



Annual Report 2018

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The Company's annual financial statements and consolidated accounts are included on Pages 22-27 and 30-77.

This is Biotage

– facilitators and problem solvers

Biotage is a global life science company that develops innovative, effective chemical separation and synthesis solutions.

The company's products are used in areas such as pharmaceutical research, development and manufacturing and analytical examination of patient, forensic, environmental, and foodstuff samples. Separation is an important part of our customers' production process and often involves extracting a compound from other substances, isolating the components of a substance, or chemically purifying substances from contaminants.

Through our broad selection of innovative products, Biotage helps customers streamline their workflows and reduce the impact of their activities on the environment. For example, this is done by cutting down on the use of solvents in the manufacturing process, by helping doctors make more accurate diagnoses, and by enabling pharmaceutical research scientists to work more efficiently. By making the customer's work easier, increasing productivity, and offering more sustainable solutions, Biotage is laying the foundation for better, more cost-effective manufacturing for customers all around the world.



Business concept

Making progress in separation

Biotage offers effective separation technologies and high-quality solutions for everything from small-scale analysis to industrial-scale analytics. We develop and manufacture systems and consumables and offer services in three product areas: Organic Chemistry, Analytical Chemistry, and Industrial Products. Our customers include pharmaceutical companies, government agencies, scientific institutions, and forensic and commercial analytical laboratories.

Though our acquisition of PhyNexus Inc., which was completed in January 2019, we have strengthened our position as a leading chemical separation company in the rapidly growing field of biomolecules.



The entire value chain

From R&D to products

Biotage aims to be a natural part of our customers' workflow. Thanks to our close relationship with end users and our market presence, we are able to identify customer needs and respond to future challenges by introducing new products and solutions. Biotage covers the entire value chain from research and development through production, sales, and service. We have a well-developed global infrastructure - around 96 percent of our sales are direct and only 4 percent occur through distributors. System sales made up around 51 percent of our total 2018 revenue, while sales of consumables and services accounted for the remaining 49 percent.





Continued strong growth

2018 was yet another record year for Biotage. Sales increased in all regions where Biotage has direct sales. Revenue rose 21.8 percent and an organic growth rate of 8.0 percent was achieved. Operating profit (EBIT) amounted to SEK 172.5 Mil, corresponding to an operating margin of 18.9%. In January 2018 Horizon Technology Inc. was acquired, an acquisition that strengthens our market position in environmental applications and food safety. In addition, we also signed an agreement in December to purchase PhyNexus Inc. The acquisition, which was completed in January 2019, is in line with our strategy for growth within the chemical separation market and addresses the rapidly growing biomolecules segment. Another important event during the year was the market introduction of Biotage® Selekt and Biotage® Sfär - the largest product launches in the company's history.

Financial summary	2018	2017
Net revenues, million SEK	910.9	748.1
Gross profit, million SEK	556.6	456.7
Gross margin, %	61.1	61.0
Operating profit (EBIT), million SEK	172.5	133.6
Operating margin, %	18.9	17.9
Earnings per share, SEK*	2.59	2.14
Average number of employees	404	335

*Before and after dilution



Certain financial figures presented by Biotage are not defined in accordance with IFRS standards. Refer to Pages 75-76 for more information.

Growth objectives

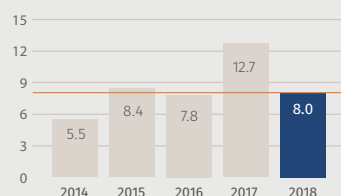
8%

Organic growth is defined as revenue growth, excluding acquisitions and adjusting for exchange rate differences. Our goal is for average annual organic growth to equal 8% or more over a three-year period.

2018 Results

Organic growth of 8.0% was achieved in 2018. Over the last three years, the average organic growth rate was 9.5 percent.

Organic growth, %



Comment



For the segments where Biotage competes, overall market growth is estimated to be around 3-5%. Our growth objectives call for the company to grow at a faster rate than the underlying markets.

Profitability goal

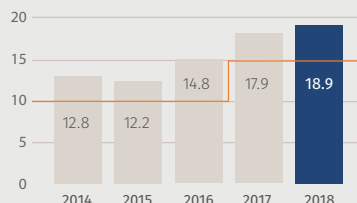
20%

This refers to earnings after depreciation and amortization (EBIT margin). Our goal is to achieve an average operating margin of 20% or more over a rolling three-year period.

2018 Results

The operating margin in 2018 was 18.9%. Over the last three years, the average operating margin was 17.2 percent.

Operating margin, %



Biotage requires a reasonably high level of profitability in order to facilitate investment in new, innovative products and market segments, strengthen the company's marketing organization, and generate returns for our owners.

Due to the favorable growth of the company, in 2018, the board decided to raise the profitability goal for the average operating profit margin from 15 to 20 percent. The new level is considered to be reasonable and enables the continuation of a reasonably brisk pace of investment in the business, along with the active evaluation of acquisitions.

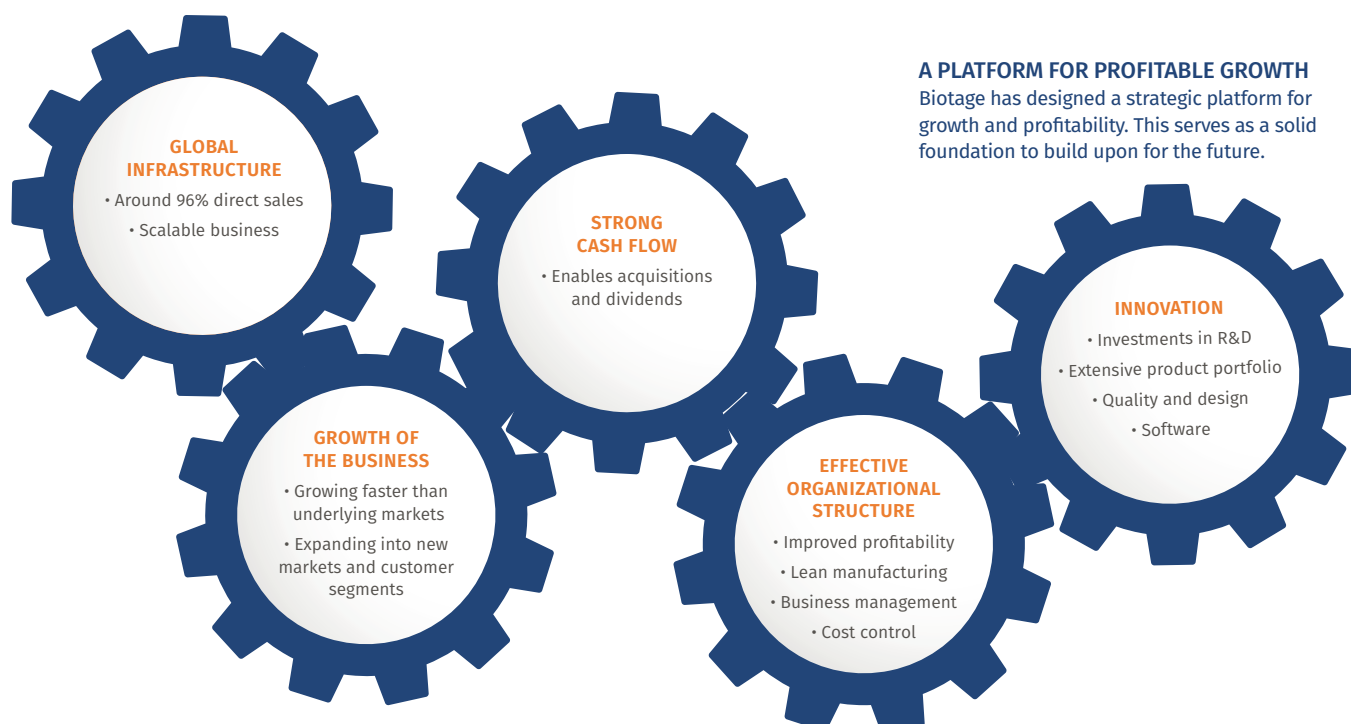
Biotage in Brief

Biotage is a global life sciences company developing innovative, effective separation solutions for organic and analytical chemistry as well as industrial applications. Following the acquisition of PhyNexus Inc. in January 2019, Biotage is now an active player in the rapidly growing field of biomolecules.

San Jose, USA



ORGANIC CHEMISTRY	ANALYTICAL CHEMISTRY	INDUSTRIAL PRODUCTS
51% Products used in the early stages of pharmaceutical development, for example, to chemically create or purify the base substances of new drugs. ☞ Refer to Pages 10-11 for more information.	39% Products that facilitate and streamline the analysis of clinical and bio-analytical tests, for example, patient samples, forensic samples, and environmental and foodstuff samples. ☞ Refer to Pages 12-13 for more information.	10% Industrial-scale products that separate substances during the production process or extract new substances for further processing, for example, in pharmaceutical and food manufacturing. ☞ Refer to Pages 14-15 for more information.





THE COMPANY'S VISION

Biotage aims to offer the most effective and sustainable synthesis and separation solutions by combining innovation and knowledge while focusing on satisfying customer needs.

SALES DISTRIBUTED BY GEOGRAPHIC MARKET

42%

AMERICAS

29%

EUROPE & EMEA

29%

ASIA

NET SALES

910.9 MILLION SEK
(+22%)

OPERATING PROFIT

172.5 MILLION SEK
(+29%)

NUMBER OF EMPLOYEES

405
(+16%)

LEAN MANUFACTURING

Production takes place in a combination of company-owned and contract manufacturing facilities. The production plant in Cardiff, Wales manufactures our consumables as well as certain systems. Following the acquisitions of Horizon and PhyNexus, systems and consumables are now also manufactured in New Hampshire and California in the USA. All other production of systems is carried out by contract manufacturers. The plant in Lund manufactures bulk polymer materials for our Industrial Products operations.



We are well positioned for continued growth

2018 was the company's most successful year ever. Sales rose in all regions where we have established a direct sales network, which is proof positive that our strategy of being close to our customers is working. As a result of very favorable developments, resulting in strong growth as well as continued profitability, our profitability goal was raised from an operating margin of 15 to 20 percent, measured as a rolling average over a three-year period. Even if this new goal proves to be challenging going forward, I am extremely proud of the profit growth at Biotage. Over

an extensive period of thirteen years, we have grown our operating profits by over 25 percent per year on average, while at the same time, we have succeeded in strengthening our market position and building a stable platform for continued growth. This incredible development is the result of all the hard work put in by our many skilled employees.

Focus on innovation and lean manufacturing

One reason that Biotage is so successful at maintaining a good level of profitability is that we are constantly in the machine room,

streamlining our manufacturing processes. I always say that efficiency needs to be a pervasive hallmark of our business as well as our product offerings. Our products and solutions must always be simple to use and need to improve the workflows of our customers.

Investments in research and development are just as important to our future growth as lean manufacturing and cost control are to our profitability. Innovation is a crucial driving force, and we continue to invest both time and resources into the development of new and improved products. During the year, we invested 7.4% of our sales in research and development, and we have worked intently on structuring our R&D processes to maximize the return on investment. Among other things, we have expanded our external collaborations when it comes to innovations. This means that we quickly gain access to specialized skills so that the development time for new products is shortened. We have also continued to work on our internal innovation forums, and several new projects are under development.

Successful launches

In October the largest commercial launch in the company's history took place when the new technology platforms, the Biotage® Selekt flash purification system and the Biotage® Sfär consumables, were introduced to the market. This is an excellent example of getting results out of our own research and development efforts. The products enable more efficient separation with better quality and a reduced environmental footprint thanks to their lower solvent usage. In light of the extensive innovation and development we have put into the project, it is especially satisfying that the launch was well received by the market.

One of the secrets of successful product launches is being close to your customers, allowing you to listen to their needs. Our sales take place almost exclusively through our own sales channels, which account for 96 percent of our sales. The direct contact and close collaboration with customers gives us an enormous advantage. The knowledge and feedback we receive about the needs and issues of customers serve as valuable information, enabling the development of new technology and new applications.

Sustainability and green chemistry

Sustainability is an important issue for Biotage and our goal is to play an active role

and contribute to a more sustainable world, with respect for the environment and people. As a part of our work in strengthening our sustainability initiatives, during the year we became a signatory of the UN's Global Compact, whose ten principles provide us with a stable foundation and clear guidelines for operating a more sustainable business.

A trend we have noticed in recent years is the increased awareness of the effect of corporations on the environment and their surroundings. One of the biggest environmental challenges for our customers is their usage of solvents in the separation and purification of molecules, a necessity in, for example, the development of new drugs. Over several years, we have been successful in introducing new products that facilitate "green chemistry," reducing the usage of solvents, and we doggedly continue to develop even better methods. For example, we have an exciting project going on to evaluate new methods to completely eliminate the use of solvents in chromatography.

Strategically important acquisitions

Acquisitions are an important part of our strategy for expanding and strengthening our market position within existing and new regions and product segments. Thanks to our high profitability, growth, and global organization, today we have the resources needed to carry out an effective M&A strategy. At the beginning of 2018, we completed the acquisition of Horizon Technology, and the integration process has exceeded our expectations. Thanks to Horizon, Biotage has welcomed over 30 new employees to the company, and we now have access to exciting new market segments within food manufacturing, the environment, and other areas. Toward the end of the year, we also announced the consummation of an agreement to acquire PhyNexus in the USA, which will be completed early in 2019. The goal is to strengthen our position as a chemical separation company within the rapidly growing field of small-scale purification of biomolecules and consequently gain access to new customers and markets. With our established direct sales channels, we also see good opportunities for the global expansion of products based on PhyNexus' patent-protected technology platform.

Our minority investment in Chreto A/S was made to increase our exposure to the biomolecular field, with an option to acquire the remaining shares of Chreto at a pre-ar-

"Together, we have built an innovative and effective organization with the financial strength to provide us with more opportunities, and we are well prepared for the future."

ranged price by the end of 2018. However, we decided that this price was too high in relation to Chreto's level of progress in their development efforts and the future investments we considered necessary in order to commercialize this technology. Therefore, Biotage did not exercise this option and instead initiated discussions concerning an acquisition at a different valuation.

Growth on multiple fronts

The Americas continue to be our largest market, and even though there were certain challenges, sales grew 23 percent during the year. Growth in Asia continues to be strong. South Korea has delivered exceptional growth since we established a presence there in 2016. In addition, we continue to see growing sales numbers out of China. India, where we established a local organization during the year, is a challenging market in many respects, but the potential makes it a very exciting investment. In Europe & EMEA, we are pleased to see that sales in Analytical Chemistry have gained momentum over the course of the year, with sales in the region increasing 14 percent.

While we grow, we are continuing to invest in our future growth, where the acquisitions of Horizon and PhyNexus serve as examples of investments with the potential for future growth. Otherwise, we have seen an increased interest in our products from life science companies within the medical cannabis industry. This is an industry that is developing rapidly and facing new challenges from legislation on pesticide residue limits in the end product. Among manufacturers of medical cannabis, there is an increased need for industrial-scale products for analysis and purification, and during the course of the year, we have sold our larger systems for flash purification to stakeholders in this area.

Thank you for a wonderful time

Thanks to the dedicated employees at Biotage, 2018 was yet another eventful year filled with progress. We can feel satisfied that we increased sales by 22 percent, while at the same time maintaining a stable gross margin of 61 percent. Together, we have built an innovative and effective organization with the financial clout to provide us with more opportunities, and we are well prepared for the future.

After almost 14 years as the CEO of Biotage, it is now time for me to step aside. It has been a wonderful time, and I am extremely proud and impressed by all that we have achieved and the dedication I see every day among the company's employees. It is thanks to the hard work of all the employees in the organization that we enjoy the leading position we have today.

I do not intend to completely leave Biotage just yet. I have accepted the invitation of the nomination committee to become a board member, and ultimately, to also serve as Chairman of the Board once the new CEO is in place. I am hoping for a vote of confidence at the AGM so that I can continue to contribute to the company's growth. Finally, I would like to sincerely thank all the employees for their outstanding effort, both during the past year and throughout the time I have had the privilege to work with you all. I am really looking forward to growing the business together with you in new ways.

Uppsala, Sweden, March 2019

Torben Jørgensen
CEO and Group Director

Strategically important areas

Operating a successful business and achieving our financial goals calls for a clear strategy. Biotage has defined seven strategically important areas that will have an impact on the company's future opportunities.

OUR STRATEGIC AREAS OF FOCUS

IMPORTANCE TO THE BUSINESS IN 2018

Investment in research and development

Successful research and development is needed in order to ensure the company's long-term growth and generate increased sales. Continuous new product launches are critical to create growth in the markets where Biotage competes. Innovative products that add functionality, enable customers to work in new ways, and improve performance strengthen the company's market position and increase end user demand. The goal at all times is to offer an up-to-date line-up of systems as well as consumables.

Biotage continues to invest in research and development, and in 2018 the company allocated 7.4 percent of sales to this area. As Biotage grows, more and more focus is placed on structuring the research and development processes in a way that maximizes the return from these investments. Among other things, over the course of the year, Biotage allocated more resources to technological development and external collaborations centered around innovation and growth while continuing to improve the company's internal innovation forum. The goal is to generate a stable flow of innovative products within existing as well as new areas, and we would ideally like for 20 percent of our sales to come from products launched within the last 3 years. In October 2018, the largest commercial launch in the company's history took place when the new technology platforms, the Biotage® Selekt flash purification system and the Biotage® Sfär consumables, were introduced to the market.

Reach new market segments and customer groups

An important part of our growth initiatives involves reaching new market segments and customer groups. Biotage is constantly working on improving sales initiatives as well as current technology so they can be applied to new applications.

Through the acquisition of Horizon Technology, Biotage has significantly strengthened its Analytical Chemistry product line within the environmental and food manufacturing segments - areas with good potential for further expansion. The medical cannabis industry is another area where the company has noticed increased demand, and Biotage has sold a number of the company's larger systems for flash purification to customers in this field. Biotage also continues to invest in the biomolecular field. The acquisition of PhyNexus has enabled Biotage to strengthen its market position within this rapidly growing field and consequently gain access to new customers in industries not previously focused upon. With our established direct sales channels, the door is now open for the global expansion of products based upon PhyNexus' patent-protected technology platforms.

Increased share of aftermarket sales

The long-term goal is to have at least 60 percent of sales come from aftermarket products, which consist of consumables and service. On the whole, aftermarket sales are more evenly distributed throughout the year, more profitable, and relatively insensitive to cyclical fluctuations. Continued investment in the sales of consumables within all product areas is an important part of this strategy. Biotage also works on continuously strengthening its service offerings to customers.

For the year, our sales were made up of 49 percent aftermarket products and 51 percent systems. In the USA and Europe this ratio was 60/40 while the company's various market segments in Asia have a higher proportion of system sales. Competition with Chinese consumables, which are cheaper than our products, continues to be tough. The company's strategy for turning these numbers around is to sell locally-manufactured consumables in China - a strategy that we also plan on expanding to Japan and South Korea in 2019. Biotage believes that it is important to continue the direct sales work in Asia since it strengthens long-term customer relationships and improves opportunities for aftermarket sales.

IMPORTANCE TO THE BUSINESS IN 2018

Enhanced market presence

Biotage must increase its presence in markets where the company sees clear potential. This may involve establishing a new presence in a market through our own sales office, a distributor, or a strategic alliance or strengthening our existing presence in a market by, for example, expanding our sales force or opening a direct sales office in a part of the market that previously was covered by a distributor.

Continuous lean manufacturing improvements

Biotage seeks to achieve an optimal balance between internal and contract manufacturing. This balance is based upon what is most appropriate for each product line with respect to the overall cost, flexibility, risk, investment, etc. Our goal is to increase each individual product's contribution to the gross margin. Furthermore, a part of our overall strategy is to constantly evaluate and introduce new work procedures that can increase manufacturing efficiency.

Improvements to reduce our environmental footprint

Sustainability is an important focal point both for Biotage and many of our customers. These issues are not just about working on constant improvements to reduce the environmental impact of our own operations, but also about offering products that allow customers to reduce their impact on the environment.

Acquisitions

The life sciences industry is currently undergoing a trend toward consolidation, and Biotage plans to take advantage of this opportunity. We are constantly on the lookout for acquisitions that can expand our product line and strengthen our market position in both existing and related areas.

OUR STRATEGIC AREAS OF FOCUS

Biotage has continued to establish direct sales operations in India, where a lot of effort has been put into setting up and improving the sales organization. In Europe, the company has strengthened its sales organization and established direct sales in the Benelux countries. Through the acquisitions of Horizon and PhyNexus, the company has positioned itself with a presence in several parts of the USA. With the Horizon acquisition, Biotage has expanded its product lines and enhanced its opportunity to reach a more global audience within several areas of application in Analytical Chemistry. Beginning in 2019, PhyNexus' existing products and products under development will enable Biotage to address the rapidly growing market for small-scale biomolecules purification.

During the course of the year, Biotage has continued to automate consumables manufacturing, a growing priority as sales continue to increase. In 2018 the work continued on the new factory in Cardiff, where Biotage has invested in lean manufacturing improvements and automation control along with expansion of the production capacity. Robots are now used in Cardiff to carry out certain tasks that used to be performed manually. We have made significant investments in lean manufacturing during the development of Biotage® Selekt and Biotage® Sfär. This is expected to have a positive impact on profits going forward. Another example of an investment with a positive impact on the bottom line is an ongoing innovation project designed to improve the manufacturing cost basis for the UV detectors used in the company's products. This is expected to result in improved margins for these products.

Our manufacturing facility in Cardiff is certified in accordance with the ISO 14001 environmental management standard. This standard helps Biotage continue its efforts to reduce its impact on the environment on an ongoing basis. During the course of the year, the management system was updated to conform with the latest update to the standard. Another important focal point for the company is to constantly improve its products and enable customers to lower their usage of solvents. With the new Biotage® Selekt system and the Biotage® Sfär columns, large amounts of samples can be purified more quickly with less usage of solvent.

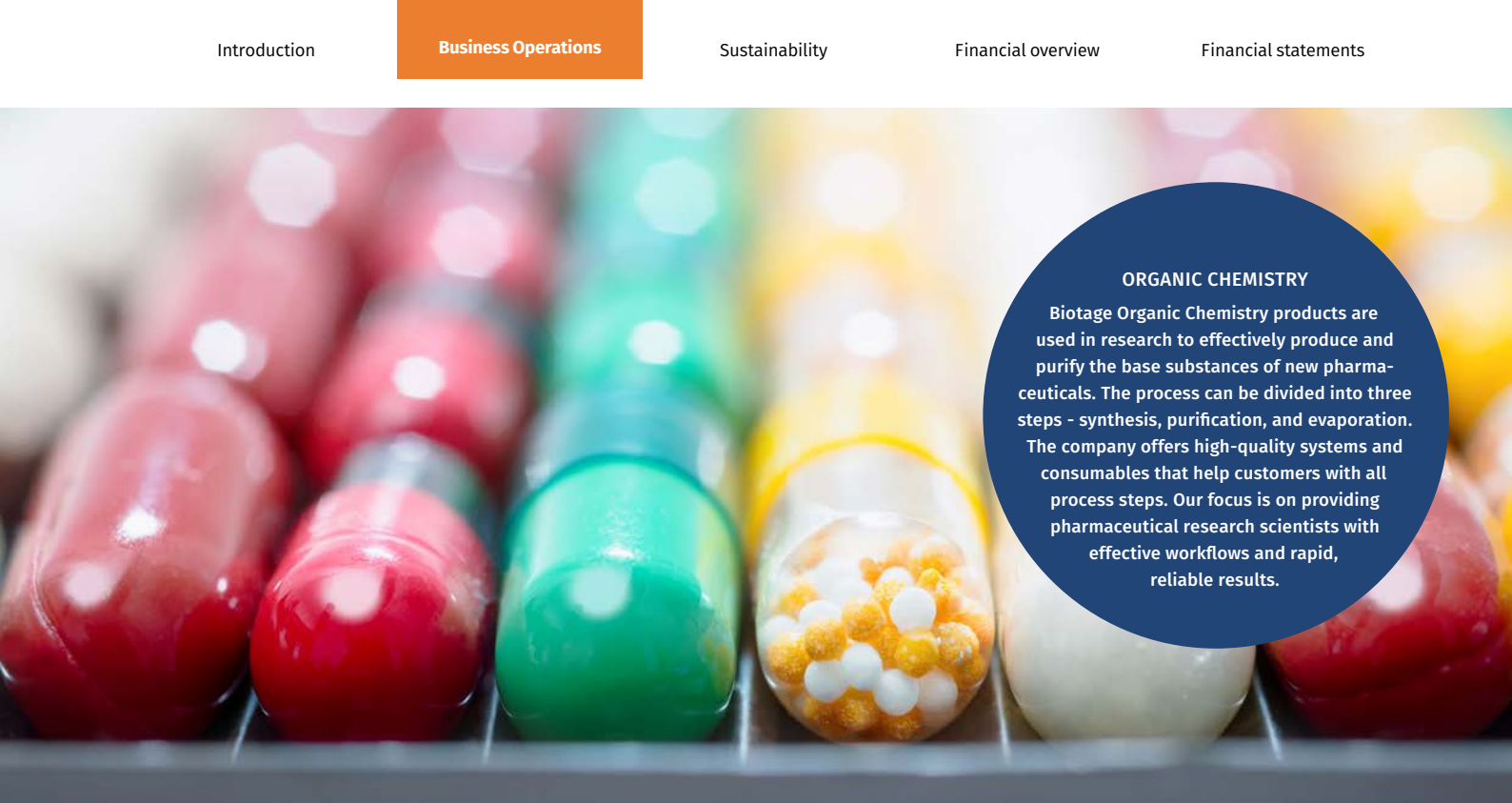
Thanks to our robust profitability, strong growth, and global organization, today we have the resources needed to carry out an effective M&A strategy, where we are constantly evaluating potential acquisitions. During the course of the year, we have focused on the integration of Horizon, which was acquired in January. The acquisition of PhyNexus, completed in early 2019, is in line with our growth strategy for the chemical separation market, and has allowed us to expand into new areas of application. PhyNexus products can reach a larger global audience through our direct sales channels while conversely enabling us to gain access to customers in industries that we have not actively focused on in the past.

The company's product segments

In the three product segments of Organic Chemistry, Analytical Chemistry, and Industrial Products, Biotage offers systems, consumables, and service.

PRODUCTS	MARKETS	CUSTOMER GROUPS	PRODUCT SEGMENTS
ORGANIC CHEMISTRY Products that streamline pharmaceutical development, i.e., the process of chemically creating or purifying substances used in new drugs.	Global market focused on the US, Europe, Japan, and China. The market is mainly served by our sales organization, but also to a lesser extent by distributors.	The company's largest customer groups consist of pharmaceutical and biotech companies, contract research organizations (CROs), and academic institutions.	• Microwave-assisted synthesis • Peptide synthesis • Purification (flash chromatography) • Evaporation of samples
ANALYTICAL CHEMISTRY Products that streamline the analysis of various tests, for example, patient samples, forensic samples, and environmental and foodstuff samples.	Global market focused on the US, Europe, Japan, and the Middle East.* The market is mainly served by our direct sales organization, but also to a lesser extent by distributors.	The company's largest customer groups include commercial labs, CROs, hospitals and bioanalytical laboratories, food manufacturers, and labs performing, e.g., food safety or environmental analysis.	• Consumables (sample prep) • Automated SPE • Evaporation of samples
INDUSTRIAL PRODUCTS Products that separate substances during industrial-scale production processes, for example, in pharmaceutical and food manufacturing.	The largest markets are the US, Europe, and Japan.	The company's most important customer groups in this product segment are pharmaceutical companies and contract manufacturers (CMOs/CDMOs).	• Purification (flash chromatography) • Resins/chemical media

* Going forward, Biotage also sees a great amount of potential in China.



ORGANIC CHEMISTRY

Biotage Organic Chemistry products are used in research to effectively produce and purify the base substances of new pharmaceuticals. The process can be divided into three steps - synthesis, purification, and evaporation. The company offers high-quality systems and consumables that help customers with all process steps. Our focus is on providing pharmaceutical research scientists with effective workflows and rapid, reliable results.



ANALYTICAL CHEMISTRY

Biotage Analytical Chemistry products are used by organizations such as hospitals and commercial research labs to purify, for example, blood, soil or foodstuff samples before they are sent for final analysis. Preparation and purification of samples are important and time-consuming, and Biotage has developed and automated the entire process in order to improve the level of quality and reduce the amount of time involved.



INDUSTRIAL PRODUCTS

Biotage Industrial Products are used to purify or separate substances on an industrial scale, for example, in the pharmaceutical and food manufacturing industries. They are used in manufacturing processes as well as process development. An example of this is the purification of citric acid from pesticide residues. Industrial-scale purification with flash chromatography works in the same manner as it does in Organic Chemistry.



Organic Chemistry

Biotage Organic Chemistry products are used in the early stages of pharmaceutical development. The products make it possible to produce the base substances of new pharmaceuticals - both traditional pharmaceuticals as well as second-generation pharmaceuticals.

In 2018, a new generation of purification system, Biotage® Selekt, was launched. Together with the Biotage® Sfär consumables, this system enables the company's customers to cut down on their development time.

Product segments and product lines

- Microwave-assisted synthesis
- Peptide synthesis
- Purification (flash chromatography)
- Evaporation

Most of the Organic Chemistry products are used for synthesis and purification. Synthesis involves creating new substances through chemical reactions of various organic or inorganic materials. Purification in this context involves removing impurities from synthesized substances with the help of flash chromatography. After purification, the substance must be transformed from a liquid to a solid, which is done through evaporation, where the chemical compound is dried until it solidifies.

Product differentiation and competitive advantages

The company's products are characterized by high quality and reliability, which creates smooth workflows that streamline the work of pharmaceutical researchers. The close collaboration with customers provides us with insight into their needs at an early stage and leads to advances in the development of new systems and rapid innovation. Customer demand for simplicity has prompted Biotage to prioritize the development of advanced software. Intuitive user interfaces reduce the time required for training and make the software easier to use. Biotage columns are market leading in the green chemistry arena. They facilitate more sustainable processes by lowering the consumption of materials and solvents.

The majority of the company's sales in Organic Chemistry take place through its own sales organization. Consumables and service and support are a part of the product line in each and every market, which promotes close, long-term, customer relationships.

“Biotage® Selekt and Biotage® Sfär enable more effective separation with a reduced usage of solvent in less time - quality and reliability provide smooth workflows and rapid results.”

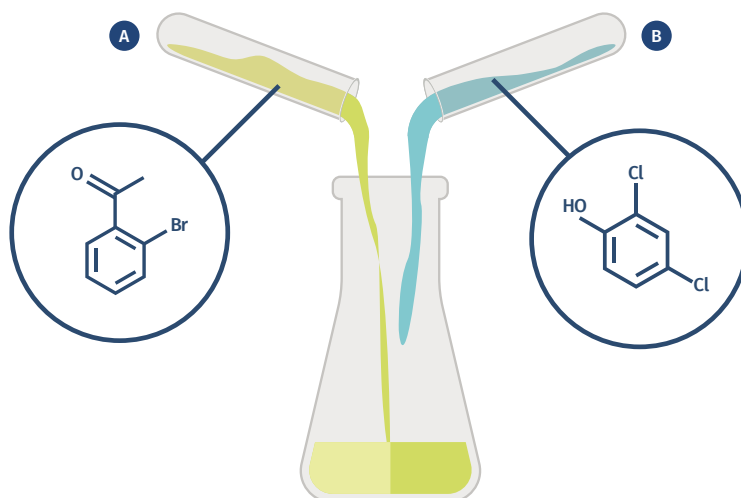
➔ See our entire product line on Page 84

This is how we do it

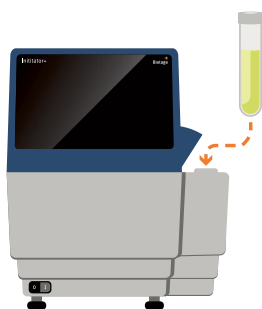
Synthesis, purification, evaporation

Biotage Organic Chemistry products are used in drug discovery, streamlining the work involved in producing the base substances of a drug.

In the example below, pharmaceutical substance C is produced, which will be used in a new drug. Simply put, several organic substances must be combined to create C. We can call these inputs “Substance A” and “Substance B.”

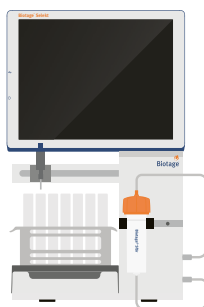


1 SYNTHESIS – combining the various ingredients



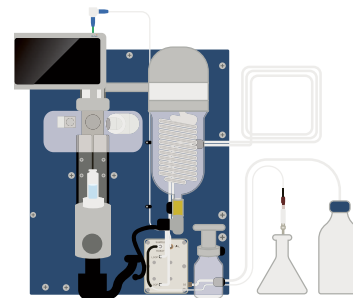
The two substances, A and B, cannot be combined without a little help. In this case, a solvent, heat, and reagents for catalyzing the chemical reaction are needed. The company's synthesis procedure uses microwaves to rapidly and accurately generate the heat and energy required to combine A and B and create a new substance.

2 PURIFICATION – removing contaminants



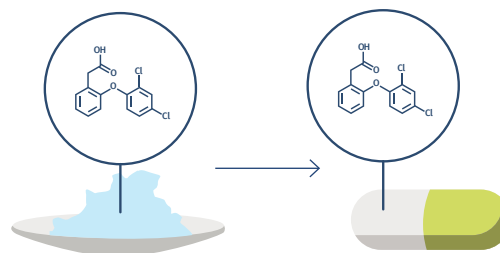
The work involved to create, i.e., synthesize the new substance forms by-products that must be removed. The company's purification system automates the entire purification process. The result is a product consisting only of the desired substance - in this case C. With the new system using Biotage® Selekt and Biotage® Sfär, larger amounts of substances can be purified with less usage of solvents in a shorter amount of time.

3 EVAPORATION – drying the new substance



After purification, the new substance is still dissolved in a fluid made up of solvent. Therefore, before it can be used, this solvent must be removed from the slurry. The company's evaporation process uses a vacuum, heating, and centrifugation to rapidly and safely dry the product.

C Finished! The new substance, C, is now a solid and is ready for the next step in the development process for a new drug.





Analytical Chemistry

Biotage Analytical Chemistry products are used by chemists to prepare various types of samples for analysis. The products are used within many areas, for example, the environmental field, food manufacturing and drug development. The company's product line consists of two parts: consumables, specially made for the separation of selected substances from samples, and automated, customized systems that streamline sample preparation and provide significant time savings for laboratories that carry out analysis on an industrial scale.

In Analytical Chemistry, the company's products are used to prepare samples for analysis. The products are used within many areas and for many different types of analytical tests, for example, to discover contaminants in soil, water and food, in forensic medicine to find traces of drugs or doping compounds, or in the analysis of blood and urine samples in order to provide a diagnosis or in conjunction with drug trials.

Product segments and product lines

- Consumables
- Automated SPE (Solid Phase Extractions)
- Evaporation of samples

The first part of the product line consists of consumables and their associated applications (methods), which are used to separate specific substances from various samples. The consumables utilize various separation techniques, such as, e.g., SPE (Solid Phase Extraction) or SLE (Supported Liquid Extraction).

The second part of the product line consists of systems that streamline and automate sample processing and concentrate

the samples after they've been separated. Sample preparation prior to analysis is often a time-consuming activity but is important for the quality of the subsequent analysis. The company's products provide chemists with reliable tools that streamline this work.

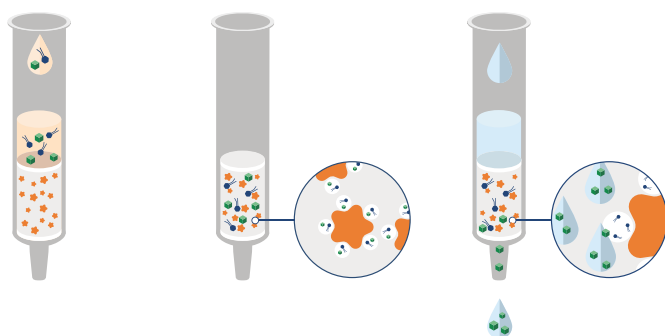
Product differentiation and competitive advantages

High quality and reliable, stable performance are hallmarks of the company's Analytical Chemistry product line. The consumables are easy to use and manufacture during the sustainable processing of samples, otherwise known as "green chemistry." Biotage has a broad selection of standardized products but also partners with customers to develop customized products and methods to solve the customers' specific challenges. The close collaboration with end users allows us to better understand their needs and continuously develop new applications. The more applications we can offer for our consumables, the larger the share of the underlying market we can capture. Biotage is a market leader in SLE, and the majority of our sales flow through local sales organizations. Service and support are an important part of our product line in all markets.

"Through the acquisition of Horizon Technology Inc. in early 2018, Biotage took another important step forward in response to the increased demand for analytical products within the pharmaceutical and environmental industries."



See our entire product line on Page 84



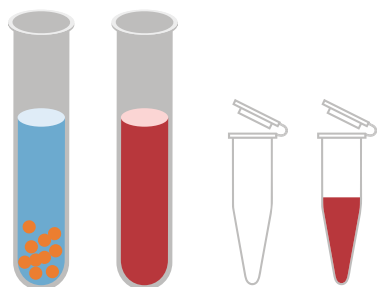
This is how we do it

Sample purification, automation and additives, concentration, analysis

Biotage Analytical Chemistry products are used to analyze various samples, for example, blood work, urine samples, soil and water samples, and foodstuff samples.

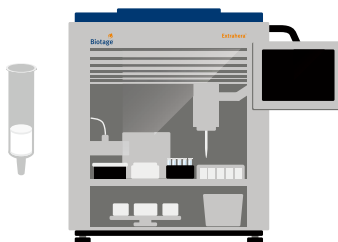
A very sensitive instrument called a mass spectrometer is used for these analyses. The sample must be cleansed of all impurities that could contaminate the analysis. The company's products are used for this part of the work - sample preparation for analysis.

1 SAMPLE PURIFICATION



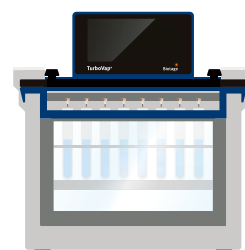
Biotage has a large number of consumables and bundled methods that are specialized for the purification of various types of samples. Simply put, they are very advanced filters that remove impurities from the sample, only allowing the substances needed for the analysis to pass on through.

2 AUTOMATION



The Biotage® Extrahera™ system automates the entire process of preparing samples for analysis. This results in efficiency gains for laboratories that carry out a large number of analyses.

3 SAMPLE CONCENTRATION

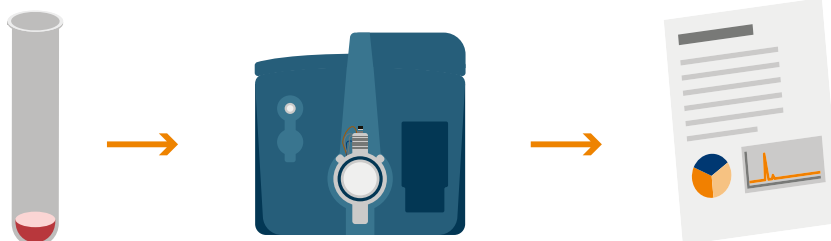


In certain cases, the sample needs to be concentrated before it's analyzed. This involves removing excess solvent, which is done with the TurboVap® evaporation system.

4 ANALYSIS

After the company's products have removed the impurities, the samples can be accurately analyzed by a mass spectrometer.

A chemist later reviews the result, which can then, for example, help a doctor make a patient diagnosis, enable a food safety inspector to verify that food is fit for consumption, or allow a police officer to confirm the presence of narcotics in an offender's bloodstream.





Industrial Products

Biotage Industrial Products are primarily used by pharmaceutical companies, chemical manufacturers, and consumer goods manufacturers to purify their products of contaminants through separation or to isolate the substances to be processed. Biotage offers industrial-scale purification systems based on flash chromatography and consumables.

The company's systems and consumables for large-scale flash chromatography, Biotage® Flash 150 and 400, work in the same manner as the flash chromatography products in the Organic Chemistry product line. Customers using the company's systems and consumables can therefore use the same methods when developing drugs in the lab that they use to manufacture larger quantities of a substance. This is because the work procedure is in principle the same - only the manufacturing scale is different.

Product segments and product lines

- Purification
- Resins/chemical growth media
- Customer-specific projects

The company's Industrial Products include systems, consumables, and research services. The majority of the product line consists of industrial-scale purification systems that use flash chromatography with bundled consumables either based on silica or polymers.

Biotage also offers advanced research services to help customers manufacture effective, custom consumables that help

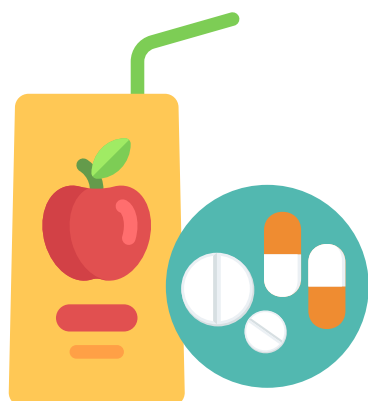
the customers isolate substances from their products. The company's "Resins" provide customers with access to methods that can remove unwanted substances from products down to extraordinarily minute levels, for example, to meet the strict requirements of authorities.

Product differentiation and competitive advantages

The company's products for industrial applications are characterized by strong customer relationships with repeat sales. Biotage is one of the few companies offering ready-made consumables for large-scale purification systems based on flash chromatography. These products result in both efficiency gains and cost savings for customers. A key selling point is that the company's products can be customized to meet the needs of customers. Biotage has collected a team of highly educated professionals to staff its research and development groups. This team possesses a considerable body of knowledge and experience, allowing it to effectively respond to customers' future needs for chemical growth media.

"The medical cannabis industry is growing rapidly and has displayed an interest in the company's industrial-scale flash chromatography, which makes it possible to purify the medicinal end products from pesticide residues."

 See our entire product line on Page 84

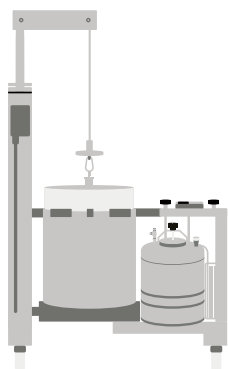


This is how we do it

Scale-up, bulk consumables, customer-specific development

All of the company's products in the Industrial Products line are used to purify or separate various substances on a large scale. This can be to remove traces of pesticide from citric acid or to purify a drug from by-products or trace amounts of excipients left over from the manufacturing process.

1 SCALE-UP



The company's systems and consumables for large-scale flash chromatography, Biotage® Flash 150 and 400, work in the same way as the flash chromatography products in the Organic Chemistry product line. This allows, for example, pharmaceutical companies and contract manufacturers to purify large amounts of a substance with the same methods used in the lab during development work.

Pharmaceutical companies do this, for example, when they need mass quantities of a substance for clinical drug trials. The company's purification system is also used for small-scale commercial production of drug ingredients.

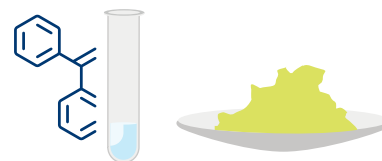
2 BULK CONSUMABLES



Biotage offers a line of so-called Resins that remove traces of unwanted substances in customers' products. A common area of application is in removing excipients used in manufacturing - for example, the metal palladium, which is often used as a catalyst in pharmaceutical manufacturing.

Customers can use the products in several different ways. They can pack columns with consumables and allow the fluid that needs to be purified to pass on through. Biotage Resins trap the unwanted substance. Alternatively, they can mix the consumables with the fluid that needs to be purified. The Resins trap the unwanted substance so it can then be filtered out.

3 CUSTOMER-SPECIFIC DEVELOPMENT



In the event customers need to purify a product in an area where no ready-made consumable is currently available to solve the task, Biotage can help them develop a customized solution that suits their needs. This is done in the form of a research project, designed to develop a consumable that can effectively remove the unwanted substance from the customer's product.



The company's products allow customers to effectively remove unwanted substances from their products. This allows Biotage to help its customers, for example, to satisfy regulatory requirements and offer purer and safer end products to consumers.

Continued strong sales growth

Biotage has sales in the majority of international markets. In 2018 sales continued to grow in all of the regions where the company has an established direct sales force. The positive growth during the year was strengthened by the successful integration of Horizon Technology, which was acquired in January 2018.

Biotage competes in markets in three geographic regions - the Americas, Europe & EMEA, and Asia. In 2018 the Americas accounted for 43% of sales, Europe & EMEA for 29%, and Asia for 28%.

The USA continues to be the company's largest individual market. During the course of the year, Horizon Technology in New Hampshire was acquired, and the successful integration of the company has had a positive impact on both sales and profitability. The acquisition has strengthened the company's positioning in Analytical Chemistry within the environmental and food manufacturing industries, two areas where Biotage sees favorable opportunities for further expansion. The launch of the Biotage® Selekt flash purification system and Biotage® Sfär consumables in the fourth quarter was well received by the market and is expected to be an important growth stimulus going forward.

Europe, where the United Kingdom and Germany are the two largest individual markets, has been on an upward trajectory in 2018. Biotage has actively worked on developing existing as well as new customer relationships in order to improve its position in the market.

Percentage growth over the course of the year was greatest in Asia. This can be explained by the direct sales organizations that were recently established by the company. In China, system sales volumes have risen significantly within Organic Chemistry. Sales also rose in South Korea, and at the end of 2018, an analytical testing method for foodstuffs using one of the company's products was approved as an official method for analyzing mold contamination in the country. In India, Biotage set up a new sales office in 2017 and focused this past year on establishing a sales organization in order to

safeguard the market's potential.

The regions where markets are served by distributors, mainly the Middle East, Africa, and the Pacific, accounted for 6 percent of total sales in 2018.

Customer-focused and responsive working methods

A large part of the company's success is attributable to the fact that we have established our own sales organization in almost all of our markets. By working closely with customers and listening to their requests, Biotage is able to continuously develop new products with a high performance level that meet customers' needs. Customers expect to be able to use the company's products in an increasingly broader range of applications, which often leads to changing requirements for product characteristics. An important part of the ongoing product development and quality control work thus deals with customers being able to use the company's product within new areas.

Biotage actively addresses new markets for continued expansion, which at times requires obtaining regulatory compliance. In such cases, Biotage must ensure that the products comply with the regulations applicable to specific markets, which is made easier by the fact that the company's organizational structure is made up of local business offices with considerable knowledge of those specific markets.

“A large part of the company's growth is attributable to the fact that we have established our own sales organization for direct sales in almost all of our geographic markets.”





O

Organic Chemistry

The market for the company's Organic Chemistry product line is largely tied to pharmaceutical drug development. The largest customer group is made up of pharmaceutical companies, but biotech companies, academic institutions, and contract research organizations are also among the company's customers.

The market is characterized by close similarities between different geographical areas since research into new drugs employs the same work procedures and principles regardless whether it's being conducted in Europe, the Americas, or Asia.

The company's brand is associated with high-quality products that help customers streamline their workflows. In Organic Chemistry, Biotage is one of the market's leading suppliers of systems and consumables for the synthesis and purification of substances used in pharmaceutical research. The company is either number one or two in most of its geographic markets.

A

Analytical Chemistry

The company's Analytical Chemistry product line is used to analyze samples for, among other things, clinical diagnostic testing of patients, bioanalytical tests in conjunction with drug trials, forensic samples for, e.g., drug detection, environmental testing to detect pollutants in soil and water, and the analysis of foodstuffs for chemical impurities. Customers include commercial, hospital, and forensic labs, pharmaceutical companies, and private as well as governmental laboratories in the environmental and food manufacturing industries.

Biotage is still a relatively small player in the Analytical Chemistry market. However, our market position is strengthening as the company expands its product line and makes inroads into its targeted market niches. For example, in 2018, Biotage succeeded in strengthening its position in environmental and foodstuff analysis. The company is moreover a market-leading player in SLE (Supported Liquid Extraction) separation technology.

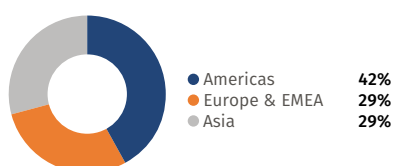
I

Industrial Products

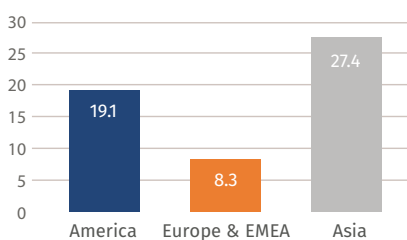
Our Industrial Products market is largely tied to drug development and pharmaceutical manufacturing. Customers include pharmaceutical companies and, to a larger extent, contract manufacturers that produce substances for the pharmaceutical industry. Part of these operations are centered around consumer goods manufacturers in, e.g., the food manufacturing industry who need to isolate certain substances from their products during the production process.

By offering a high-performance technology that can be customized to selectively separate specific substances, Biotage occupies a unique position in the market. The products are certified so that they can be sold internationally in compliance with applicable regulations. Biotage is one of the market-leading players in industrial-scale purification using flash chromatography, a method used in drug manufacturing. In 2018 the medical cannabis sector has also shown an increased level of interest in larger-scale flash purification systems.

2018 sales distribution by geographic market, %



2018 sales growth by geographic market, %



2018 sales distribution by segment, %



Megatrends affecting Biotage

The company's research and development activities are actively focused on reducing the need for solvents.

A

Personalized medicine

A very pronounced trend in medicine is research and development centered around so-called personalized medicine, i.e., drugs customized for an individual. This means that more methods will be needed in the future and there will be a higher demand for advanced clinical diagnostics within the Analytical Chemistry segment. When it comes, for example, to cancer patients, there are enormous opportunities in personalized medicine. Just as each patient is unique, so is each type of cancer. Instead of experimenting with various types of treatment, risking either severe side effects or a lack of therapeutic response, researchers are looking at the potential advantages of clinically testing each patient beforehand in order to determine which treatment is most likely to be beneficial. This is more cost effective in the long run and, more importantly, lowers the risk of losing valuable time for the patient following a diagnosis of cancer, where each and every day counts.

Numerous research institutions around the world are currently evaluating personalized medicine approaches and many experts expect a breakthrough in this field within the next five years. To respond to this demand in the marketplace, Biotage is researching, among other things, lipids. As a responsible company, Biotage aims to play a leading role in medical research and development. At the same time, from a commercial perspective, personalized medicine offers the company an expanded market in Organic Chemistry as well as a new frontier in Analytical Chemistry.

O**A**

Biomolecules

Today, biomolecules are one of the most rapidly growing areas

within drug development. This includes, for example, drugs based on monoclonal antibodies used to treat diseases such as rheumatoid arthritis and cancer. For diseases where biologics have already been approved and launched on the market, these treatments have represented astonishing medical breakthroughs that have reduced suffering and improved the quality of life of many patients.

The processes involved in the development of biomolecules are complex and extensive and do not follow the same synthetic pathways used in the development of small molecule drugs. Currently, the purification of biomolecules is often complicated and expensive. As the level of activity around biomolecules increases, this area becomes more appealing to Biotage for both Organic Chemistry and Analytical Chemistry. We already offer a pharmaceutical development product line based on peptides. The acquisition of PhyNexus, which offers products for small-scale purification of biomolecules and patented technologies with significant future potential for the development of new products, has allowed us to strengthen our position in the biomolecular field and reach new customers in industries that we have not actively focused on in the past. In addition, our minority stake in the Danish company Chreto is another example of our investment in the area of biomolecules.



O

A

Helping customers to reduce their environmental impact

A clear multi-year

trend is customers trying to reduce their environmental impact. This issue is highly relevant for Biotage both in Organic Chemistry and Analytical Chemistry. A significant part of customers' environmental challenges is linked to the solvent used in separating and purifying molecules. Customers are therefore very interested in products that can perform separation and purification with less usage of solvents. In Analytical Chemistry, end users are demanding products that can analyze smaller and smaller sample amounts, thereby reducing the need for solvents. For several years, Biotage has successfully reduced the usage of solvents in several of its products. The most recent example of this is the new Biotage® Selekt system with the Biotage® Sfär columns that makes it possible to realize higher productivity with less solvent usage. Through its research and development activities, Biotage is actively working on reducing the need for solvents and developing methods that completely eliminate the use of solvents in chromatography.

I

Rising industrial production in the USA and Europe

In recent years, there has been a trend where the production of chemical substances for pharmaceuticals is returning to the USA and Europe instead of continuing to be contracted out to companies in, for example, China and India. This can be explained by the improved opportunity for quality control and the sped-up processes due to reduced waiting times between different research institutions. The company's answer to this trend has been primarily to focus on products that can shorten development cycles, such as the larger-scale Biotage® Flash 150 and 400 purification systems, in order to respond to customers' increasing demands for quality and time savings.

Biotage has, for example, received an increased amount of interest in its Industrial Products from the medical cannabis sector for treating, among other things, epilepsy and multiple sclerosis (MS). In the USA, this is an industry that is developing rapidly and facing new challenges from legislation on pesticide residue limits in the end product. The company's products are currently being evaluated for both analytical testing and purification within this field.

O

Increasing automation and intelligent systems

There is global demand for higher quality, increased levels of automation, and the use of Artificial Intelligence (AI) designed to streamline the work of chemists. Product development and design are both trending toward increasingly more advanced systems that either reduce or eliminate the need for certain process steps. Customers are looking for rapid workflows and quality-controlled processes, where they can easily select a method and allow the equipment to read the codes on samples and start the process. Once the analysis is complete, the results are automatically transferred to the chemists' computers. In response to this trend, Biotage is constantly investing in innovative products and systems for streamlining workflows. The company focuses on making products that are intuitive and user friendly. The new Biotage® Selekt system with the Biotage® Sfär columns is one example of how Biotage is responding to this trend and delivering improved productivity with a high level of control, ease of use, and reliability.

Innovation and product development for long-term growth

The company's operations are based on rapid, innovative development. The goal is for approximately 8-10 percent of the company's revenues to be reinvested in research and development.

The work is divided into three parts: research, product development and product care. Biotage strives to ensure that innovative concepts can be transformed swiftly into development and production. All employees are encouraged to submit project descriptions for new concepts, which are then evaluated by a specially appointed team.

	1	2	3
	RESEARCH	PRODUCT DEVELOPMENT	PRODUCT CARE
AREA OF FOCUS	Biotage develops innovative new technology for next-gen products. This work is conducted both internally at Biotage and in collaboration with other companies and academic institutions. Biotage research is focused on streamlining customers' workflows and reducing their environmental impact.	Biotage is constantly developing new products to be launched in the next one to two years. Safety, reliability, and usability are prioritized in each development project in order to enhance the user experience and improve the workflow.	Work within product care mainly concerns product improvement and the addition of new functionality to enhance the performance of products that have already been launched. It is also about improving competitive advantages in the marketplace by reducing the costs of various components used in the manufacturing process.
	FOLLOWING THE TRENDS	USABILITY - A COMPETITIVE ADVANTAGE	PARALLEL DEVELOPMENT PROJECTS
OUR APPROACH	Research is often based upon growing trends in the marketplace. This is to ensure that Biotage is able to continue to offer customers relevant, cutting-edge products as their needs and requirements change. Examples of such trends include the increasing demand for cost efficiency and automation, products with a reduced environmental impact and the continuing focus on analysis and purification of biomolecules.	Product safety and reliability are always priority number one, and usability is one of the company's main competitive advantages. These factors play a key part in all development, and the aim is to have the market's most advanced system software while ensuring that the products are intuitive, well designed, and user-friendly. Customers need to be confident that they are getting reliable results, with an efficient, safe and smooth workflow.	The company's project managers routinely communicate with their product teams about potential improvements to existing products. The work is constantly changing, and a number of parallel development projects are always in progress. The development team employs a process that ensures that projects are evaluated on a technical basis in order to identify and mitigate any risks, so that the projects can be completed on time and within budget.
	MORE EFFECTIVE PURIFICATION PROCESSES	REMOTE CONTROL LEADS TO TIME SAVINGS	SOFTWARE ENABLES MORE EFFECTIVE PURIFICATION TECHNIQUES
EXAMPLE	One example of progress that has been made in reducing the usage of solvents during substance purification includes new, smaller columns that can handle larger sample amounts when combined with intelligent software algorithms. Another example is a research project examining how to virtually eliminate the use of solvents in chromatography. The method has been refined, and new prototypes have been developed during the course of the year.	The ability to remotely control and monitor instruments and processes saves time and resources. One example of Biotage creating efficient workflows for its customers is through Bluetooth® technology, where information can be smoothly transferred from an analytical tool to one or more devices. This is one of several digitalization initiatives Biotage is developing for the future. New, intuitive interfaces also make it easier for customers to familiarize new user groups with the system.	In 2018 Biotage developed new software that can be applied to existing equipment. This has streamlined the purification process and reduced solvent usage. The company has made purification technology more cost effective by developing its own UV detectors to improve performance. The project is constantly undergoing improvements, with a focus on improving performance and reducing environmental impact in order to continue to improve the cost efficiency.



Successful product launches

The company's largest individual product area within Organic Chemistry is purification, where the flash purification system and its line of consumable accessories account for the majority of sales. Within this area, Biotage® Selekt and Biotage® Sfär were launched in 2018. These products were developed to position Biotage as a complete partner for customers seeking efficient chemistry, delivering high quality and reliability with less impact on the environment. The products facilitate more efficient separation with higher quality and less environmental impact.

Biotage® Selekt – for increased productivity

Biotage® Selekt is a very compact system for flash purification. The new smaller columns can be mounted either on the side or front of the instrument and have been developed for maximum productivity. The instrument's high flow and high-pressure capacity allows flash purification to be performed more efficiently and quickly with less consumption of solvents. Biotage® Selekt has a redesigned large touch-screen with an intuitive interface that makes it easy to locate the controls and lessens the time needed for training.

Biotage® Sfär - lower usage of materials and more efficient separation

In tandem with the new system, Biotage® Sfär was launched - a complete suite of new, more efficient flash purification columns that come in different sizes, from 5 g to 350 g, with a variety of media. The media in the columns are made from spherical silicon dioxide with a large surface area that provides a higher load capacity, making it possible for chemists to use a smaller column for the same separation process. This not only reduces the amount of solvent needed, but also the cost of the separation.

Biotage® Selekt – a system that can be counted on

- 1. Improved productivity.** It's important for the job to be done right the first time. The company's system is designed for maximum productivity.
- 2. The most environmentally-friendly columns.** All Biotage® Sfär columns are packed with spherical silicon dioxide, which has a large surface area and reduces the usage of solvents and materials.
- 3. Incredibly simple to use.** Biotage® Selekt is flexible, intuitive, and simple to use for novices and experts alike.
- 4. More control.** Lightning-quick, exact chromatography for advanced separation
- 5. Trust.** The results aren't the only thing that need to be reliable. High-quality Biotage instruments ensure greater dependability and safety.

Sustainability initiatives with a lasting impact

The goal of Biotage is for our business to contribute to a more sustainable world, with respect for both the environment and people. To strengthen this commitment, during the year, we became a signatory of the UN's Global Compact, whose ten principles provide us with a stable foundation and guidelines for operating a more sustainable business.

Biotage competes in several international markets, with a global responsibility for its production processes as well as its employees. Our business is built on close, long-term relationships with customers, suppliers, and other business partners. In each individual case, Biotage takes pride in being a reliable and stable partner. The company's activities benefit the community at large, for example, through our products and solutions being used for chemical separation and synthesis, which are, among other things, important steps in the development of new drugs.

The company's business concept is based upon responsibility and a long-term view, both when it comes to ensuring financial stability and reducing our impact on the environment. We constantly work on improving customers' efficiency, which leads to lower costs and a smaller environmental footprint. This is, for example, facilitated by the extended lifespan of our products and so-called green chemistry solutions. We are constantly making improvements in order to create sustainable manufacturing processes that reduce the need for solvents in chemical processes.

Biotage seeks to have a positive influence on communities and serve a role model wherever the company is active. Aside from our commercial goals and principles, our business activities must be performed with strict requirements for integrity and ethics. Therefore, Biotage is focused on acting in a professional, honest, and ethically-correct manner. In addition to being a signatory of the UN's Global Compact, Biotage supports the ILO's fundamental conventions and the OECD's Guidelines for Multinational Enterprises.

Our sustainability initiatives are governed by the the Biotage Code of Conduct, our whistleblower policy, and our company policies.

Code of Conduct

The Biotage Code of Conduct contains guidelines specifying the responsibility the company has toward employees and stakeholders. The company's goal is for all employees, partners, and suppliers to follow the Code of Conduct. The CEO of each individual group company is responsible for ensuring that everyday work activities are performed in accordance with this code.

The work in following up on the Code of Conduct, which was started in 2017, was designed in a manner that all employees participate on a regular basis and certify that they are familiar with the code and comply with it during their everyday work activities. The Code of Conduct covers areas such as anti-corruption, the environment, financial reporting, human rights, and working conditions as well as, e.g., equal opportunity, non-discrimination, organiza-

tional freedom, and opposition to child labor and forced labor.

Whistleblowing

Biotage aims for the highest possible levels of transparency, honesty, and accountability. The group has a global whistleblower system, where employees, customers, and other business partners are given the opportunity to report any irregularities or deviations from the Code of Conduct. All employees must be able to feel comfortable reporting anomalies, irregularities, or serious incidents related to Biotage without any fear of reprisal. No violations were reported in 2018.

Sustainability risks

If Biotage fails to perform as expected in its sustainability efforts, there is a risk of negative impacts in several areas. In 2018 the risk analyses concerning the company's internal manufacturing processes were revised. The sustainability risks Biotage has identified are presented below. Please refer to Page 32 for a more detailed description of the company's risks.

One example where we have made sustainability improvements is the launch of the Biotage® Selekt flash chromatography system and the Biotage® Sfär consumables. Biotage® Selekt and Biotage® Sfär make it possible to fit a larger quantity of samples into the same size column, resulting in less solvent usage with effective separation of a larger quantity of samples. This time-saving increase in throughput means that customers can process a larger number of samples in less time and with lower usage of materials, reducing their impact on the environment.

The lifespan of existing equipment can be extended, among other things, through the company's development of "smart" products that can be customized to meet changing needs and requirements. Existing products can, for example, be updated with new software or consumables in order to prolong their lifespan and/or expand their areas of application.



“Biotage seeks to have a positive influence on communities and serve as a role model wherever the company is active.”

RISK AREA	DESCRIPTION OF RISK AND POTENTIAL IMPACTS	HOW BIOTAGE REMEDIATES RISK
Environmental	Chemical spills in the lab environment and emission of chemicals into the run-off system	Routine assessment of the business's environmental risks. Biotage has routines and procedures for chemical processing and the prevention of effluence into the run-off system, for example by sealing wells.
Employee skills	Lack of appropriate skills. Recruiting and retaining qualified, skilled workers is a prerequisite in order to carry out the group's business strategies.	Annual performance reviews that set goals and monitor the progress of each employee, along with individual career planning sessions. Biotage actively works on maintaining an attractive work environment that provides employees with opportunities for personal growth and development. The company also actively recruits new employees in order to find the right skills.
Employee health and safety	The risk that employees are injured in a production accident and risk related to the psychosocial workplace environment	Routine assessments of the business's health and safety risks. Appointed workplace environment groups and safety ombudsmen carry out ongoing audits to handle local workplace environment issues.
Breach of the Code of Conduct in a Biotage business or the supply chain	The risk that employees, suppliers, or subcontractors do not comply with the Biotage Code of Conduct, including with respect to the environment, working conditions, human rights, or anti-corruption.	Training of Biotage personnel, updated Code of Conduct, supplier agreements, and a global whistleblower system. Biotage has also introduced the “Biotage Group Modern Slavery and Human Trafficking Statement,” which discusses the process for identifying individual risks and risk areas and discusses the internal allocation of responsibilities, inspection, monitoring, and training.
Corruption	Corruption and bribery: individuals acting wrongly or criminally in order to derive financial or personal gain	Policy of zero tolerance for bribery and corruption, internal control mechanisms to prevent and discover irregularities, and anti-bribery and anti-corruption clauses in agreements with partners.

Employees - our most important asset

Employees are the company's most important asset. It is the commitment and knowledge of our employees that leads to growth. By offering empowerment, a positive environment for development, and rapid decision-making pathways Biotage is able to recruit dedicated employees with top-notch skills. In 2018 over 100 new employees were welcomed into the company. In addition, many employees have found new career opportunities within the group.



Biotage has grown at a brisk pace in recent years, and for the first time in history, the workforce now exceeds 400 employees. As of December 31, 2018, the total number of employees was 405 - an increase of 16 percent.

Ethics and morals are of paramount importance to Biotage, and the company's position with respect to this is reflected in the majority of our policy documents as well in as the Biotage Code of Conduct. In order for new employees to be able to quickly assimilate the company's values and routines, they participate in an introduction program including training in the company's Code of Conduct. Each year, a follow-up is performed, where all of the company's employees in every country read the Code of Conduct and certify that they are familiar with it and agree to comply with it.

Biotage carried out its first employee survey during the year to measure and assess the work environment in all countries. The goal of the survey was not only to measure the health of the organization, but also to identify areas for future improvement. We plan to carry out this survey on a routine basis going forward in order to improve our follow-up and assessment of the work environment. 76% of the company's employees responded to this completely anonymous

survey. The results show, among other things, that 87 percent of the employees indicate they are optimistic about the company's future and 84% feel their supervisors listen to them. The areas for improvement included, e.g., suggestions to improve internal communication and update certain IT structures.

The higher employee turnover during the year primarily stems from more turnover within the sales force in Europe and the USA. There is currently low unemployment in the United States, which both affects employee turnover in the region and within our group as a whole.

Motivational leadership

Biotage is a global employer with an owner dedicated to ensuring that the company's workplace is an attractive place to work. A flexible organizational structure and rapid decision-making pathways make it possible for employees to develop and contribute to the company's growth. Leadership is a key factor in what makes a workplace attractive. For this reason, Biotage focuses strongly on the recruitment of senior executives. All supervisors and senior managers have the opportunity to participate in professional training focused on leadership. An important part of leadership is about supporting the development of employees and promoting an open, transparent corporate culture. Annual performance reviews provide employees with constructive feedback and clear goals for

their work. Individualized career planning is also included, where the employee's goals and motivation are assessed in order to outline appropriate developmental steps.

Diversity and equal opportunity

A basic principle at Biotage is that all employees must be treated equally and fairly. In order to achieve its business goals, Biotage seeks to attract employees with a diverse set of skills and experience. Diversity is becoming increasingly more important in a global environment, where customers as well as suppliers come from far-ranging markets and a variety of cultural backgrounds. Biotage has tried to eliminate gender bias in its management group (43% women) as well as its board (40% women, nominated by shareholders) and constantly strives to achieve overall gender equality in its recruitment of new employees for the group. The Code of Conduct contains guidelines that aim to ensure that all employees, regardless of gender, ethnicity, religion, or sexual preference, are provided with equal

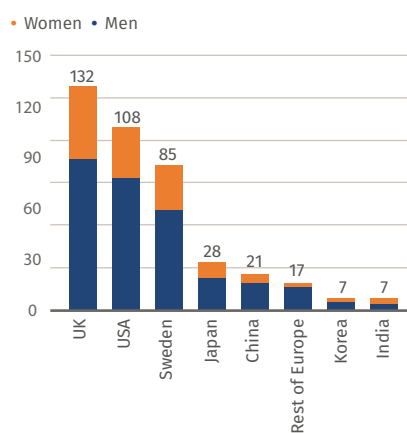
2.0% 17%

Sick leave in Sweden during the year (2017 1.3%, 2016 1.0%)

Employee turnover in the Biotage group (2017 8.6%, 2016 6.5%)

“Biotage is a global employer and is dedicated to ensuring that the company’s workplace is an attractive place to work.”

Number of employees by geography and gender as of December 31



opportunities for growth and receive equal pay for equivalent work tasks. This is also clarified in the company’s equal opportunity policy, which applies to the entire group, as well as in the local employee handbooks in each country.

The equal opportunity policy includes an equal opportunity plan that’s revised every three years. The goal of this action plan is not only to evaluate past years, but also to peer into the future and define any measures that need to be adopted in the upcoming period. In order to ensure equal pay as far as possible, wage analyses are run.

Health and safety

Biotage seeks to have a safe, healthy workplace environment, both when it comes to the physical as well as the psychosocial environment. The workplace environment initiatives include setting quality goals and carrying out risk assessments, so employees enjoy their jobs and can have a reasonable work-life balance. The company approaches workplace environment issues in a systematic, structured manner, based on the company-wide workplace environment policy and in accordance with international standards and local legislation. All of the company’s policies include action plans for handling any transgressions.

Biotage has historically had a low level of sick leave. In 2018 overall sick leave incidence in Sweden was 2.0% (4.4% for women and 0.8% for men).

The health risks at Biotage are low, and any incidents related to the workplace environment or safety are reported. In 2018 the company had a small number of reported incidents. Measures that were adopted included updating risk assessments and work processes as well as increasing requirements for the mandatory usage of personal protective gear in certain processes. For preventive purposes, “near-miss incidents” are reported internally, and action plans are drafted to prevent future incidents.



Career opportunities within the group

Dan Menasco worked at Biotage as an Application Chemist in Charlotte, North Carolina (USA). When a position was advertised in the Marketing department at the head office in Uppsala, Sweden, he decided to apply. When he was hired for the position, he moved his entire family to Sweden. We asked Dan a few questions about career opportunities within the Biotage group.

How are the career opportunities within the group?

Biotage is a relatively small company. Therefore, there are a limited number of new positions. At the same time, it’s a global company with many opportunities. Naturally, it makes it easier if you take the initiative, plan your career, and dare to climb out of your comfort zone.

How did you find your new position?

An area was being divided into two, and an individual fitting my profile was needed in Uppsala, so I applied directly. I wanted to take the next step and be able to use all of my skills and be able to work on development projects, so I was very happy when I got the opportunity.

What was the deciding factor when it came to moving to Sweden?

That I got a position that involved more responsibility and more opportunities to participate in and affect the development of new instruments. In addition, my wife was in favor of moving and, in general, working conditions in Sweden are very good.

Any tips on making a career at Biotage?

Believe in yourself! Take the initiative and network. Don’t be afraid to ask about plans for the future and new positions. Keep your eyes open and when an opportunity pops up, take the chance. Let your supervisor know the direction you want to develop in.

Dan Menasco

Title: Global Technical Product Manager – Analytical

Living: in Uppsala, Sweden

Birthplace: Medford, Oregon, USA

Education: B.S. in Biochemistry and Ph.D. in Chemistry, University of South Carolina

Employed since: 2015.

Reduced environmental impact

The demand for less environmental impact is rising both via new legislation and from the company's stakeholders. Biotage strives to minimize environmental impacts both in its business activities and through the products and services the company offers.

The company's manufacturing processes are flexible and can be adapted in response to changing needs or environmental requirements. Most of our manufacturing is done at our production plant in Cardiff, Wales as well as in New Hampshire, following the acquisition of Horizon Technology Inc. We also have a smaller production facility in Lund, Sweden. Biotage is currently in the process of expanding its capacity with a new manufacturing plant adjoining the existing Cardiff plant and is intently focused on making sure the facility complies with the company's strict requirements for smooth workflows with the lowest possible impact on the environment. Integration of the company's most recent acquisition, Horizon Technology Inc., is still ongoing and has followed our environmental goals according to plan.

In 2016 the facility in Cardiff was certified in accordance with ISO 14001 by the British Standards Institute. The facility in Lund is preparing for certification, and work pursuant to the ISO 14001 requirements is already underway. As part of the ISO 14001 program, Biotage is monitoring a number of important parameters that affect the Company's environmental performance. These include the usage of water, gas, and electricity.

Through strategic research focused on "smart" products with a reduced usage of solvents, Biotage is an innovator and a leader in the growing green chemistry revolution. Moreover, the company is evaluating how products that are already on the market can continue to be improved, especially with respect to the manufacturing process. As an example, Biotage

The company's environmental goals

- 1 Reduce the amount of waste generated in manufacturing operations
- 2 Reduce the use of environmentally hazardous substances
- 3 Increase manufacturing efficiency with respect to water and electricity

The goals are monitored by internal audits within the scope of our environmental system as well as tracking of the data reported on, for example, waste and energy.

has been able to offer customers new software for existing platforms to shorten process times and reduce the usage of solvents.

Usage of solvents

Both of the manufacturing facilities in Cardiff and Lund are required to have a license for the usage of solvents in the manufacturing process. Assessment and manufacturing development of the business in New Hampshire, which was acquired in 2018, is still ongoing. To reduce the usage of solvents within the group, Biotage is constantly working on changes to its manufacturing processes, for example, by reducing the number of cleaning steps where solvents are used. The usage of solvents in manufacturing

increased by 37% in 2018 compared to 2017. This increase can be explained by the fact that demand for chemical media has risen significantly and the production of silica- and polymer-based materials rose by 30 and 91 percent, respectively. However, relative to the production volumes of these products, the manufacturing has become more efficient.

Energy use

The main environmental impact from manufacturing operations stems from energy consumption. In Cardiff energy consumption was the same as for the prior year, while at the same time, overall production value increased by 15 percent. This more efficient use of energy is the result of investments in new ventilation facilities with better energy performance.

Waste

Biotage actively works on reducing the overall amount of waste and increasing the proportion of waste that's recycled. The amount of waste sorted as corrugated cardboard decreased by 33 percent, but other non-hazardous waste increased by 70 percent. During the year, the company's non-hazardous waste removal supplier provided assurances that 100 percent of this waste is recycled for energy.

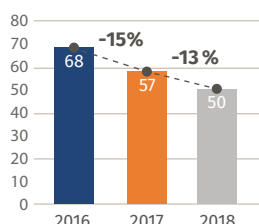
Shipping

To reduce the environmental impact of shipping, Biotage tries as far as possible to minimize the share of air freight in favor of OTR and sea freight. The majority of freight from Cardiff to Uppsala and customers in Europe is shipped by truck and boat, most shipments to the US are sent via sea freight. In 2018 the overall volume of sea freight shipments to the USA increased since shipping from Sweden to the USA also goes by sea. However, for some shipments, air freight is difficult to avoid due to either low production volumes, the high value of the goods, and/or time constraints. This applies not only to shipping within Europe, but also to the USA and Asia.

One way to reduce the company's environmental impact is by regulating employee business travel. The group encourages the use of videoconferencing in order to avoid unnecessary business trips.

Electricity consumption

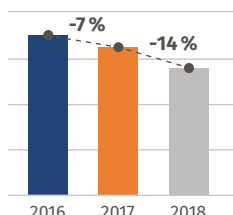
kWh per 1,000 KGBP



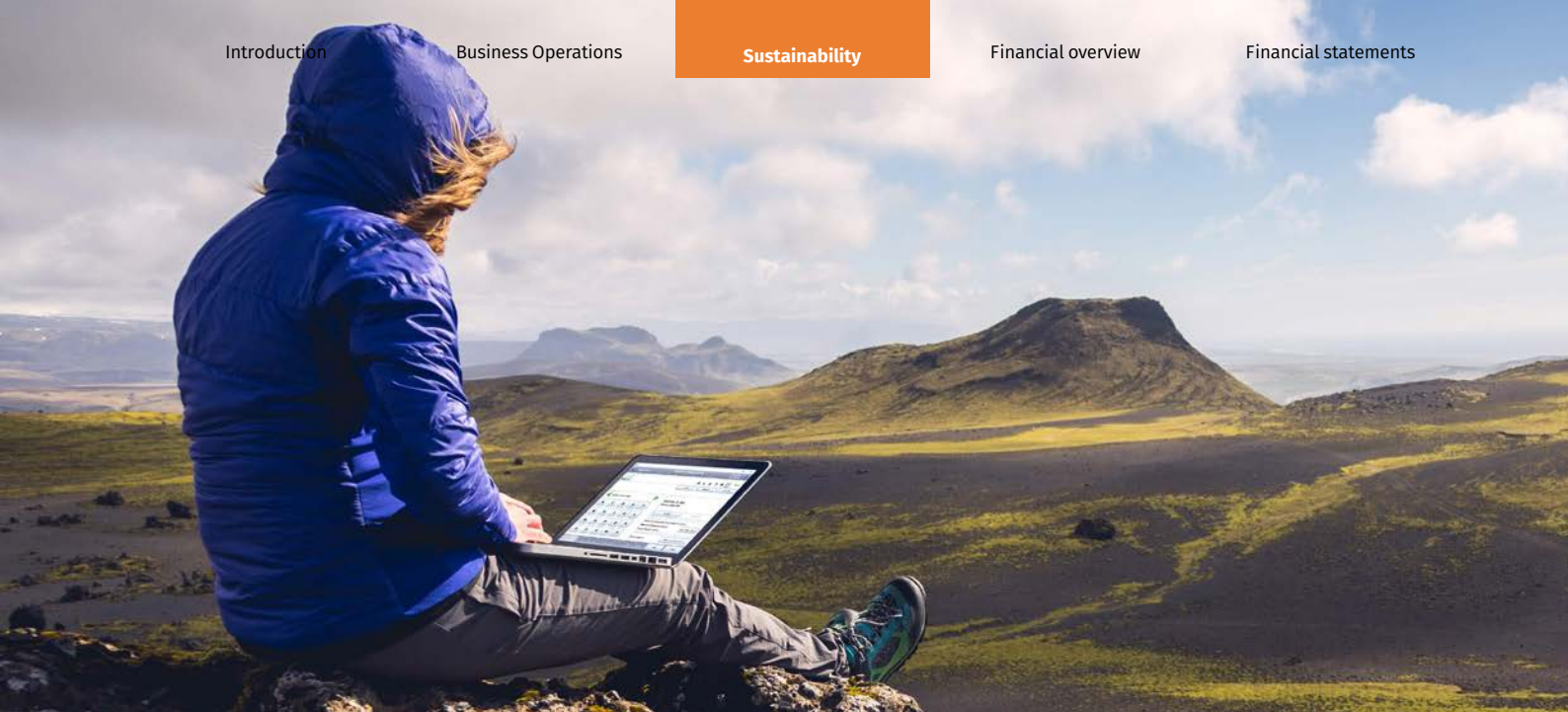
Electricity consumption was unchanged, while at the same time production value increased 15% in 2018 (24%). This is an efficiency gain equivalent to around 13% (15%).

Solvent concentration

Amount of solvent per relevant unit of manufacturing weight



In relation to the weight of manufactured goods, where solvent is used in the production process, solvent consumption was reduced by 14% in 2018 (7%).



A global social responsibility

A global presence is accompanied by global responsibility. Biotage promotes anti-corruption and human rights in its governing policies that pertain to its relationship with stakeholders, regardless of the market. In recent years, Biotage has stepped up its work in this area through the introduction of new policy documents - an initiative that has continued throughout the year in 2018.

Ethics and morals are at the core of the company's business and must be reflected in all of the company's relationships. To address the issue internally and agree upon a common global approach within the group, an anti-corruption policy has been issued. This emphasizes the value Biotage places on integrity and transparency and describes the zero tolerance policy for corruption. During the course of the year, all employees were informed about the Code of Conduct, where anti-corruption is an important part, and certified that they have read it and comply with it. No cases of corruption within the Biotage group were reported during the year.

Bribery and corruption can occur in a variety of forms, including for example, offering or giving money or gifts to an individual or family member or in the shape of inflated commissions, fake consulting contracts, unauthorized rebates, or political or charitable donations. If abused, ordinary business methods may be interpreted as corrupt payments. Giving, offering, requesting, or receiving bribes are all forms of corruption, even if they're carried out indirectly via a third party. Gifts, influence, compensation,

or personal favors may only be offered to third parties if they are of insignificant value and are consistent with prevailing practices. In order to lower the risk of improprieties, Biotage has routines and procedures in place for all subsidiaries with clear rules regarding the jurisdiction and authorization procedure for approval of payments. Furthermore, monthly audits are carried out by the Finance department at the headquarters in Uppsala. Training on the existing policies is provided on an annual basis.

Modern slavery and human trafficking statement

Biotage reserves the right to take action in the event any activities of its own employees or suppliers provide grounds for suspicion that human rights may have been violated. In addition to incorporating human rights in the Code of Conduct, in 2017 a policy was implemented addressing human rights within the company. This aims to lower the risk of modern slave trading or human trafficking within our business or any supply chain Biotage may be associated with.

Biotage follows a procedure for identifying high-risk countries and potential activities that may pose a risk for human trafficking. All sup-

pliers are assessed based on their geographic location and industry using the Global Risk Index and the US Department of Labor's List of Goods Produced by Child Labor or Forced Labor. Biotage has a system called the Supplier Performance Management System that routinely monitors, inspects, and follows up on suppliers in order to ensure that they comply with the company's Code of Conduct. The contract with the supplier stipulates requirements for worker rights, health and safety, the environment, non-discrimination, and diversity. Suppliers who breach the Code of Conduct are held accountable. The company's response to violations is determined on a case-by-case basis in proportion to the seriousness of the infringement. Biotage has moreover identified a number of high-risk activities in relation to purchasing. In the event the company is not able to verify that a supplier can meet the requirements, another supplier is chosen. In 2018 Biotage increased the number of supplier audits and 4 audits were carried out.

During the prior fiscal year, internal training was started in parts of Biotage to ensure that the policy for human rights was being complied with. In 2018 the organization continued its work on this training program. For example, the training includes the early identification of risks within various corporate activities and departments, awareness of risks when purchasing or contracting with suppliers, available assistance in the area, and measures that should be adopted if a supplier does not comply with the company's policies for human rights.

Four internal audits have been carried out over the course of the year and no significant discrepancies from the company's requirements have been discovered.

The Company's shares

Biotage shares were listed on NASDAQ Stockholm's Mid Cap list and traded under the name Biotage AB (BIOT.ST) during 2018. The number of shares outstanding on December 31, 2018 was 64,714,447 (64,714,447). Based on the closing price per share on December 28, 2018, the Company's market cap amounted to SEK 7,054 (5,436) million.

Price development

The share price increased by 28 percent from SEK 85.00 to SEK 109.00 million in 2018. The highest closing price in 2018 was SEK 143.20 on November 8. The lowest closing price was SEK 69.20 on April 4. In 2018, 36.4 (28.4) million shares were traded at a market value of SEK 3,802 (1,790) million. The turnover rate for the year was 56 (44) percent.

Shareholders

As of December 31, 2018, the number of known shareholders in Biotage was 7,561 (7,105). The 15 largest owners accounted for 41.7 (45.6) percent of the total capital and votes. Foreign owners accounted for 51.4

(41.5) percent of the total capital and votes. The highest proportion of foreign ownership was in Norway, the US, the UK and France.

Authorization to issue shares

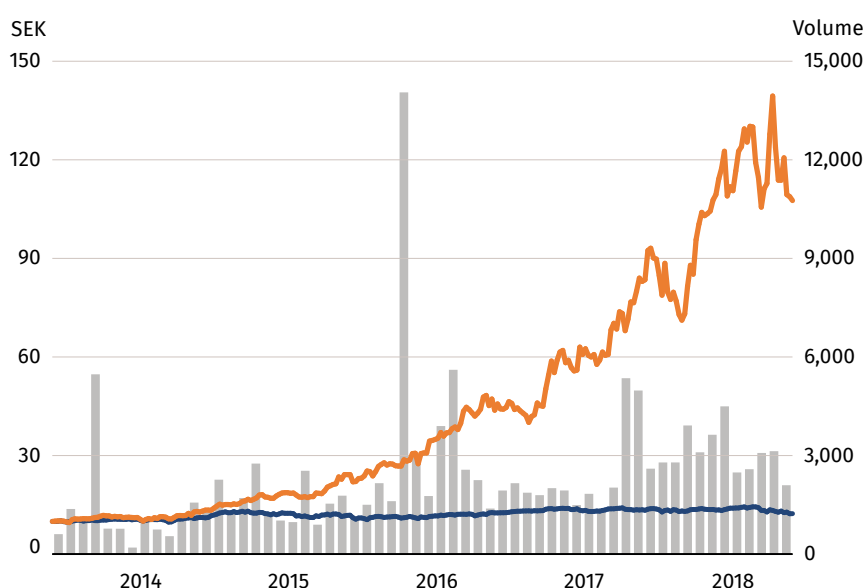
At the 2018 AGM, the Board was authorized to adopt a resolution regarding the issuance of one or more offerings of shares and/or convertibles. On January 15, 2019 the Board decided to exercise the authorization to issue shares as part of the consideration for the acquisition of PhyNexus Inc. Following the issue, the number of Biotage shares increased from 64,714,447 to 65,201,784, resulting in dilution of 0.7 percent for existing shareholders.

Dividend policy and dividends

The Biotage dividend policy requires at least 50 percent earnings per share to be distributed to shareholders. The Board of Biotage AB proposes a dividend of SEK 1.50 per share for the fiscal year 2018. The previous year's dividend was SEK 1.40 per share, and would have been SEK 1.39 based on the new number of shares outstanding after the January 2019 issue. Earnings per share amounted to SEK 2.59 (2.14).

Change in price per share and volume

• Biotage • OMX Stockholm_PI • Volume of shares traded in thousands



Source: Financial Information

Ownership categories, December 31, 2018

Owner	Number of shares	Share of capital and votes, %
Foreign institutional owners	16,277,152	25.2
Private individuals in Sweden	14,727,084	22.8
Swedish institutional owners	11,835,603	18.3
Other owners	8,299,995	12.8
Anonymous ownership	13,574,613	21.0
Total	64,717,447	100.0

15 largest known owners, December 31, 2018

Owner	Number of shares	Share of capital and votes, %
Swedbank Robur Fonder	5,198,062	8.0
Vind LV AS	3,544,261	5.5
The Fourth Swedish National Pension Fund	3,365,788	5.2
Montanaro	3,290,000	5.1
Oppenheimer	2,295,300	3.5
ODIN Fonder	1,500,000	2.3
Ove Mattsson	1,434,450	2.2
Groupama Asset Management	948,943	1.5
Norges Bank	853,379	1.3
Lena Westergren	772,859	1.2
Susanne Wetterlin	772,700	1.2
Eva Forsberg	772,700	1.2
Ann-Charlotte Bergström	772,700	1.2
Jonas Lenman	772,700	1.2
Dimensional Fund Advisors	682,893	1.1
Total	26,976,735	41.7

Shareholders grouped by size, December 31, 2018

Number of shares per owner	Number of known share-holders	Share of capital and votes, %
1-1,000	6,183	2.1
1,001-10,000	1,081	5.3
10,001-100,000	229	10.5
100,001-500,000	47	17.0
500,001-1,000,000	14	14.9
1,000,001-	7	31.9
Anonymous ownership	N/A	18.4
Total	7,561	100.0

Source: Monitor, Modular Finance

Board of Directors' Report

About the Company

Biotage provides effective separation technology, from analysis to industrial scale, and high-quality solutions for organic and analytical chemistry in everything from research to commercial analytical laboratories and industry applications. Users of Biotage products include government agencies, academic institutions and the pharmaceutical and food industries. Biotage AB, headquartered in Uppsala, Sweden, is the Parent Company of the Group and has wholly-owned subsidiaries in Sweden, the United Kingdom, Germany, France, Italy, the United States, Japan, China, South Korea and India. The Biotage share is listed on Nasdaq Stockholm.

Summary of business activities in 2018

Biotage set a new sales record with sales in excess of SEK 900 million for 2018. Reported net sales increased by 21.8 percent. At comparable exchange rates and adjusted for acquisitions, net sales increased by 8.0 percent, which is exactly in line with the Company's growth target. Geographically, the United States continued to be the largest market, with 42 (42) percent of net sales. The EU and EMEA accounted for 29 (32) percent of net sales and Asia for 29 (26) percent.

Asia accounted for the strongest percentage growth for Q4 and the full year. Sales growth in this region continues to be dominated by organic chemistry system sales, but Biotage also began a market drive in Asia for analytical chemistry in 2018. The two more developed, and single largest, geographic markets for Biotage products, the US and Europe, continue to grow. Although these markets do not match the expansive growth of Asia, they are growing faster than the global market for the Company's products on a full-year basis. In 2018, the development of a local organization began in India, where Biotage registered a subsidiary at the end of 2017.

In addition to the year's major new product launches in organic chemistry, Biotage has successfully worked to provide complete workflow solutions for customers in this area. There has also been strong sales growth for the Company's industrial products, which represented a total of 10 percent of sales at the end of 2018, while analytical chemistry products had something of an off year, with lower growth than expected.

The company has returned to profitable growth and operating profit (EBIT) increased by 29 percent during the year. The operating margin improved by one percentage point to 18.9 percent, compared with the new profitability target of an average of 20 percent over a three-year period.

Successful efficiency measures and increased sales are enabling Biotage to continue to grow with increased profitability. Biotage works constantly to improve efficiency at the production facility in Cardiff, Wales. Efficiency improvements continued in 2018, with larger production volumes and focused efforts to achieve a higher degree of production automation. The gross margin remained unchanged at 61 percent, despite an unfavorable product mix, with systems accounting for 51 (47) percent of sales and aftermarket products for 49 (53) percent. The main reason why Biotage has not come closer to the strategic target of 40/60 for the systems/aftermarket ratio is the success in Asia, notably in China, where the Company's sales are almost exclusively systems.

The integration of Horizon Technology, Inc., which was acquired in January 2018, has progressed well. The acquisition of Horizon has brought Biotage access to important knowledge and new products

that strengthen the Group's analytical chemistry offering in the areas of environment and food. Biotage has also worked to improve margins in the acquired business and these are now in line with the Group's overall profitability. The process of transferring production from the current contract manufacturer of the V10 evaporation system to Horizon also began during the final months of the year. These activities move the integration of Horizon a step further, while capacity utilization and profitability in the acquired business are increasing.

On December 4, 2018, Biotage signed an agreement to acquire another US company, PhyNexus, Inc. The acquisition was finalized on January 15, 2019. With this acquisition, Biotage broadens its separation operations into small-scale purification of biomolecules – an area in which the Company has wanted to participate for a long time. The sales organization is now being strengthened to take full advantage of the opportunities in the acquired business. The feasibility of moving the PhyNexus instrument manufacturing to Horizon is also being considered.

The minority investment in Chreto A/S in fall 2016 was aimed at increasing exposure to the biomolecular field. Biotage also had an option to acquire the remaining Chreto shares at a pre-arranged price by the end of 2018. However, Biotage decided that the price was too high in relation to Chreto's level of progress in its development and the future investments that were considered necessary to commercialize this technology. Biotage did not therefore exercise this option and instead initiated discussions concerning an acquisition at a different valuation.

The Company's investments in research and development have generated several successful new products in recent years. On October 1, Biotage launched a brand-new technology platform in Purification, the Company's largest product area. The launch of the Biotage® Selekt flash purification system and associated Biotage® Sfär consumables represents a significant investment in more efficient and environmentally sound purification. The launch has been well received by the market.

Biotage works continuously on social responsibility issues and regulatory compliance. Policies for compliance with GDPR legislation were updated and adopted in 2018.

During the year, we worked with succession arrangements, in particular with regard to the current CEO Torben Jørgensen whose employment contract expires in April 2020. In a press release published on January 2, 2019, the Board informed the market that a recruitment process had been initiated.

Earnings and cash flow

The Group's net sales increased by 21.8 percent to SEK 910.9 (748.1) million. At comparable exchange rates and adjusted for acquisitions, net sales increased by 8.0 percent. The gross margin was 61.1 (61.0) percent. Systems accounted for 51 (47) percent of sales, while aftermarket products accounted for 49 (53) percent. The unfavorable product mix had an adverse impact on profitability, as did exchange differences on translating the Cardiff production facility's costs from GBP to SEK. However, this is offset by the positive contribution of volume increases and increased production efficiency to increased profitability.

Operating expenses were SEK 384.1 (323.0) million. The higher figure is mainly due to sales expenses increasing by SEK 49.0 million to SEK 256.7 (207.6) million as a result of sales organization expansion and the Horizon acquisition. Research and development costs increased by SEK 9.9 million to SEK 65.9 (56.0) million, while administrative

expenses rose by SEK 15.5 million to SEK 70.2 (54.7) million. The latter increase is largely attributable to the acquisition of Horizon. Other operating items, consisting mainly of currency effects on operating liabilities and receivables and the Company's share of the associate Chreto's profit/loss, which was SEK -1.7 (-1.2) million, amounted to SEK 8.6 (-4.7) million for the year, yielding a positive effect of SEK 13.3 million between the years.

Operating profit improved by 29.1 percent to SEK 172.5 (133.6) million, corresponding to an operating margin (EBIT) of 18.9 (17.9) percent. Net financial items amounted to SEK 3.8 (2.6) million. Profit after tax was SEK 167.6 (138.7) million, an increase of 21 percent. The previous year's positive income tax and the majority of the tax expense reported for the year are due to the effects of changes in the carrying amounts of recognized loss carryforwards.

Cash flow from operations was SEK 155.0 (168.9) million. The year's cash flow from changes in working capital is negative, mainly due to large new product launches and increased sales as capital tied up in increased inventories and trade receivables.

Balance sheet items and financial position

The Group's cash & cash equivalents totaled SEK 177.0 (174.3) million on December 31, 2018. The Group had interest-bearing liabilities of SEK 109.4 (-) million at the end of the reporting period. These liabilities are related to loans within the framework of a credit facility that was arranged in connection with the acquisition of Horizon. The net cash position on December 31 was SEK 67.6 (174.3) million. A dividend of SEK 90.6 (80.9) million was paid to shareholders during the year.

The Group's goodwill amounted to SEK 186.1 (104.0) million on December 31. The increase is due the acquisition of Horizon Technology, which was completed in January 2018. Other goodwill is attributable to the acquisition of MIP Technologies AB in 2010 and the acquisition of two product lines from Caliper Life Sciences, Inc. in the same year.

Other intangible assets amounted to SEK 192.7 (118.6) million, with capitalized development costs accounting for SEK 101.2 (95.0) million of the figure. The largest single capitalized projects during the year were the development of the Biotage® Selekt and Biotage® Sfär products, which were launched on October 1, 2018. The increase in intangible assets consists mainly of identified surplus values of acquired assets in Horizon.

Trade receivables increased to SEK 185.1 (139.2) million as a result of sales growth. Inventories increased to SEK 132.3 (95.8) million, mainly due to launches of proprietary products and an expanded product range following the Horizon acquisition and global expansion of these products. The increase is also related to the construction of local warehouses to manage risks associated with deliveries to and from Cardiff in the event of Brexit.

Trade payables amounted to SEK 167.1 (139.7) million.

Equity amounted to SEK 702.2 (608.6) million on December 31. The main changes in equity during the year are as follows: net profit for the year SEK 167.6 (138.7) million and dividend to shareholders SEK -90.6 (-80.9) million.

Investments, depreciation and amortization

Investments amounted to SEK 178.4 (36.9) million, with the acquisition of Cardiff, completed in January 2018, accounting for SEK 131.2 million

of the figure. Depreciation, amortization and impairment amounted to SEK 39.4 (34.2) million. Capitalized development costs accounted for SEK 24.0 (22.8) million of investments and SEK 17.3 (18.6) million of depreciation, amortization and impairment.

Research and development

The Company's strategy for research and development is market-driven. Development of new, innovative products is an important competitive instrument and a way of creating opportunities for increased growth. Efforts are largely aimed at developing new products by improving existing technology and adding new functionality. In the short term, the continuing development of the system platforms and new applications for existing products are key growth drivers. The Company's long-term target is a level of investment in research and development of about 10 percent of sales. This investment level was 7.4 (7.6) percent in 2018. Capitalization amounted to SEK 24.0 (22.8) million. About one-tenth of the research and development budget is allocated to innovative research on new concepts, and Biotage collaborates with academic research groups within this framework.

Intellectual property rights

Biotage uses its intellectual property rights as a commercial instrument to create competitive advantages. Patent protection is sought for strategically important results, including processes, synthesis and analysis methods, products and applications. In addition to filing patent applications, the Company seeks to register its intellectual property rights in the form of design protection and trademarks. Biotage regularly evaluates its own portfolio of intellectual property rights on a cost-benefit basis. Biotage actively monitors the external environment and third-party intellectual property rights to ensure the Company does not infringe on the rights of others and other parties do not infringe on the rights of the Company. Biotage currently has 140 (129) registered patents and 56 (45) patent applications, divided into 52 (46) patent families. During the year, 4 (2) new patents were granted and 5 (5) new patent applications were submitted.

Personnel

The Group had 405 (349) employees at the end of the year. Within the framework of the Group's systematic work environment management, Biotage performs risk analyses and annual reviews to ensure a good physical and social work environment. Biotage has had relatively low sick leave over the years. Sick leave (including long-term sick leave) for all employees in the Swedish companies was 2.0 (1.3) percent. Sick leave (including long-term sick leave) for all employees in the UK company was 4.2 (3.1) percent. The Company invests in fitness activities and is prepared to act quickly and take measures should an employee suffer ill-health. In addition to its Work Environment Policy, the Company has a Code of Conduct, an Alcohol and Drug Policy, an Anti-corruption policy, a Policy on Sexual and Other Harassment and a whistleblowing procedure. All of the policies include action plans for handling any breaches of the guidelines. The Company's Equal Opportunities and Discrimination Policy is regularly updated and an updated Equal Opportunities Plan will be produced in 2019. Biotage conducts annual salary analyses in order to ensure equal pay as far as possible.

Biotage Sweden AB has a collective agreement with Innovation and Chemical Industries in Sweden. Other companies in the Group comply

with prevailing local regulations and guidelines. The Company applies an individual, performance-based and market-related pay structure.

Environment

Biotage production has a low environmental impact, as the Company does not have any manufacturing processes. The Company's production consists primarily of assembly and installation of components, and is conducted in compliance with the European Union's RoHS Directive. The environmental impact of Biotage operations is primarily related to freight and transportation. To reduce this impact, Biotage endeavors to switch from air to sea transport where possible and to optimize packaging by measures such as increasing the number of products in each package and buying packaging material and components locally if it can.

The main environmental impact of the production activities is from the use of energy, although production is not electricity-intensive. The facilities in Cardiff and Lund also generate waste in the form of solvents used in the production process. The Company's aim is to regularly replace these solvents, where possible, with others that have a lower environmental impact. Most of the solvents that are used are recycled. At the Cardiff facility, waste is also generated in the form of packaging materials from incoming goods, which are sorted and sent for recycling where possible. The environment is also an important aspect of product development. Ensuring that an environmental approach is an integral part of new product design helps minimize the environmental impact of the Company's own production and product use in customers' own operations.

In 2013, Biotage set up environmental management systems in Lund and Cardiff as part of the program to obtain ISO 14001 certification. The Cardiff facility, where most of the Company's own production takes place, was awarded ISO 14001 certification in April 2016. As part of the ISO 14001 program, Biotage is monitoring a number of important parameters that affect the Company's environmental performance. In 2018, there was an increase in material for recycling, but also in the quantity of waste. During the year, the company's non-hazardous waste removal supplier provided assurances that 100 percent of this waste is recycled for energy.

Risks

Biotage operations are associated with risks in certain areas.

Customers and market

The Company has a broad customer base in several different sectors. The fact that no customer accounts for more than five percent of sales reduces the risk of variations in demand arising from fluctuations in certain sectors or customer-specific circumstances. New or less expensive products from competitors could affect the Company's market position. Biotage seeks to establish the broadest possible areas of use for its products and to have sufficient customer segments to ensure that each customer's proportion of sales is kept to a minimum. In recent years, Biotage has worked to broaden its customer base to areas of application in food and the environment.

Products and technologies

The Company's broad product portfolio reduces sensitivity to product lifecycles and economic fluctuations. New biotechnology takes a relatively long time to establish, and Biotage is unable to guarantee that others will not develop products based on new technologies, which would reduce the competitiveness of the Company's products or make them redundant.

Production

Production of systems is handled by contract manufacturers in Sweden and the United States. Production also takes place at the

Company's own facility in Cardiff, Wales, in Salem, New Hampshire and, after the acquisition of PhyNexus in January 2019, in San Jose, California. Consumables are produced at the Lund, Cardiff and Salem facilities. All of the production facilities have the capacity to increase production at short notice. Dependence on external production capacity could increase the risk of delays or non-delivery, although this risk is considered minimal. Biotage has special staff who closely monitor how suppliers discharge their obligations in terms of quality and delivery times. In cases where Biotage enters into large call-off contracts, under which the Company commits to purchase certain volumes over a certain period, there is a risk of loss if sales do not meet the expectations on which the contracts are based. When the UK leaves the EU, the Company's operations in Wales could be adversely affected by trade and other agreements signed between the countries. Biotage has prepared for any transitional problems by building up inventories of selected products in strategically selected locations.

Personnel

Biotage has a large number of highly skilled, committed and motivated employees, who have developed strong customer relationships. Recruiting and retaining qualified staff is a prerequisite for pursuing the Group's business strategies. Biotage offers its employees competitive employment conditions, scope for input into the Group's products and services, some control over their own duties, and opportunities for personal development through initial training, continuing training and career planning.

Competitors

Competition in the Company's market is intense and Biotage often finds itself competing against large, well-established companies with vast financial and industrial resources at their disposal. It is not inconceivable that this competition could lead to lower market shares and reduced profitability for Biotage in the future. Biotage endeavors to maintain a strong market presence and to outperform its competitors in focusing on customer needs.

External risks

The Company's operations are exposed to risks associated with the effects of external factors and events. The main external risks include macroeconomic changes, political decisions on bilateral trade agreements, taxes, duties and other regulatory changes. By their very nature, external risks are out of the Company's control. Biotage endeavors to minimize this type of risk through business intelligence and access to the resources and expertise that will enable the Company to respond quickly when it needs to grasp and adapt to changes in the external environment.

Intellectual property rights

Biotage is dependent on non-patentable business secrets, know-how and continuing technological inventions, and on the ability to obtain and maintain patents to protect its technologies and products. Biotage continuously applies for patent protection for the methods and products it develops. Should the Company be unsuccessful in protecting its patents, business secrets, know-how or technologies, or have insufficient protection against competitors, the Company's competitive position could be undermined and the value of its existing and future products could be adversely affected. Should a party claim that the Company has infringed its intellectual property rights, the Company would be obliged to pay damages if the party were considered to have valid grounds for its claim against Biotage in a court of law. The Company might also need to initiate proceedings to defend its intellectual property rights. Even if Biotage were to win a case, the process would be time-consuming and costly, and would also take up much of management's time and attention. Biotage

endeavors to monitor the development of new products and methods in the external environment as far as possible, and to maintain good technical and legal expertise within its organization. There were no ongoing disputes when this annual report was issued.

Financial risks

Financial risks include currency risk, interest rate risk, credit risk, liquidity risk and refinancing risk. Currency risk is the most significant financial risk for Biotage, while interest risk and credit risk are less of a priority.

The Group's operating income is exposed to foreign currencies to a greater extent than its operating expenses. Exchange rate movements may shift the relationship between income and expenses and affect the Group's profitability. In order to reduce currency risk, some of the net flows have forward cover. In the long term, currency risk could be reduced if the Group relocated parts of its activities, although this might involve costs and loss of expertise. In addition, the Parent Company has invested in subsidiaries, notably in the U.S., U.K., China and Japan. As a result of these investments, the Group's equity is affected by exchange rate movements in relation to these countries' currencies.

Liquidity risk is primarily the risk of Biotage being unable to convert a financial asset sufficiently quickly at a market price, and incurring unforeseen losses if cash funds need to be released. Biotage's financial position and liquidity are satisfactory, with an equity ratio of 80 (80) percent, cash and cash equivalents of SEK 177.0 (174.3) million and liabilities to credit institutions of SEK 109.4 (0.0) million on the reporting date. The cash flow statements show a satisfactory positive cash flow from operating activities, providing reasonable assurance that the obligations associated with the current scope of operations can be fulfilled, and also taking into account the loan facility of up to SEK 150 million obtained in connection with the acquisition of Horizon Technology in January 2018. Consequently, Biotage does not currently have any tangible liquidity or financing risks that would leave the Group dependent on credit facilities or capital contributions for its expansion, with decision-making falling outside its control. Biotage addresses these risks in the long term by focusing strongly on operating profit, financial position and cash flow from operating activities. This will create the conditions for long-term organic growth and confidence among shareholders and lenders.

A description of the Group's financial risks and risk management is presented on pages 51–54.

Parent Company

The Group's Parent Company, Biotage AB, has wholly-owned subsidiaries in Sweden, the US, the UK, Germany, France, Italy, Japan, China, South Korea and India. The Parent Company is responsible for Group management, strategic business development and administrative functions at Group and subsidiary level.

The Parent Company's net sales amounted to SEK 2.5 (2.3) million. Operating expenses were SEK 24.4 (20.9) million. The increase is mainly due to costs associated with the acquisition of PhyNexus. Operating profit/loss was SEK -21.9 (-18.6) million.

The Parent Company's net financial items were SEK 92.3 (88.5) million. The Parent Company's profit after financial items amounted to SEK 70.7 (70.0) million.

Investments in intangible assets amounted to SEK 2.0 (1.7) million. The Parent Company's cash and bank balances were SEK 2.1 (1.5) million on December 31.

Mandate to issue shares

At the 2018 AGM, the Board was given a mandate to adopt the issue of shares and/or convertibles on one or more occasions. On January 15, 2019 the Board decided to exercise the authorization to issue shares

as part of the consideration for the acquisition of PhyNexus Inc. See also "The Biotage share" below.

The Biotage share

Biotage had a total of 64,714,447 shares outstanding on December 31, 2018. On January 15, the Board decided to issue shares as part of the purchase consideration for the acquisition of PhyNexus. The issue increased the number of Biotage shares from 64,714,447 to 65,201,784, resulting in dilution of 0.7 percent for existing shareholders. Each of the Company's shares gives the right to one vote, and the articles of association do not contain any restrictions on the number of shares a shareholder may vote at general meetings. There are no restrictions on transferability of shares. Shareholders Ann-Charlotte Bergström, Eva Forsberg, Lena Westergren, Jonas Lenman, Ove Mattsson and Susanne Wetterlin have concluded an agreement whereby they adopt, by concerted exercise of the voting rights they hold, a lasting common policy towards the management of the Company. The Company is not aware of any agreements between shareholders in this regard.

Sustainability reporting

As required by Chapter 6, Section 11, of the Annual Accounts Act, Biotage AB prepares a statutory sustainability report. The sustainability report is included in the annual report on pages 22–27.

Corporate governance

Biotage has prepared a Corporate Governance Report in accordance with the provisions and implementation guidelines contained in Swedish legislation and the Swedish Corporate Governance Code. The report has been prepared separately from the annual report. The report and related auditors' report are available on the Group's website at www.biotage.com together with other information about corporate governance within Biotage.

Guidelines for remuneration of senior executives

Current principles and guidelines for remuneration of senior executives adopted by the 2018 AGM are described in note 1 on pages 57–58.

The Board's proposed guidelines for the remuneration of senior executives to be presented for adoption at the 2019 annual general meeting

The Board proposes that the annual general meeting adopt the following guidelines for remuneration of senior executives (the CEO and other members of Group management). The guidelines shall apply to employment contracts entered into after the AGM's decision on the guidelines and to any changes made to existing conditions of employment after the meeting's decision.

The Company shall endeavor to offer its senior executives market-based salaries. The remuneration committee shall prepare remuneration matters and present proposals for the Board's consideration. Proposals for remuneration shall take into account the importance of duties, expertise, experience and performance. Remuneration shall comprise a fixed annual salary, variable pay, retirement benefits, discretionary payments, other benefits and termination benefits. The Board is entitled to derogate from these guidelines if it believes there is sufficient reason to do so in a particular case.

CEO

The Company's CEO receives a fixed annual salary and variable pay under the terms of his employment contract. In accordance with the contract, the Company makes a pension provision corresponding to 35 percent of the CEO's fixed annual salary. In addition to the fixed annual salary, the CEO receives variable pay of up to 100 percent of his fixed annual salary. The variable pay is linked to the Company's achievement of defined financial targets.

The CEO receives annual compensation of SEK 100,000 for travel and increased housing costs.

Other senior executives

This group consists of two individuals, who report directly to the CEO.

All members of Company management receive a fixed annual salary which is in line with market salaries, and variable pay of up to 40 percent of the fixed annual salary. 75 percent of the variable pay is linked to the Company's achievement of defined financial targets. The remaining 25 percent is based on performance-related goals for the individual. The pension provision is up to 30 percent of the fixed salary.

Any new members of Company management can expect the same remuneration conditions.

Variable pay and performance requirements

The Board is entitled to decide on the criteria for variable pay.

Discretionary payments

The Board may decide to award a discretionary payment to members of Company management, including the CEO. Such a discretionary payment may only be made in exceptional circumstances. Discretionary payments are not covered by the thresholds for senior executives.

Other benefits

Senior executives may be awarded other customary benefits such as a company car, health care, etc.

Termination benefits

Salaries during the period of notice and termination benefits for senior executives shall not exceed 24 monthly salaries.

Equity and share-based incentive programs

Any equity and share-based incentive programs shall be adopted by the Annual General Meeting. Allotment shall be in accordance with the decision of the AGM. There were no such programs when this annual report was issued.

Previously decided remuneration

There is no previously agreed upon remuneration that is not yet due for payment. A description of remuneration can be found in note 1.

Remuneration in 2018

For information on remuneration of senior executives in 2018, see note 1 on pages 55–58.

Significant events after the end of the fiscal year

- On January 2, the Board announced that a recruitment process had been initiated to appoint a new CEO. The current CEO Torben Jørgensen has announced that he intends to continue as CEO until a replacement has been engaged.
- The acquisition of PhyNexus was finalized on January 15. The purchase consideration was approximately USD 21.4 million, which corresponds to about SEK 191.3 million based on a transaction date SEK/USD exchange rate of 8.93. USD 4.8 million (SEK 43.3 million) was paid in cash and USD 6.6 million (SEK 58.6 million) was settled in newly issued Biotage shares on the closing date. The remaining USD 10.0 million (SEK 89.3 million) consists of contingent consideration based on future results.
- On January 15, the Board decided to issue consideration shares in connection with the acquisition of PhyNexus. The issue increased the number of Biotage shares from 64,714,447 to 65,201,784, resulting in dilution of 0.7 percent for existing shareholders.

Proposed appropriation of profit

The annual general meeting has the following amounts from the Parent Company at its disposal (SEK):

Retained earnings	380,532,355
Profit for the year	55,800,590
Total	436,332,945

The Board of Directors and CEO propose that the amounts be distributed as follows:

Dividend payment of SEK 1.50 per share to shareholders	97,802,676
Carried forward	338,530,269
Total	436,332,945

The Board proposes a dividend of SEK 1.50 (1.40) per share. Based on the current number of shares, the previous year's dividend would have been SEK 1.39 per share. The proposed dividend reduces the Parent Company's equity ratio by 4.7 percentage points to 62.3 percent and the Group's equity ratio by 3.2 percentage points to 66.8 percent. The calculations are based on the Group's statement of financial position and the Parent Company's balance sheet as of December 31, 2018.

The Board proposes Friday, April 26, 2019 as the record date, and the dividend payment is expected to be made by Euroclear Sweden AB on Thursday, May 2, 2019.

The proposed dividend has been made possible by cash generation from operations in 2018. The equity ratio is satisfactory in view of the fact that the Group's operations are expected to continue to be profitable. It is also the assessment that the Group's liquidity can be maintained at a similarly satisfactory level. It is the Board's opinion that the proposed dividend does not prevent the Company from discharging its current and long-term commitments or making necessary investments. The dividend also appears justifiable considering the demands that the nature, scope and risks of the business place on the size of equity. In this regard, the Board of Directors has considered the current economic situation, historical trends and future projections for both the Company and the market. It is hereby noted that the Board has taken into account the part of the purchase price that was paid in cash (SEK 43.3 million) when the acquisition of PhyNexus was closed on January 15, 2019. The proposed dividend can therefore be justified pursuant to Chapter 17, section 3, paragraphs 2-3, of the Swedish Companies Act (the precautionary principle).

The earnings and financial position of the Group and the Parent Company are presented in the Group's statement of comprehensive income, statement of financial position and statement of cash flows, the Parent Company's income statement, balance sheet and statement of cash flows, the statements of changes in equity and the accounting policies and notes which follow.

Five years in summary

Key figures and ratios	2018	2017	2016	2015	2014 ²⁾
<i>Group</i>					
Net sales, SEK thousands	910,896	748,147	667,912	610,534	490,381
Growth in net sales, %	21.8	12.0	9.4	24.5	10.3
Gross profit, SEK thousands	556,626	456,664	385,813	342,568	266,919
Gross margin, %	61.1	61.0	57.8	56.1	54.4
Operating margin, %	18.9	17.9	14.8	12.2	12.8
Profit margin, %	19.4	18.6	13.8	12.5	14.0
Profit before tax, SEK thousands	176,289	136,260	92,401	76,190	68,361
Total assets, SEK thousands	1,003,203	757,201	695,196	668,832	632,510
Equity/assets ratio, %	69.8	80.4	81.0	81.7	81.6
Capital expenditure, SEK thousands	178,411 ³⁾	37,804	68,161	32,126	32,177
Average number of employees	404	335	308	293	292
Return on equity, %	25.6	23.7	16.7	12.8	13.0
Return on capital employed, %	25.2	23.3	18.1	14.3	13.7
Return on total assets, %	20.3	18.8	14.7	11.9	11.0
Key figures and ratios					
Earnings, SEK/share	2.59	2.14	1.43	1.13	1.00
Earnings after dilution, SEK/share	2.59	2.14	1.43	1.13	1.00
Dividend, SEK/share ¹⁾	1.50	1.40	1.25	0.75	0.60
Stock market price at end of period, SEK/share	109.00	84.00	46.00	24.60	13.10
Equity, SEK/share	10.84	9.40	8.70	8.45	7.98
Equity after dilution, SEK/share	10.84	9.40	8.70	8.45	7.98
P/E ratio, times	42.1	39.3	32.2	21.7	13.1
P/S ratio, times	7.7	7.3	4.5	2.6	1.7
Cash flow from operations, SEK/share	2.40	2.61	2.15	1.86	1.25
Weighted average number of shares, thousands	64,714	64,714	64,714	64,714	64,714
Weighted average number of shares after dilution, thousands	64,714	64,714	64,714	64,714	64,714
Total number of shares outstanding at end of the period, thousands	64,714	64,714	64,714	64,714	64,714
Total number of shares outstanding after dilution at end of the period, thousands	64,714	64,714	64,714	64,714	64,714

¹⁾ Amounts refer to dividends paid for each year. The Board recommends that the AGM adopt a dividend of SEK 1.50 per share for the fiscal year 2018.

²⁾ The 2014 figures include a positive one-time item of SEK 13.5 million attributable to the revaluation of the additional purchase consideration provision.

³⁾ SEK 131.2 million relates to the acquisition of Horizon Technology Inc.

Consolidated Statement of Comprehensive Income

Amounts in SEK thousands	Note	2018	2017
Net sales	3	910,896	748,147
Cost of sales	1,2,4,5,6	-354,270	-291,483
Gross profit		556,626	456,664
Distribution costs	1,2,5,6	-256,670	-207,628
Administrative expenses	1,2,4,5,6	-70,165	-54,705
Research & development expenses	1,2,5,6	-65,925	-55,986
Other operating income	7	16,396	8,963
Other operating expenses		-7,784	-13,678
Total operating expenses		-384,148	-323,034
Operating profit		172,478	133,630
Finance income	8	6,126	3,210
Finance costs	8	-2,315	-580
Net financial items		3,811	2,631
Profit before tax		176,289	136,260
Income tax	9	-8,662	2,487
Profit/loss for the year		167,627	138,747
Other comprehensive income			
<i>Items that may be reclassified to profit or loss for the year:</i>			
Exchange differences from translation of foreign subsidiaries		16,623	-12,268
Cash flow hedges		-81	-213
Total other comprehensive income		16,542	-12,481
Total comprehensive income for the year		184,169	126,267
Profit/loss for the year attributable to owners of the Parent		167,627	138,747
Total comprehensive income attributable to owners of the Parent		184,169	126,267
Average number of shares outstanding		64,714,447	64,714,447
Average number of shares outstanding after dilution		64,714,447	64,714,447
Ordinary shares outstanding at the reporting date		64,714,447	64,714,447
Earnings per share		SEK 2.59	SEK 2.14
Earnings per share after dilution		SEK 2.59	SEK 2.14
Total comprehensive income per share after dilution		SEK 2.85	SEK 1.95

Quarterly overview Amounts in SEK thousands	2018				2017			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Net sales	234,574	232,204	236,071	208,048	188,888	177,716	196,315	185,228
Cost of sales	-90,534	-90,815	-91,678	-81,242	-73,271	-70,469	-75,270	-72,473
Gross profit	144,040	141,389	144,392	126,805	115,618	107,246	121,045	112,755
Gross margin	61.4%	60.9%	61.2%	61.0%	61.2%	60.3%	61.7%	60.9%
Operating expenses	-108,303	-96,250	-94,381	-85,214	-83,387	-77,986	-83,853	-77,808
Operating profit	35,737	45,139	50,011	41,591	32,231	29,260	37,192	34,947
Net financial items	-290	-1,846	1,903	4,044	2	725	600	1,304
Profit before tax	35,448	43,293	51,914	45,635	32,233	29,984	37,793	36,250
Tax	-8,120	735	-495	-782	2,417	1,143	-116	-958
Profit/loss for the period	27,327	44,027	51,419	44,853	34,650	31,127	37,677	35,293

Consolidated Statement of Financial Position

Amounts in SEK thousands	Note	12/31/2018	12/31/2017
ASSETS			
Non-current assets			
Property, plant & equipment	10	48,630	45,303
Goodwill	11	186,055	104,023
Other intangible assets	12	192,654	118,646
Investments in associates	13	17,368	17,838
Deferred tax asset	23	62,205	60,735
Other non-current receivables	14,19	1,853	1,404
Total non-current assets		508,765	347,949
Current assets			
Inventories	15	132,338	95,794
Trade and other receivables	16,19	185,080	139,195
Cash and cash equivalents	19	177,020	174,263
Total current assets		494,438	409,252
Total assets		1,003,203	757,201
EQUITY AND LIABILITIES			
Capital and reserves attributable to owners of the parent	17		
Share capital		89,953	89,953
Reserves		-79,877	-96,419
Retained earnings		692,104	615,077
Total equity		702,180	608,611
Non-current liabilities			
Liabilities to credit institutions	18,19	109,400	–
Other financial liabilities	19,20,21	1,201	656
Deferred tax liabilities	23	14,780	1,621
Non-current provisions	22	2,245	1,936
Total non-current liabilities		127,625	4,213
Current liabilities			
Trade and other payables	19,21,24	167,106	139,693
Tax liabilities		3,132	1,899
Current provisions	22	3,159	2,785
Total current liabilities		173,397	144,377
Total equity and liabilities		1,003,203	757,201

Consolidated statement of changes in equity

Amounts in SEK thousands	Share capital	Translation reserve	Hedging reserve	Retained earnings	Total equity
Opening balance January 1, 2017	89,953	-84,227	288	557,223	563,238
Changes in equity in 2017					
Profit/loss for the year	-	-	-	138,747	138,747
<i>Other comprehensive income:</i>					
Cash flow hedges	-	-	-213	-	-213
Exchange differences on translation of foreign subsidiaries	-	-12,268	-	-	-12,268
Total comprehensive income	-	-12,268	-213	138,747	126,267
Transactions with owners of the parent					
Dividend to shareholders of the parent	-	-	-	-80,893	-80,893
Closing balance December 31, 2017	89,953	-96,494	76	615,077	608,611
Changes in equity in 2018					
Profit/loss for the year	-	-	-	167,627	167,627
<i>Other comprehensive income:</i>					
Cash flow hedges	-	-	-81	-	-81
Exchange differences on translation of foreign subsidiaries	-	16,623	-	-	16,623
Total comprehensive income	-	16,623	-81	167,627	184,169
Transactions with owners of the parent					
Dividend to shareholders of the parent	-	-	-	-90,600	-90,600
Closing balance December 31, 2018	89,953	-79,871	-5	692,104	702,180

Consolidated Statement of Cash Flows

Amounts in SEK thousands	Note	2018	2017
Operating activities			
Profit before tax		176,289	136,260
Adjustments for non-cash items		27,684	36,216
		203,974	172,476
Income tax paid		-9,314	-5,091
Cash flow from operating activities before changes in working capital		194,659	167,385
<i>Cash flow from changes in working capital:</i>			
Increase (-)/decrease (+) in inventories		-21,416	-12,544
Increase (-)/decrease (+) in current receivables		-30,020	-6,372
Increase (+)/decrease (-) in other liabilities		11,781	20,463
Cash flow from operating activities		155,005	168,932
Investing activities			
Acquisition of intangible assets	12	-34,179	-26,998
Acquisition of property, plant and equipment	10	-12,979	-10,806
Acquisition of financial assets	13,14	-131,253	-
Sale of financial assets		-	902
Cash flow from investing activities		-178,411	-36,903
Financing activities			
Dividend to shareholders		-90,600	-80,893
New borrowing		109,942	-
Repayment of borrowings		-	-160
Cash flow from financing activities		19,342	-81,053
Cash flow for the year		-4,064	50,976
Cash and cash equivalents at beginning of year		174,263	128,622
Exchange differences		6,821	-5,336
Cash and cash equivalents at end of year		177,020	174,263
Additional disclosures			
<i>Adjustments for non-cash items:</i>			
Depreciation and impairment	6	39,412	34,225
Other items	25	-11,727	1,991
Total		27,684	36,216
Interest received		630	410
Interest paid		-1,738	-2

Income Statement, Parent

Amounts in SEK thousands	Note	2018	2017
Net sales	3	2,537	2,304
Administrative expenses	1,2,4,5,6	-21,998	-18,011
Research & development expenses	2,6	-2,467	-2,874
Other operating income	7	17	14
Operating expenses, net		-24,448	-20,871
Operating profit		-21,911	-18,567
<i>Profit/loss from financial investments:</i>			
Interest income, receivables from group companies		216	150
Interest expense, liabilities to group companies		-	-2,550
Other interest and similar income		-	0
Interest and similar expense		-1,613	-
Currency effects		3,335	4,608
Group contributions received		90,645	86,334
Net financial items	8	92,584	88,543
Profit/loss after financial items		70,673	69,976
Income tax	9,23	-14,872	8,649
Profit/loss for the year		55,801	78,626

Statement of Comprehensive Income, Parent

Amounts in SEK thousands	Note	2018	2017
Profit/loss for the year		55,801	78,626
Other comprehensive income			
Items that may be reclassified to profit or loss for the year:		-	-
Comprehensive income for the year		55,801	78,626

Balance Sheet, Parent

Amounts in SEK thousands	Note	12/31/2018	12/31/2017
ASSETS			
Non-current assets			
<i>Intangible assets</i>			
Patents and licenses	12	10,983	10,053
<i>Financial assets</i>			
Investments in group companies	26	471,922	470,399
Receivables from Group companies	28	169,378	11,685
Investments in associates	13	19,284	19,284
Deferred tax asset	23	33,623	48,495
		694,207	549,863
Total non-current assets		705,190	559,916
Current assets			
<i>Current receivables</i>			
Receivables from Group companies	28	73,783	55,600
Other receivables	16	2,616	307
Prepayments and accrued income	16	2,389	3,410
		78,788	59,317
Cash and bank balances		2,111	1,459
Total current assets		80,899	60,776
Total assets		786,088	620,692
EQUITY, PROVISIONS AND LIABILITIES			
Equity			
<i>Restricted equity</i>			
Share capital		89,953	89,953
<i>Unrestricted equity</i>	17		
Retained earnings		380,532	392,507
Profit/loss for the year		55,801	78,626
		436,333	471,133
Total equity		526,286	561,086
<i>Non-current liabilities</i>			
Liabilities to credit institutions	18	110,000	–
<i>Current liabilities</i>			
Trade payables	24	1,717	876
Liabilities to group companies	28	139,974	50,669
Other current liabilities	24	71	47
Accruals and deferred income	24	8,041	8,014
		149,802	59,606
Total equity and liabilities		786,088	620,692

Statement of Changes in Equity, Parent

Amounts in SEK thousands	Share capital	Retained earnings	Total equity
Opening balance January 1, 2017	89,953	473,400	563,353
Changes in equity in 2017			
Profit/loss for the year	–	78,626	78,626
Total comprehensive income	–	78,626	78,626
<i>Owner transactions:</i>			
Dividend to shareholders of the parent	–	-80,893	-80,893
Closing balance December 31, 2017	89,953	471,133	561,086
Changes in equity in 2018			
Profit/loss for the year	–	55,801	55,801
Total comprehensive income	–	55,801	55,801
<i>Owner transactions:</i>			
Dividend to shareholders of the parent	–	-90,600	-90,600
Closing balance December 31, 2018	89,953	436,333	526,286

Statement of Cash Flows, Parent

Amounts in SEK thousands	Note	2018	2017
Operating activities			
Profit/loss after financial items		70,673	69,976
Adjustments for non-cash items		-89,545	-85,461
		-18,872	-15,485
Income tax paid		–	–
Cash flow from operating activities before changes in working capital		-18,872	-15,485
<i>Cash flow from changes in working capital:</i>			
Increase (-)/decrease (+) in other current receivables		-86,517	101,803
Increase (+)/decrease (-) in other liabilities		90,195	-2,547
Cash flow from operating activities		-15,194	83,771
Investing activities			
Acquisition of subsidiaries		-1,524	-1,128
Acquisition of intangible assets	12	-2,030	-1,683
Cash flow from investing activities		-3,554	-2,811
Cash flow from financing activities			
New borrowing		110,000	–
Dividend to shareholders of the parent		-90,600	-80,893
Cash flow from financing activities		19,400	-80,893
Cash flow for the year		652	68
Cash and cash equivalents at beginning of year		1,459	1,391
Cash and cash equivalents at end of year		2,111	1,459
Additional disclosures:			
<i>Adjustments for non-cash items:</i>			
Depreciation and impairment	6,26	1,100	873
Group contributions		-90,645	-86,334
Total		-89,545	-85,461
Interest received		216	150
Interest paid		-1,613	-2,550

Summary of Significant Accounting and Measurement Policies for the Group and Parent Company

Contents

1. **Introductory information**
2. **Basis of preparation**
3. **Consolidation and business combinations**
4. **Segment reporting**
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8. **The Parent Company's accounting policies**
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1 Introductory information

The consolidated annual financial statements and the Parent Company's annual financial statements for the fiscal year ending December 31, 2018 were approved by the Board and CEO for publication on March 25, 2019 and will be presented for adoption at the annual general meeting on April 24, 2019.

The consolidated financial statements include the Parent Company Biotage AB (the Company) and its subsidiaries, which together are referred to as the Group or Biotage. The Parent Company is a Swedish public limited liability company. The address of the registered office is Vimpelgatan 5, 751 03 Uppsala, and this is where the Group's management and central functions are located. The Company's shares are listed on Nasdaq Stockholm.

Biotage offers effective separation technology, from analysis to industrial scale, and high-quality solutions for analytical chemistry in everything from research to commercial analytical laboratories. Users of Biotage products include government agencies, academic institutions and the pharmaceutical and food industries. Biotage had 405 employees at the end of 2018 and net sales of SEK 911 million for the year. The Group has offices in Sweden, the United States, the United Kingdom, China, Japan, South Korea and India.

2 Basis of preparation

Statement of compliance with reporting standards

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB), as adopted by the European Union, effective for periods beginning on or after January 1, 2018. The Group also applies the Swedish Annual Accounts Act and the Swedish Financial Reporting Board's recommendation RFR 1, *Supplementary Accounting Rules for Groups*. Differences between the Parent Company's and the Group's accounting policies are described in Section 8. The accounting policies have been applied consistently to all periods presented in the consolidated financial statements and to the financial statements of companies in the Biotage Group.

New and amended standards and interpretations applicable for 2018

New and amended standards and interpretations from the IASB and IFRS have not had any material effect on the Group's financial reports.

IFRS 9 Financial instruments

IFRS 9 *Financial Instruments* is effective from January 1, 2018. The standard introduces significant changes in the areas of classification and measurement, impairment and hedge accounting. The transition to IFRS 9 has not had any material effect on the Group's earnings and financial position. Under the new standard, classification and measurement of financial assets is based on the business model used to manage them and their contractual cash flow characteristics. IFRS 9 has not resulted in any changes to the Group's measurement of assets. The new impairment rules require an allowance for expected credit losses for all financial assets measured at amortized cost on recognition in the balance sheet. This affects the principles for provisions for trade and other receivables. See note 16.

The Company has elected to apply the transitional provisions contained in IFRS 9, which allow a continuation of the hedge accounting requirements in IAS 39. The Company has also chosen not to restate previous periods.

IFRS 15 Revenue from Contracts with Customers

The transition to IFRS 15 has not had any material effect on the Group's earnings and financial position. The new application is described below under 7.1 Revenue recognition.

New and amended standards and interpretations not yet effective

Under IFRS 16 *Leases*, all assets that Biotage holds under leases, including leases for premises, are recognized as assets and liabilities, with amortization and interest charges recognized separately in the income statement. The standard will lead to higher amounts for assets and liabilities being recognized on the balance sheet than is currently the case.

Leases are reported as a right of use asset and a corresponding lease liability. The lease payments are apportioned between the repayment of the liability and the interest charge. The right-of-use asset is amortized on a straight-line basis over the asset's useful life. The lease liability is initially recognized at the present value of future lease payments. Fixed payments and significant variable lease payments that depend on an index or a rate are included in the initial measurement of the lease liability. Amounts payable under residual value guarantees are also included.

IFRS 16 is effective for annual periods beginning on or after January 1, 2019. The Group's existing leases and the effects on the financial statements have been analyzed. The Group applies the standard with effect from 2019. The simplified transition approach will be used. See also note 5 for a description of the considerations and assessments used to calculate lease liabilities and right-of-use assets.

It is management's assessment that other new and amended standards and interpretations are not likely to have any material effect on the Group's financial reports in the period of initial application.

Functional currency and presentation currency

The financial statements are reported in Swedish kronor (SEK), which is the Parent Company's functional currency and the presentation currency for the Group's financial reporting. Unless otherwise stated, amounts are reported in SEK thousands.

Basis of measurement

Assets, liabilities, contingent assets and contingent liabilities are measured at cost, apart from certain financial assets and liabilities, which are measured at fair value.

Use of accounting estimates

Preparation of financial statements in accordance with IFRS, Swedish legislation and generally accepted accounting principles requires management to make critical judgments, accounting estimates and assumptions which affect the application of the accounting policies. These accounting estimates take into account internal and external circumstances and the Group's goals and strategic plans. If the actual outcome differs from these accounting estimates, this may have an effect on the Group's future financial position and performance.

Accounting estimates and assessments are regularly reviewed. Changes in accounting estimates are recognized in the period of the change if the change only affects that period. Changes are recognized in the period of the change and future periods if the change affects both. Information about complex areas that require a high degree of estimation or where accounting estimates are of key significance to the consolidated financial statements can be found in Section 10, Significant accounting estimates.

Classification

Non-current assets, liabilities and provisions are essentially amounts that are expected to be recovered or paid more than 12 months after the reporting date. Current assets, liabilities and provisions are amounts expected to be recovered or settled within 12 months of the reporting date. Investments in financial instruments for managing temporary excess liquidity are classified as cash & cash equivalents if they have an original maturity of three months or less. Financial instruments with an original maturity of over three months are classified as other short-term investments.

3 Consolidation and business combinations

Consolidation

The consolidated financial statements comprise the Parent Company and its subsidiaries. The financial statements of companies included in the consolidated financial statements relate to the same period and are prepared using the Group's accounting policies. All intra-group balances, income, expenses, gains and losses arising from transactions between consolidated companies are eliminated in their entirety.

The results of operations of a subsidiary are included in the consolidated financial statements from the date of acquisition, which is the date on which the Parent Company obtains control, until the date on which control ceases. Control exists when the Parent Company is exposed, or has rights, to variable returns from its involvement with an investee and has the ability to affect those returns through its power over the investee. The Group's structure is shown in note 26.

Business combinations

The consolidated financial statements have been prepared using the acquisition method. The purchase consideration consists of the fair value of assets acquired and liabilities incurred by Biotage to the former owners and the fair value of the shares issued by the Group. Contingent consideration is a liability incurred by Biotage to former owners and is recognized at the acquisition-date fair value and included in the cost of acquisition. Subsequent changes in fair value are recognized in the income statement. The fair value of identifiable acquired assets, liabilities and contingent liabilities is determined at the acquisition date. Financial assets and financial liabilities (e.g., con-

tingent consideration), which are subsequently measured at fair value through profit or loss are initially recognized at fair value. Identifiable assets and liabilities also include assets, liabilities and provisions (including obligations and claims from external parties) which are not recognized in the balance sheet of the acquiree. For business combinations where the total of the purchase consideration transferred, any non-controlling interests, and the acquisition-date fair value of the acquirer's previous equity interest in the acquiree, exceeds the acquisition-date fair value of identifiable net assets, the difference is reported as goodwill in the statement of financial position. If on acquisition of a subsidiary the fair value of acquired assets, liabilities and contingent liabilities is higher than cost, the surplus is recognized immediately in the income statement. Acquisition costs are recognized in the income statement in the period in which they are incurred.

Reporting of associates

Associates are partly-owned entities over which the Group has significant influence, being in the power to participate in financial and operating policy, but not control. This normally corresponds to a shareholding of between 20 and 50 percent of the votes. Investments in associates are reported in the consolidated accounts using the equity method. The equity method means that the carrying amount of shares in associates corresponds to the Group's share of the associates' equity and any goodwill and fair value adjustments recognized on the acquisition date. The share of associates' profit and loss, adjusted for recognized fair value changes, is reported under other operating income and expenses in the consolidated income statement.

4 Segment reporting

Segment information is required to be presented using a management approach, and operating segments are identified on the basis of internal reporting to the chief operating decision-maker, which for Biotage is the Group's CEO. In the internal reporting system used by the CEO to review operating results and make decisions about the allocation of resources, financial information is presented for the Group as a whole. Consequently, the Group consists of one operating segment, and for this reason Biotage does not report separate segment information.

5 Foreign currency translation

Functional currency and presentation currency

Items in the individual financial statements of each Group entity are presented in the currency used in the area in which the entity operates (its functional currency). The consolidated financial statements are presented in SEK, which is the Parent Company's functional currency.

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Exchange gains and losses arising on settlement of these transactions and on translation of foreign currency monetary assets and liabilities using the closing rate are recognized in profit or loss.

Foreign currency receivables and liabilities are translated to SEK at the closing rate. Unrealized exchange gains and losses on operating receivables and liabilities are recognized in operating profit or loss, while unrealized exchange gains and losses on financial assets and liabilities are recognized in net financial items.

A monetary item receivable from or payable to a foreign operation,

for which settlement is neither planned nor likely to occur in the foreseeable future, is a part of the Company's net investment in that foreign operation. Exchange differences arising on the translation of such monetary items are recognized in other comprehensive income.

Group companies

The results and financial position of Group companies (none of which has a functional currency that is the currency of a hyperinflationary economy) are translated into the Group's presentation currency using the following procedures:

- (i) assets and liabilities are translated at the closing rate;
- (ii) income and expenses are translated at the average exchange rate for the reporting period. On consolidation, exchange differences arising from the translation of the net investment in foreign operations and the translation of borrowings and other currency instruments designated as hedges of such investments are accounted for in other comprehensive income. When a foreign operation is disposed of, these exchange differences are recognized in the income statement as part of the gain or loss on sale.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the acquiree.

6 Items in the consolidated statement of financial position

6.1 Intangible assets

Intangible assets are recognized at cost less accumulated amortization and impairment. The useful life of each intangible asset is determined and amortization is applied on a straight-line basis over the useful life. Intangible assets with an indefinite useful life are not amortized; instead, they are tested for impairment when the annual financial statements are prepared or when there is an indication of a decline in value. The useful life of goodwill is generally assumed to be indefinite. The useful life of acquired technology-based assets is 3-15 years.

Capitalized development expenditure

Expenditure on development projects are recognized as an asset in the consolidated financial statements when it is probable that the projects will generate future economic benefits. If a business combination gives the Group access to products, technological equipment or processes it did not previously have, and utilization of these is expected to provide economic benefits for the Group, a value for these technology-based intangible assets may be reported in the consolidated statement of financial position.

The purpose of development projects is to develop new products and improve existing ones. Because development of products in the areas in which Biotage is active is a long process, it is not uncommon for a development project to span several fiscal years. Reporting and control of development expenses takes place through project reporting, which is part of the Group's ERP system.

Development projects are classified as Product Care, Pre-Study or Product Development. Expenditure associated with Product Care projects are recognized immediately as an expense. Pre-Study projects in the research phase are recognized immediately as an expense. When a project moves from the research phase to the development phase, and it can be demonstrated how the intangible asset will generate probable future economic benefits, and it meets the criteria in IAS 38 for capitalization of internally-generated intangible assets, it is reclassified as Product Development. The development phase is aimed at producing new technology or a new product and ends when the technology is placed in service or the new product is launched in the Group's sales markets.

The amortization period for capitalized development costs begins when the fully developed asset is available for use in the manner

intended. In many cases, this is when the new product is launched. Amortization is on a straight-line basis over a period of time and is based on an assessment of the product's estimated useful life. The Company's capitalized development costs can be divided into systems, consumables and software. The estimated useful life for systems and consumables is 7 years, and for software 3 years. Useful life expectations are based on the Company's experience of the life-span of its products and on its innovation cycles, i.e., the intervals at which Biotage could be expected to launch new products to replace, or partly replace, previous ones. These useful life assumptions are reviewed regularly during impairment testing, which is conducted on an individual level annually or more frequently if there is an indication of impairment.

Market and customer-related intangible assets

Patent and license rights and trademarks are recognized at cost less accumulated amortization. The amortization period for patents is normally 10 years, but never longer than the patent term. Amortization begins when the first national patent is granted. The patent portfolio is also evaluated annually to identify any need for additional amortization. License rights are amortized over their duration. Brands have an indefinite useful life.

Goodwill

Goodwill is recognized as an intangible asset at cost less accumulated impairment in the balance sheet. For business combinations where the total of the purchase consideration transferred, any non-controlling interests, and the acquisition-date fair value of the acquirer's previous equity interest in the acquiree, exceeds the acquisition-date fair value of identifiable net assets, the difference is reported as goodwill. Goodwill is tested for impairment annually or more frequently if there are indications of a decline in value. The carrying amount of goodwill is compared with its recoverable amount, which is the higher of value in use and fair value less costs to sell. Any impairment is recognized as an expense in the income statement.

For impairment testing, goodwill is allocated to the smallest cash-generating unit in the Company in which the goodwill in question is monitored during internal control. See also Section 10, Significant accounting estimates, on page 54, which describes the estimates and assumptions made during impairment testing.

Software licenses

Acquired software licenses are capitalized on the basis of the expenditure incurred when the software itself is acquired and placed in service. Amortization is applied over the useful life, which is 3 to 7 years, depending on the contractual terms.

6.2 Property, plant & equipment

Items of property, plant & equipment are recognized at cost less accumulated depreciation and impairment losses. These assets include factories, offices, testing instruments, production tools, computers and peripherals and office and warehouse equipment. The cost of property, plant & equipment comprises the purchase price and any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended. The cost of an item of property, plant & equipment is recognized as an asset on initial measurement, as is the cost of major spare parts if it is probable that future economic benefits associated with the asset will flow to the Group. Other costs are recognized as an expense in the period in which they are incurred.

Depreciation is applied on a straight-line basis over the asset's estimated useful life. Parts of an item of property, plant & equipment which constitute a large proportion of the asset's total cost and which have different useful lives are treated as separate components of property, plant & equipment and are subject to separate depreciation.

The following useful lives apply:

Land	No depreciation
Site improvements	10-20 years
Buildings	30-40 years
Production tools	3-7 years
Improvement of 3rd-party property	2-10 years
Computers	3-4 years
Other property, plant & equipment	3-5 years

The gain or loss arising from the disposal of an item of property, plant & equipment is the difference between the selling price and the asset's carrying amount, and is reported under other operating income or other operating expenses.

6.3 Financial assets

Financial assets are accounted for in accordance with the description in section 6.6 Financial instruments.

6.4 Leased assets

A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership. Otherwise, it is classified as an operating lease. The Group recognizes finance leases as assets and a corresponding liability is recognized on initial recognition. An asset leased under a finance lease is subject to depreciation over its estimated useful life, while minimum lease payments are apportioned between the finance charge and the reduction of the outstanding liability. Leased assets held under operating leases are not recognized in the balance sheet. The lease payments are recognized in the income statement on a straight-line basis over the lease term.

In financial and cost terms, Biotage has a small proportion of leases, which are mainly rental agreements for premises. All the Group's leases and rental agreements are classified as operating leases.

6.5 Inventories

Inventories are measured using the "lower value" principle, i.e., the lower of cost and net realizable value. Cost is measured using the FIFO method. The cost of finished goods and work in progress consists of design costs, raw materials, direct labor, other direct costs and related indirect manufacturing costs. Borrowing costs are not included in cost. The net realizable value is the estimated selling price in the ordinary course of business less costs of completion and costs necessary to make the sale.

6.6 Financial instruments

Financial instruments reported in the statement of financial position include securities, other financial receivables, trade and other receivables, cash & cash equivalents, trade payables, loans, other liabilities and derivatives.

Recognition in the statement of financial position

Financial assets are recognized in the statement of financial position when the Group becomes a party to the contractual provisions of the instrument. Trade receivables are recognized when an invoice has been sent. A liability is recognized when the counterparty has performed and there is a contractual obligation to pay.

A financial asset or part of a financial asset is derecognized when the rights to receive cash flows from the asset have expired or have been transferred or the Group no longer has control of it. Financial liabilities are derecognized when the contractual obligation has been discharged or extinguished in some other way.

A financial asset and a financial liability may be offset and the net amount presented in the statement of financial position when, and only when, the Company has a legally enforceable right to set off the recognized amounts, and the Company intends either to settle on a net

basis, or to realize the asset and settle the liability simultaneously. The Group does not offset financial assets and liabilities on the reporting date.

Classification and measurement under IFRS 9

Financial assets are classified into categories on initial recognition. The classification is based on the business model used to manage the assets and their contractual cash flow characteristics. The Company considers whether the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets are classified in the following categories:

1. Financial assets at amortized cost
These assets are held to collect contractual cash flows that are solely payments of principal and interest on the principal amount outstanding.
2. Financial assets at fair value through profit or loss.
These assets are held to collect contractual cash flows and to sell investments, and have contractual cash flows that are solely payments of principal and interest on the principal amount outstanding.
3. Financial assets at fair value through OCI
These are other financial assets and investments in equity instruments.

The Group holds trade receivables, cash and other non-current receivables to collect contractual cash flows. As the contractual cash flows from these assets consist of payments of principal and interest on the principal amount outstanding, they are measured at amortized cost. Financial liabilities are measured at fair value through profit or loss if they are held for trading or were placed in this category on initial recognition.

The Group's financial liabilities consist of liabilities to credit institutions, other financial liabilities and trade and other payables. These liabilities are all measured at amortized cost.

Amortized cost is the amount at which an asset or liability is measured at initial recognition minus principal repayments, plus or minus the cumulative amortization using the effective interest method of any difference between the initial amount and the maturity amount, and minus any reduction for impairment or uncollectibility. The effective interest rate is the rate that discounts all estimated future cash payments or receipts through the expected life of the financial instrument to the initially recognized carrying amount of the financial asset or liability.

The fair values of assets and liabilities with a remaining maturity of less than three months, such as cash deposits, trade and other receivables, and trade and other payables, are considered equal to their carrying amounts.

The transition to IFRS 9 does not have any material effect on the Group's earnings and financial position. Although the new rules introduce a change to the classification of financial assets, this does not affect the measurement of financial assets and liabilities.

For a description and definition of fair value measurement, see notes 19 and 20.

Impairment, IFRS 9

The Group recognizes a loss allowance for expected credit losses on financial assets measured at amortized cost. At each reporting date, the Group reports the change in expected credit losses since initial recognition.

The Group measures losses for all financial assets through a loss allowance equal to 12-month expected credit losses. If the credit risk of a financial instrument has increased significantly since initial recognition, a loss allowance for full lifetime expected credit losses is recognized (the general approach).

The Group assesses these full lifetime expected credit losses either individually or collectively, based on all reasonable and supportable information, including forward-looking factors. The Group's measurement of expected credit losses on financial instruments reflects an unbiased and probability-weighted amount that is determined by evaluating the range of possible outcomes, the time value of money, and reasonable, supportable information about current conditions and forecasts of future economic conditions.

Under the simplified approach, the Group reports full lifetime expected credit losses for trade receivables, contract assets and lease receivables.

The general approach is used for cash and cash equivalents. A practical expedient is applied for cash and cash equivalents with a low credit risk on the reporting date. The general approach is also used for other non-current receivables.

The Group considers a default to exist when it is unlikely that a counterparty will meet its obligations based on indicators such as financial difficulties and missed payments. A default is also considered to exist when payment is 90 days overdue. The Group writes off receivables when it is considered that there is no possibility of further cash flows.

Derivatives and hedge accounting

The Group has elected to apply the transitional provisions contained in IFRS 9, which allow a continuation of the hedge accounting requirements in IAS 39. Derivatives are recognized on the contract date and are subsequently measured at fair value. Under the Company's financial policy, derivative financial instruments may only be held for hedging purposes. In its hedge accounting, the Group uses cash flow hedges and fair value hedges. The Company's derivatives consist of forward contracts which are used to hedge currency risk associated with external and internal flows of products and services. In accordance with IAS 39, the portion of the gain or loss on a derivative designated as a cash flow hedge that is determined to be an effective hedge is recognized in other comprehensive income, and the accumulated changes in fair value are recognized in the hedging reserve in equity. Any gain or loss on the ineffective portion of the hedge is recognized immediately in profit or loss. Amounts in the hedging reserve are recycled into profit or loss in the same period in which the hedged item affects profit or loss. Biotage hedges currency risk in accordance with the Board's established financial policies. Currency hedging is based on the expected difference between the cash flow in SEK and other currencies.

Other information about financial instruments

Trade receivables

Trade receivables are reported net of provisions for expected losses. As trade receivables are of short duration, they are measured at nominal amounts without discounting, using the amortized cost method. Expected credit losses on trade receivables are measured through a loss allowance. The simplified approach is used, as the receivables do not contain any significant financing component and are of short duration. The allowance for credit losses is based on the matrix model, which takes into account historical data on the number of days outstanding. The allowance is adjusted for relevant current conditions and probable future outcomes. The provision amount is recognized in the income statement.

Non-current securities and other financial assets

Non-current receivables are measured at amortized cost and the general approach is used for credit impairment of these receivables. Assessment of whether financial assets are credit-impaired is made by reference to known and probable circumstances, based on the knowledge available at each point in time, established financial plans and relevant forward-looking factors.

Trade payables

Trade payables are categorized as *Financial liabilities at amortized cost*. As trade payables are of short duration, they are measured at nominal amounts without discounting.

Loans

Amounts due to credit institutions, bank overdrafts and other liabilities are categorized as *Financial liabilities at amortized cost*. Any transaction costs are distributed over the term of the loan using the effective interest method. Non-current liabilities are due for settlement more than 12 months after the reporting date, while current liabilities are due within 12 months of the reporting date.

Financial instruments, December 31, 2017, IAS 39

Classification and Measurement

On initial recognition, a financial instrument is classified according to the purpose for which it was acquired. The definitions of the different categories are such that a financial instrument may be classified in more than one category. Financial assets and financial liabilities which are not subsequently measured at fair value through profit or loss are initially recognized at fair value, plus or minus transaction costs. Financial assets and financial liabilities which are subsequently measured at fair value through profit or loss are initially recognized at fair value. Financial instruments are subsequently measured at amortized cost or fair value, depending on their initial classification in accordance with IAS 39. IAS 39 classifies financial instruments in the following categories:

1. Financial assets and liabilities at fair value through profit or loss

This category comprises three types of items:

- Financial assets and liabilities held for trading. These are items that are held for the main purpose of short-term profit-taking.
- Derivatives that are not effective hedging instruments.
- Designated – other financial assets or liabilities the Company has chosen to report in this category.

2. Held-to-maturity investments

Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturity which an entity has the positive intention and ability to hold to maturity.

3. Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. This category includes trade receivables, other receivables and other non-current receivables.

4. Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives that are either designated in this category or not classified in any of the other categories.

5. Other liabilities

Financial liabilities that are not measured at fair value through profit or loss are classified as other liabilities.

After the date of acquisition, financial instruments classified as Financial assets and liabilities at fair value through profit or loss and Available-for-sale financial assets are measured at fair value. Financial instruments in the categories Held-to-maturity investments, Loans and receivables and Other liabilities are subsequently measured at amortized cost using the effective interest method. Amortized cost is the amount at which an asset or liability is measured at initial recognition minus principal repayments, plus or minus the cumulative amortization using the effective interest method of any difference between the initial amount and the maturity amount, and minus any reduction for impairment or uncollectibility. The effective interest rate is the rate that discounts all estimated future cash payments or receipts through the expected life of the financial instrument to the initially recognized carrying amount of the financial asset or liability.

For a description and definition of fair value measurement, see notes 19 and 20.

Trade receivables

Trade receivables are classified as Loans and receivables. Trade receivables are reported net of provision for doubtful debts. As trade receivables are of short duration, they are measured at nominal amounts without discounting, using the amortized cost method. A provision for doubtful debts is recognized when there are objective grounds for assuming that the Group will not receive all amounts due under the original terms and conditions. The size of the provision is the difference between the asset's carrying amount and the value of estimated future cash flows. The provision amount is recognized in the income statement.

Non-current securities and other financial assets

Non-current receivables are classified as Loans and receivables. An impairment loss is recognized for a financial asset when there is objective evidence that the asset's cash flows are affected by events occurring after its initial recognition.

Trade payables

Trade payables are classified as Other liabilities. As trade payables are of short duration, they are measured at nominal amounts without discounting, using the amortized cost method.

Loans

Amounts due to credit institutions, bank overdrafts and other liabilities are categorized as Other liabilities and measured at amortized cost. Any transaction costs are distributed over the term of the loan using the effective interest method. Non-current liabilities are due for settlement more than 12 months after the reporting date, while current liabilities are due within 12 months of the reporting date.

6.7 Taxes

Income tax consists of current tax and deferred tax. Taxes are recognized in the income statement except when the underlying transaction is recognized in OCI or directly in equity, in which case the related tax effect is also recognized in OCI or equity.

A current tax liability or asset is the amount of income taxes payable or recoverable in respect of the taxable profit or loss for the current year and prior years.

A deferred tax liability or asset is recognized for temporary differences between the carrying amounts of assets and liabilities and their corresponding tax bases or the carryforward of unused tax losses and credits. Biotage does not recognize deferred tax liabilities or assets for temporary differences arising from non-deductible goodwill or the initial recognition of an asset or liability which does not affect accounting profit or taxable profit or loss.

Deferred tax assets are only recognized to the extent that it is probable that taxable profit will be available against which they can be utilized. Deferred tax is measured using national tax rates that have been enacted or substantively enacted by the reporting date in the countries where the Group has legal entities with tax losses that can be utilized.

6.8 Provisions

Provisions for restructuring are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, and it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. Restructuring provisions include the cost of lease cancellation and termination benefits to employees. Provisions are not recognized for future operating losses.

Provisions for warranties for products sold are based on the warranty terms & conditions and historical warranty costs and quality rates. Provisions are classified as non-current and current items. Non-current obligations will not require an outflow of resources during the next 12 months. All other obligations are classified as current.

6.9 Share capital

All issued shares are ordinary shares, which are classified as equity. Transaction costs directly attributable to the issue of new shares or options are recognized in equity, net of tax, as a deduction from the issue proceeds.

7 Items in the consolidated income statement

7.1 Revenue recognition

Revenue is the value of the consideration that the Company is entitled to receive for goods sold or services rendered in the course of the Group's ordinary activities, excluding VAT and discounts, and after elimination of intra-group sales.

IFRS 15 *Revenue from Contracts with Customers* is effective from 2018. The first steps involve identifying the type of contract and its performance obligations. The price is then determined and allocated to the different components of the contract. Revenue is recognized when control of the goods or service has been transferred to the buyer. This has not involved any significant changes, as previous revenue recognition has largely coincided with the requirements of IFRS 15. The transition has not had any effect on revenue recognition, but IFRS 15 requires enhanced disclosures on the composition of net sales to provide a picture of revenue streams. See also note 3.

Sale of goods

The Group develops and sells systems, re-agents, accessories, spare parts and services on a global basis directly to end users through its subsidiaries, and through distributors. Revenue is recognized when control of the products has been transferred from seller to buyer and the customer has confirmed acceptance, which is normally on delivery. In these circumstances, revenue is recognized at a point in time.

Rendering of services

Sales of services are recognized as revenue in the reporting period in which the services are performed. The Company's sales of services include servicing of systems and customer-specific development projects. For customized development projects, services are performed over a long period and revenue is therefore recognized by reference to the stage of completion of the transaction at the end of the reporting

period. There is a small proportion of customized development projects.

Service contracts can be signed by customers who purchase the Company's systems. They normally extend over twelve months, but longer contract periods have also been initiated in 2018. It is not known to what extent or at what point in the contract term customers will use the service agreements. It is therefore the assessment that this represents a stand-ready obligation under IFRS 15. The customer simultaneously receives and consumes all of the benefits provided by the entity as the entity performs. The obligation therefore meets the criterion for being a performance obligation satisfied over time. The entity's commitment to provide services during the contract period is separately identifiable from other promises. There is no integration, modification or close dependence on other services that customers are offered. The service is therefore considered to be distinct in nature and within the scope of the contract, and is reported as a single obligation under IFRS 15. The company's satisfaction of its performance obligation is considered to be evenly distributed over the contract period. The customer can benefit from the service and has unlimited access to it throughout the contract period. Revenue is therefore recognized on a straight-line basis over the contract period.

Interest income

Interest income is distributed over the term of the interest-bearing investment using the effective interest method.

7.2 Cost of sales

Cost of sales comprises payment of sub-contractors when the Company uses other manufacturers, raw materials for production, salaries and other personnel expenses for production staff, costs of premises, packing and freight costs, depreciation of production facilities and other facilities used in production and a share of common costs.

7.3 Employee benefits

Retirement benefit obligations

The Group's pension plans are funded by contributions to insurance policies. They are all defined-contribution plans. Defined-contribution plans are plans under which companies pay fixed contributions into a separate entity (a fund). Under defined-contribution pension plans, the Group's legal or constructive obligation is limited to the amount that it agrees to contribute to the fund. It has no legal or constructive obligation to pay further contributions if the fund does not hold sufficient assets to pay all employee benefits relating to employee service in the current and prior periods. The expenses are charged to the Group's income as the benefits are earned, which normally coincides with the date on which the premium is paid.

Termination benefits

Termination benefits are paid when employment is terminated before the normal retirement age or when an employee accepts voluntary layoff in return for termination benefits. Termination benefits are recognized when the Company is committed to terminating the employment of employees before the normal retirement date or providing termination benefits as a result of an offer made to encourage voluntary layoff. The Company is committed to a termination when it has a detailed formal plan for the termination.

Variable pay

The Group provides variable pay for employees in positions where their performance has a measurable effect on the Group's earnings. Estimated expenses for variable pay are recognized on an ongoing basis and provision is made for these expenses in the consolidated statement of financial position. Variable pay for key management personnel is described on pages 56-58.

Short-term employee benefits

For employee benefits (such as wages, paid vacation and sick leave) and pensions, the amount of benefits expected to be paid in respect of service rendered by employees in a period is recognized in that period.

7.4 Impairment

Impairment is recognized when a significant increase in a financial asset's credit risk is identified during an individual or collective assessment. Impairment losses are recognized in profit or loss on the basis of reasonable and verifiable data, including forward-looking factors. The impairment reflects an unbiased and probability-weighted amount that is determined by evaluating the range of possible outcomes, the time value of money, and reasonable, supportable information about current conditions and forecasts of future economic conditions.

Full lifetime expected losses are recognized for trade receivables, contract assets and lease receivables using the simplified approach. The general approach is used for cash and cash equivalents and other non-current receivables. A practical expedient is also applied for cash and cash equivalents with a low credit risk on the reporting date.

If there is supportable and objective evidence that an impairment loss recognized in prior periods no longer exists, the impairment loss is reversed. Reversed impairment losses are recognized in the income statement. Testing of previous impairment losses is conducted on an individual basis. Goodwill impairment is not reversed.

7.5 Other operating income and expenses

Other operating income and other operating expenses include share of profit/loss of associates, one-time payments, exchange gains/losses on operating receivables and liabilities and gains/losses on the sale or disposal of non-current assets.

8 The Parent Company's accounting policies

The Parent Company applies the Swedish Annual Accounts Act and the Swedish Financial Reporting Board's recommendation RFR 2 *Accounting for Legal Entities*. This allows application of IFRS as adopted by the EU to the extent that such application is not in conflict with the Swedish Annual Accounts Act and the Pension Obligations Vesting Act, and also takes into account the relationship between tax expense and accounting profit.

Amended accounting policies for the Parent Company

The amendments to RFR 2 *Accounting for Legal Entities* that came into effect in 2018 have not had any material effect on the Parent Company's financial reporting.

The differences between the Parent Company's and the Group's accounting policies are described below.

8.1 Classification and presentation

The Parent Company's income statement and balance sheet are presented in accordance with the format described in the Annual Accounts Act. The main difference from IAS 1 *Presentation of Financial Statements*, which is applied when preparing the consolidated financial statements, concerns the reporting of finance income, finance costs, non-current assets and equity, and the presentation of provisions as a separate item. The Parent Company also presents a statement of comprehensive income, which is separate from the income statement.

8.2 Investments in Group companies

Investments in subsidiaries are recognized at cost in the Parent Company's financial statements. Acquisition-related costs for subsidiaries, which are recognized as an expense in the consolidated financial statements, are included as part of the cost of investments in subsidiaries.

8.3 Investments in associates

Investments in associates are recognized at cost in the Parent Company's financial statements. Any future dividend from an associate will be reported on a separate line under financial items.

8.4 Financial instruments

The Parent Company does not apply IFRS 9 for legal entities. The Parent Company recognizes an allowance for expected credit losses on financial assets reported under non-current assets and measured at amortized cost. At each reporting date, the Parent Company reports changes in expected credit losses since initial recognition. When calculating the net realizable value of financial assets reported as current assets, the impairment principles contained in IFRS 9 are applied. Derivative instruments that are not subject to hedge accounting and have a negative fair value are reported at this value. A financial asset is derecognized when the contractual right to receive cash flows has expired or been settled and a financial liability is derecognized when the contractual obligation has been discharged or extinguished.

8.5 Shareholder and Group contributions

Group contributions the Parent Company receives from subsidiaries are reported under finance income using the same principles as ordinary dividends from subsidiaries. Group contributions made by the Parent to subsidiaries are reported as an increase in investments in Group companies. Shareholder contributions are recognized directly in the recipient's equity and are reported in the issuer's shares and interests, to the extent that impairment is not required.

8.6 Untaxed reserves

Changes in untaxed reserves are recognized as an appropriation in the income statement. The accumulated value of the provisions is reported under untaxed reserves in the balance sheet. Tax depreciation allowances are calculated in accordance with current tax legislation. Tax depreciation allowances are regarded as accelerated depreciation, which is reported as an untaxed reserve.

9 Financial risks and the Group's risk management

9.1 Financial risks in the Biotage Group

In addition to the business risks that Biotage faces in the course of its operations, there are also different types of financial risks, which include currency risk, interest rate risk, credit risk and refinancing risk. Credit risk associated with customer relationships is managed within a defined framework and is decentralized by means of local credit ratings. Other risks are managed centrally. The Group's financial policy requires financial risks to be minimized, taking into account reasonable hedging expenses, and access to liquidity to be maintained.

Currency risk

A significant proportion of the Group's sales are conducted in USD, EUR, JPY and GBP. The proportion of sales in SEK is relatively small. Operating expenses and financial instruments are also related to these currencies, although SEK is dominant. The Group's legal entities

have intra-group balances. Translation of these balances to SEK may have a significant effect on the Group's financial position and results. As the Group's functional currency is SEK, movements of the Swedish krona against other transaction currencies will have an effect on the Group's results and financial position. A 10 percent change in the USD/SEK exchange rate would affect income and equity by SEK 30,980 (1,952) thousand. The corresponding effect of a 10 percent change in the EUR/SEK rate would be SEK -20 (-141) thousand. Hedging instruments were used only to a limited extent in 2018. The main exposures are trade receivables in EUR, USD and GBP, which amount to SEK 117,875 thousand. A 10 percent change in the EUR/SEK, USD/SEK and GBP/SEK rates would have an effect of SEK 11,788 thousand on the income statement. Other financial instruments are essentially in SEK.

Interest rate risk

Interest rate risk is the risk that the value of financial instruments will fluctuate because of changes in market interest rates. The Group's financial assets are not particularly exposed to these changes as the holdings are of short duration. The Group's interest risk is essentially the risk that its refinancing will be more expensive if general interest rates rise and vice versa. Interest-bearing liabilities have increased significantly during the year as a result of large investments. A change of 1 percentage point in the Group's interest rate on interest-bearing assets would affect income and equity by SEK 1,770 (1,743) thousand. A change of 1 percentage point in the Group's interest rate on interest-bearing liabilities would affect income and equity by SEK 1,094 (-) thousand.

Credit risk

Credit risk can be divided into financial and operational. Operational credit risk is the risk of customers being unable to pay for delivered goods. The majority of customers are large companies and scientific institutions with operations which are normally state-financed. Based on historical data, it is management's assessment that Biotage has a low credit risk, as losses have historically corresponded to less than 0.5 percent of sales. No single customer accounts for more sale than 5 percent of the Group's total sales. The Group applies the simplified matrix model for calculating expected credit losses on trade receivables. See note 16 The model is based on historical losses, but also considers forward-looking factors.

The Group's financial credit risk is counterparty risk in bank deposits, trade receivables, derivatives and financial investments. The financial policy sets limits for each counterparty, and only Swedish banks with low credit risk and high ratings in the long-term assessments of the rating agencies Standard & Poor's and Moody's may be used for investments and derivatives. The Group's method for managing expected credit losses is described in section 6.6 *Financial instruments* and in note 16 *Trade and other receivables*.

Total credit exposure was SEK 335 (294) million at the reporting date and consisted primarily of cash and cash equivalents of SEK 177 (174) million and trade receivables of SEK 156 (118) million.

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in accessing funds to discharge its financial obligations. The statements of cash flow for 2017 and 2018 show sufficiently positive cash flows from operations to allow the Group to fully discharge its current obligations. In addition, Biotage has cash & cash equivalents that are considerably higher than current and non-current liabilities. In a long-term perspective, the Group's liquidity and financing risk is the risk that it may become dependent on credit facilities or capital contributions for its expansion. This risk is managed by means of liquidity planning and liquidity monitoring and by ensuring good relations are maintained with lending institutions and major shareholders.

A maturity analysis of contractual payment obligations related to the Group's non-derivative financial liabilities is presented in the tables below. The amounts in these tables are not discounted values and also include interest payments; therefore, the amounts cannot

be reconciled with those reported in the balance sheets. Interest payments are determined based on the conditions that apply on the reporting date. Amounts in foreign currency are translated to Swedish kronor at the closing rate.

Financial liabilities, December 31, 2018	Within 3 months	3-12 months	1-5 years	After 5 years	Total
Liabilities to credit institutions	664	664	114,712	–	116,040
Trade and other payables	106,958	13,064	–	–	120,022
Total	107,622	13,728	114,712	0	236,062

Financial liabilities, December 31, 2017	Within 3 months	3-12 months	1-5 years	After 5 years	Total
Liabilities to credit institutions	–	–	–	–	–
Trade and other payables	91,400	11,333	–	–	102,733
Total	91,400	11,333	0	0	102,733

There is no significant difference between the liability on December 31, 2018 and the actual payment including interest, i.e., undiscounted cash flows.

9.2 The Group's risk management

Biotage has a Risk Management Policy and conducts an annual internal risk audit based on a survey that all managers and all regional managers are asked to complete, after which a compilation of the Group's overall risks and their management is made. To deal with the effects of the financial risks associated with Biotage operations and financial management, the Board has established a financial policy for the Group. This policy is designed to facilitate the Group's financial work and alleviate the economic consequences of financial risks. Work must be performed carefully and professionally. Implemented measures must be documented and reported to the appropriate company body.

The policy contains a division of responsibilities, duties and authority between the Company's Board, CEO, CFO and Accounting Manager. Administrative procedures have also been established on the basis that those who conduct transactions should be separate from those responsible for control, accounting and reporting of transactions. Systematic reporting documentation for financial transactions must be submitted to the accounting manager for checking against the documents received by the transaction counterparty.

The strategy is for the central finance function at corporate office to manage currency risk for the entire Group. Because the Group engages in operations, production and sales in a number of countries, it has a certain income statement exposure as a result of its income and expenses being in different currencies. This exposure may be affected by factors such as choice of currency for sales and purchases. Similarly, the Group's assets, liabilities and equity in its wholly-owned subsidiaries, and receivables from/liabilities to external customers and suppliers in different currencies result in balance sheet expo-

sure and currency risk. This exposure is largely managed by choice of currency for sales and purchases, loans and foreign currency investments.

Biotage aims to minimize the currency risk that arises in commercial flows. Biotage will never engage in speculative position-taking to exploit exchange rate volatility by entering into transactions for which there is no underlying commercial cash flow or imbalance. Credit risk associated with trade receivables must be monitored on an ongoing basis.

Available liquidity must be managed by the CFO or a person designated by the CFO. The necessary credit facilities for business financing must be in place in the Swedish companies and the foreign companies as far as possible. For foreign companies, the purpose of operating loans is to reduce currency exposure, cover working capital requirements, offset liquidity fluctuations and avoid unnecessary excess liquidity in individual subsidiaries.

Effects of financial instruments on the Group's results and financial position

The Group's financial instruments, as reported in the consolidated statement of comprehensive income or additional information, are essentially based on transactions associated with the Group's business operations. Biotage does not engage in active trading or conduct transactions in financial instruments other than for the development, production and sale of the Company's products and services. The main financial instruments are trade receivables, other operating receivables, shares, trade payables and other operating liabilities. Exchange rate movements may have a material impact on the Group's results and financial position, and this has previously been the case.

Net sales

The Group's most significant revenue currencies are USD and EUR.

	2018			2017		
	Currency thousands	SEK thousands	Distribution %	Currency thousands	SEK thousands	Distribution %
Net sales by currency						
EUR	15,086	154,617	17	14,749	142,786	19
USD	53,979	469,764	52	44,956	383,616	51
GBP	4,979	57,699	6	4,983	54,988	7
JPY	1,318,872	103,795	11	1,212,420	92,265	12
CNY	30,169	39,631	4	20,193	25,506	4
KRW	4,007,891	31,662	3	2,699,139	20,513	3
SEK	26,726	26,726	3	28,193	28,193	4
CAD	3,666	24,538	3	42	279	0
CHF	140	1,269	0	–	–	–
NOK	608	663	0	–	–	–
INR	4,188	532	0	–	–	–
Total SEK thousands		910,896	100		748,147	100

Net assets

The Group's net assets have been predominantly in SEK. This changed in 2018, mainly as a result of the acquisition of the American company Horizon Technology Inc., which was financed with a loan in SEK.

	2018			2017		
	Currency thousands	SEK thousands	Distribution %	Currency thousands	SEK thousands	Distribution %
Net assets by foreign currency, December 31						
EUR	-20	-201	-0	-1,410	-13,890	-2
USD	34,534	309,803	44	19,517	160,671	26
GBP	7,802	88,535	13	4,970	55,191	9
JPY	565,729	45,937	7	42,086	3,077	1
CNY	25,268	33,021	5	-8,505	-10,752	-2
KRW	2,259,372	18,075	3	455,113	3,504	1
CAD	956	6,302	1	–	–	–
INR	8,884	1,139	0	–	–	–
CHF	62	561	0	–	–	–
SEK	199,008	199,008	28	410,810	410,810	67
Total SEK thousands		702,180	100		608,611	100

The table below shows the Group's net assets by exposure to transaction risk and exposure to translation risk as of December 31, 2018. The latter refers to the risk of variations in exchange rates affecting the carrying amounts of subsidiaries and foreign assets when translated to SEK.

	Transaction risk			Translation risk		
	Currency thousands	SEK thousands	Distribution %	Currency thousands	SEK thousands	Distribution %
Net assets, December 31, 2018						
EUR	2,449	25,162	10	-2,468	-25,363	-11
USD	13,208	118,487	45	21,326	191,316	80
GBP	1,663	18,870	7	6,139	69,665	29
JPY	430,979	34,995	13	134,750	10,942	5
CNY	35,985	47,025	18	-10,716	-14,004	-6
KRW	1,632,212	13,058	5	627,160	5,017	2
CAD	956	6,302	2	–	–	–
INR	0	0	0	8,884	1,139	0
CHF	62	561	0	–	–	–
Total SEK thousands		264,460	100		238,711	100

9.3 Capital management

Biotage defines capital as equity. The Group's capital management objective is to safeguard its ability to conduct operations and generate reasonable returns for shareholders and value for other stakeholders. The Group monitors its capital structure on the basis of the equity/assets ratio, which is calculated as equity divided by total assets. At the end of the year, the equity/assets ratio was 70 (80) percent for the Group and 67 (90) percent for the Parent Company.

10 Significant accounting estimates

When preparing the consolidated and Parent Company's financial statements, the Board and CEO make a number of judgments and estimates that may affect the reported financial position and results.

Estimation uncertainty

Accounting estimates and assessments are evaluated regularly. They are largely based on historical experience and expectations about future events which are considered reasonable in the present circumstances. Certain accounting estimates and assumptions are of particular significance when measuring assets and liabilities in the balance sheet. Goodwill is the balance sheet item with the greatest risk of value changes as a result of adjusted assumptions or estimates. The most significant judgments used in the measurement of assets and liabilities are based on assumptions regarding the future scope for marketing the Group's products and services in volumes and at prices that allow a reasonable economic return. Scope for marketing is highly dependent on the Group's access to technical expertise for the production of new and improved products and on the level of customer investment in new product development, knowledge and methods in the scientific areas in which the Group's products are used. The estimated success of the Group's objective to broaden its products' areas of application also affects overall estimates of sales figures and financial results for Biotage.

Impairment testing of goodwill and other assets

Goodwill is tested for impairment annually when the annual financial statements are prepared, or as soon as impairment is indicated by changes. Goodwill testing involves calculating the recoverable amount of the cash-generating unit to which the carrying amount of goodwill is allocated, which for Biotage is the Group as a whole, as it consists of one single operating segment. The forecasts of the Group's expected cash flows used in the calculations (discounted cash flow) are determined by members of Biotage management, who base their judgment on past experience and the Company's own expectations about the future. During impairment testing, management makes a number of other assumptions when applying the discounted cash flow model and these may have a significant effect on the measurement result. See also note 11 for a description of key assumptions. However, sensitivity analyses show that the outcome of the testing would not change if the growth rate were reduced by 50 percent or the discount rate were increased by 20 percent compared with the assumptions made. An impairment loss is recognized in the income statement if the carrying amount exceeds the recoverable amount. At the end of the year, the Group's goodwill was SEK 186 (104) million. See also note 11.

Capitalized development expenditure

Development costs are capitalized when a project enters the Product Development phase and meets the recognition criteria set out in IAS 38. Under the standard, an intangible asset qualifies for recognition if it is probable that the future economic benefits attributable to the asset will flow to the Company and the cost of the asset can be measured reliably.

In accordance with IAS 38, Biotage capitalizes its development on the basis of a measurement of each project's expected contribution to the Group's sales revenue and cash flows. Projects are measured at cost. An item is derecognized in the statement of financial position when the product is no longer marketed or the technology is no longer used by Biotage, or when it is only expected to generate sales revenue on a limited scale. Preparation of the consolidated financial statements involves reviewing the carrying amounts of products and projects in progress in the statement of financial position. As this is based on an assessment of the product's or the technology's expected demand, use and price, it is subject to some uncertainty. Impairment losses may also arise from rapid technological development and improved products from competitors. At the end of the year, the Group's capitalized development expenditure was SEK 101 (95) million. See also note 12.

Biotage reports amortization and impairment of capitalized development costs under the item research & development expenses. Another possible income statement presentation method would have been to report all or parts of the above-mentioned amortization charge under cost of sales. Had the Company reported the year's full amortization charges and impairment for these assets in this way, cost of sales would have increased and research & development expenses would have decreased by SEK 18 (19) million. This would not therefore have had any effect on operating profit. Capitalization of development costs has reduced research & development expenses by SEK 24 (23) million.

Deferred tax asset

Biotage recognizes tax loss carryforwards on the basis of how they are expected to be utilized against future profit and the extent to which the Company can demonstrate that it is probable that such profit will be available in future periods before the unused tax losses expire. Tax loss carryforwards are mainly associated with the Swedish and US companies. When determining the value of tax losses carried forward, an assessment is made of the coming year's tax credits and the countries in which they are expected to occur. Biotage bases this on management's assessments of each company's development and results in future years. Should the Group be unable to realize its plans, an impairment loss would have to be recognized for this item. Similarly, the value of tax losses can be affected by changes in legislation regarding their utilization and changes in tax rates. Based on a new assessment at the end of the year, recognized deferred tax assets arising from unused tax losses amounted to SEK 60 (61) million, corresponding to a tax effect of SEK 279 (278) million in historical tax losses. A deferred tax asset has not been recognized for other remaining tax losses, as Biotage has been unable to confirm the probability that taxable profit corresponding to an unrecognized tax asset of SEK 14 (32) million will be generated for the remaining historical tax losses of SEK 65 (146) million. See also note 23.

NOTES

NOTE 1 Average number of employees, salaries, employee benefits and social security contributions

	Group		Parent Company	
	2018	2017	2018	2017
Board and senior executives				
A presentation of Board members and senior executives can be found on pages 82-83.				
<i>Board</i>				
Female	2	2	2	2
Male	3	4	3	4
Total	5	6	5	6
<i>Group Management</i>				
Female	1	1	–	–
Male	2	2	1	1
Total	3	3	1	1
<i>Average number of employees</i>				
Female	128	111	–	–
Male	276	224	1	1
Total	404	335	1	1
<i>Salaries and benefits</i>				
Board and CEO	6,307	5,362	6,307	5,362
Other senior executives, 2 individuals	4,300	3,835	–	–
Other employees	223,762	185,055	–	–
Total salaries and benefits	234,369	194,252	6,307	5,362
<i>Contractual and statutory social security contributions</i>				
Board and CEO	2,203	1,951	2,203	1,951
Other senior executives	1,491	1,444	–	–
Other employees	48,352	41,274	–	–
Total contractual and statutory social security contributions	52,046	44,669	2,203	1,951
<i>Pension expenses *)</i>				
Board and CEO	902	909	902	909
Other senior executives	809	805	–	–
Other employees	12,734	10,545	–	–
Total pension expenses	14,445	12,259	902	909
Total salaries, social security contributions and pension expenses	300,860	251,180	9,411	8,222

*) For salaried employees in Sweden, the ITP 2 plan's defined-benefit retirement and family pension obligation (or family pension) is covered by insurance through Alecia. According to the Swedish Financial Reporting Board's statement UFR 10, *Accounting for ITP 2 Plans Financed by Insurance in Alecia*, this is a multi-employer defined benefit-pension plan. The Company did not have access to sufficient information for the 2018 fiscal year to report its proportionate share of the plan's obligations, plan assets and costs, which meant that it was not possible to report the plan as a defined-benefit plan. Consequently, the ITP 2 pension plan insured through Alecia is reported as a defined-contribution plan. The premium for the defined-benefit retirement and family pension is calculated individually and is based on factors that include salary, previously earned pensions and the expected remaining period of service. Expected contributions for ITP 2 insurance covered by Alecia in the next reporting period are SEK 3,153 (2,467) thousand. The Group's share of the total contributions to the plan is

0.01714 (0.0020) percent, while its share of the total number of active members in the plan is 0.01219 (0.010) percent.

The collective consolidation level is the market value of Alecia's assets as a percentage of its insurance obligations calculated by reference to Alecia's actuarial methods and assumptions. This is not consistent with IAS 19. The collective consolidation level is normally allowed to vary between 125 and 155 percent. If Alecia's collective consolidation level falls below 125 percent or exceeds 155 percent, measures must be taken to create the right conditions for the level to return to the normal range. If the consolidation level is too low, an appropriate measure could be to increase the agreed price for new insurance and extension of existing benefits. If the consolidation level is too high, premium reductions could be introduced. At the end of 2018, Alecia's surplus, which was reported as a collective consolidation level, was 142 (154) percent.

Note 1 cont'd

Average number of employees by country

	2018			2017		
	Total	Male	Female	Total	Male	Female
Parent, Sweden	1	1	–	1	1	–
Subsidiaries, Sweden	85	54	31	77	47	30
USA	109	72	37	69	46	23
UK	134	92	42	125	83	42
Germany	12	9	3	12	9	3
France	4	4	–	4	4	–
China	21	16	5	18	15	3
Japan	27	20	7	24	16	8
South Korea	7	5	2	5	3	2
India	5	4	1	0	0	0
Total	404	276	128	335	224	111
Distribution %		68%	32%		67%	33%

Remuneration of Board members and senior executives*Principles*

The Chairman and members of the Board receive fees as adopted by the annual general meeting. The President & CEO receives a basic salary, variable pay, other benefits and a pension. An upward adjustment of the basic salary for 2018 has been made in order to keep the Company's total wage costs neutral. This is because social security contributions decreased when the President & CEO reached retirement age (65) in 2017. Other senior executives also receive a basic salary,

variable pay, other benefits and a pension. Group management is made up of other senior executives (two individuals) and the President & CEO. The basic salary to variable pay ratio must be proportional to responsibility and authority. The President & CEO receives variable pay, which is linked to the Group's annual results, up to a maximum of SEK 2,600,000. Other senior executives receive variable pay up to a maximum of 40 percent of their basic salary. The Board may also decide to award a discretionary payment to the CEO and other senior executives.

Accrued salaries, fees and other benefits in 2018

	Board fees	Basic salary	Variable pay	Other benefits	Pension expense	Other remuneration	Total
<i>Chairman of the Board:</i>							
Ove Mattsson *) ***)	165,000	–	–	–	–	–	165,000
Thomas Eklund *) ***)	440,000	–	–	–	–	–	440,000
<i>Board members:</i>							
Yvonne Mårtensson *)	260,000	–	–	–	–	–	260,000
Peter Ehrenheim *)	275,000	–	–	–	–	–	275,000
Karolina Lawitz *)	256,667	–	–	–	–	–	256,667
Nils Olof Björk *)	240,000	–	–	–	–	–	240,000
Total accrued cost of fees paid to Board members in 2018	1,636,667	–	–	–	–	–	1,636,667
CEO Torben Jørgensen **)	–	3,046,620	2,973,015	174,392	902,214	286,913	7,383,154
Other senior executives (2 individuals) **)	–	2,802,000	1,354,144	131,774	808,608	143,667	5,240,193
Total for 2018	1,636,667	5,848,620	4,327,159	306,166	1,710,822	430,580	14,260,014

*) Board members also received compensation for statutory employer contributions, as listed below, as their fees were paid to legal entities.

Ove Mattsson SEK 80,982.

Thomas Eklund SEK 78,554.

Yvonne Mårtensson SEK 65,982.

Peter Ehrenheim SEK 70,695.

Karolina Lawitz SEK 62,840.

Nils-Olof Björk SEK 35,990.

**) Other remuneration is mainly vacation allowances paid in accordance with the Swedish Annual Leave Act.

***) Ove Mattsson was Chairman of the Board until the end of the AGM in April 2018, when Board member Thomas Eklund was elected Chairman.

Accrued salaries, fees and other benefits in 2017

	Board fees	Basic salary	Variable pay	Other benefits	Pension expense	Other remuneration	Total
<i>Chairman of the Board:</i>							
Ove Mattsson *)	495,000	–	–	–	–	–	495,000
<i>Board members:</i>							
Yvonne Mårtensson	140,000	–	–	–	–	–	140,000
Thomas Eklund *)	250,000	–	–	–	–	–	250,000
Peter Ehrenheim *)	225,000	–	–	–	–	–	225,000
Karolina Lawitz *)	200,000	–	–	–	–	–	200,000
Nils Olof Björk *)	232,277	–	–	–	–	–	232,277
Total accrued cost of fees paid to Board members in 2017	1,542,277	–	–	–	–	–	1,542,277
CEO Torben Jørgensen **)	–	2,600,000	2,600,000	147,470	908,795	161,529	6,417,794
Other senior executives (2 individuals) **)	–	2,744,400	943,104	141,350	805,047	147,655	4,781,556
Total for 2017	1,542,277	5,344,400	3,543,104	288,820	1,713,842	309,184	12,741,627

*) Board members also received compensation for statutory employer contributions, as listed below, as their fees were paid to legal entities. Ove Mattsson SEK 80,982.

Thomas Eklund SEK 78,550.

Peter Ehrenheim SEK 70,695.

Karolina Lawitz SEK 62,840.

Nils-Olof Björk SEK 23,715.

**) Other remuneration is mainly vacation allowances paid in accordance with the Swedish Annual Leave Act.

Comments on the tables above and on the previous page*Board*

The 2018 AGM adopted Board fees of SEK 1,400,000 for the period until the 2019 AGM. The Chairman's fees accounted for SEK 500,000 of this amount. In addition, a maximum of SEK 255,000 was adopted for remuneration of committee work. The 2017 annual general meeting adopted Board fees of SEK 1,460,000 for the period until the 2018 annual general meeting. SEK 460,000 of this amount relates to the Chairman's fees. In addition, a maximum of SEK 140,000 was adopted for remuneration of committee work. This framework was defined by the 2017 and 2018 annual general meetings.

President & CEO

The President & CEO Torben Jørgensen receives a basic monthly salary of SEK 227,500. An upward adjustment of the basic salary for 2018 has been made in order to keep the Company's total wage costs neutral. This is because social security contributions decreased when the President & CEO reached retirement age (65) in 2017. In addition to the basic salary, a vacation allowance is paid in accordance with the Swedish Annual Leave Act. The President & CEO also receives variable pay and a pension, and is entitled to termination benefits, which are described below.

Variable pay and other benefits

President & CEO Torben Jørgensen receives variable pay of up to 100 (100) percent of his fixed annual salary, i.e., a maximum of SEK 2,730,000 per year. The Board may also decide to award a discretionary payment.

Pensions

The retirement age for President & CEO Torben Jørgensen is 68.

The pension premium is 35 percent of the pensionable salary. The pensionable salary is the basic salary.

Termination of employment/termination benefits

The Company may remove President & CEO Torben Jørgensen from his post at any time. The contract will terminate without prior notice on April 16, 2020. In the case of termination of employment initiated by the Company (not based on gross neglect of duties to the Company), the President & CEO will retain his fixed annual salary until April 2020. This remuneration is pensionable and counts towards vacation pay.

Guidelines for remuneration of senior executives adopted by the 2018 AGM.

The 2018 AGM adopted the following guidelines for remuneration of senior executives. Senior executives consists of the CEO and other members of Group management. The guidelines shall apply to employment contracts entered into after the AGM's decision on the guidelines and to any changes made to existing conditions of employment after the meeting's decision. The Company shall endeavor to offer its senior executives market-based salaries. The remuneration committee shall prepare remuneration matters and present proposals for the Board's consideration. Proposals for remuneration shall take into account the importance of duties, expertise, experience and performance. Remuneration shall comprise a fixed annual salary, variable pay, retirement benefits, discretionary payments, other benefits and termination benefits. The Board is entitled to derogate from these guidelines if it believes there is sufficient reason to do so in a particular case.

CEO

The Company's CEO receives an annual salary of SEK 2,730,000 under the terms of his employment contract. An upward adjustment of the basic salary has been made with effect from 2018 in order to keep the Company's total wage costs neutral. This is because social security contributions decreased when the President & CEO reached retirement age (65) in 2017. The Company makes a pension provision corresponding to 35 percent of the CEO's fixed annual salary. In addition to the fixed annual salary, the CEO receives variable pay of

Note 1 cont'd

up to 100 percent of his fixed annual salary. The variable pay is linked to the Company's achievement of defined financial targets. The CEO receives annual compensation of SEK 100,000 for travel and increased housing costs.

Other members of Company management

This group consists of two individuals, who report directly to the CEO. All members of Company management receive a fixed annual salary which is in line with market salaries, and variable pay of up to 40 percent of the fixed annual salary. 75 percent of the variable pay is linked to the Company's achievement of defined financial targets. The remaining 25 percent is based on defined goals relating to personal performance. The pension provision may amount to up to 30 percent of the fixed annual salary. Any new members of Company management can expect the same remuneration conditions.

Variable pay and performance requirements

The Board is entitled to decide on the criteria for variable pay.

Discretionary bonuses

The Board may decide to award a discretionary payment to members of Company management, including the CEO. Such a discretionary payment may only be made in exceptional circumstances.

Other benefits

Senior executives may be awarded other customary benefits such as a company car, health care, etc.

Termination benefits

Salaries during the period of notice and termination benefits for senior executives shall not exceed 24 monthly salaries.

Equity and share-based incentive programs

Any equity and share-based incentive programs shall be adopted by the Annual General Meeting. Allotment shall be in accordance with the decision of the AGM.

Previously decided remuneration

There is no previously decided remuneration that is not yet due for payment. A description of previous incentive programs can be found on page 48 of the 2014 annual report.

Remuneration in 2017

For information on remuneration of senior executives in 2017, see note 1 on pages 51-54 of the 2017 annual report.

NOTE 2 Income statement classified by nature of expense

If Biotage had presented its income statements classified by nature of expense, the composition would have been as follows:

Income statement classified by nature of expense	Group		Parent Company	
	2018	2017	2018	2017
<i>Operating income</i>				
Net sales	910,896	748,147	2,537	2,304
<i>Operating expenses</i>				
Purchased finished products, inputs, semi-finished products and production services	-226,675	-190,028	-	-
Personnel expenses	-325,050	-269,346	-8,294	-8,440
Other external costs	-156,451	-116,211	-15,071	-11,572
Depreciation, amortization and impairment of assets	-38,853	-32,768	-1,100	-873
Other operating items	8,612	-6,164	17	14
Total operating expenses	-738,418	-614,517	-24,448	-20,871
Operating profit	172,478	133,630	-21,911	-18,567

NOTE 3 Composition of income**Composition of net sales:**

	Group		Parent Company	
	2018	2017	2018	2017
Net sales - distribution between products and services:				
Products, systems	823,870	670,206	–	–
Service contracts and other services	79,645	71,838	2,537	2,304
Other sales revenue	7,381	6,103	–	–
Total sales revenue	910,896	748,147	2,537	2,304

Revenue by geographical market and product area 2017

	Organic Chemistry	Analytical Chemistry	Industrial Products	Total
North and South America	151,631	129,862	37,014	318,507
Europe	130,355	64,687	26,253	221,295
Japan	71,630	12,334	8,814	92,778
China	48,912	12,884	2,508	64,304
EMEA and APAC	10,216	11,903	2,750	24,869
South Korea	15,729	3,778	1,603	21,110
India	3,801	663	820	5,284
Total sales revenue	432,274	236,111	79,762	748,147
Sweden's share of sales in Europe				12,258

Revenue by geographical market and product area 2018

	Organic Chemistry	Analytical Chemistry	Industrial Products	Total
North and South America	159,173	187,853	39,161	386,186
Europe	128,837	89,681	26,741	245,259
Japan	75,580	12,298	15,912	103,790
China	70,856	17,125	1,010	88,991
EMEA and APAC	15,357	23,325	1,950	40,632
South Korea	22,661	10,359	2,931	35,951
India	8,474	1,017	596	10,087
Total sales revenue	480,938	341,658	88,301	910,896
Sweden's share of sales in Europe				6,335

The distribution above relates to sales per product area to customers located in the above geographical areas. As the product structure has changed in 2018, the distribution of comparatives for the previous year differs from the presentation in the 2017 annual report.

Revenue by sales channel

	2018	2017
Direct sales through own sales channels	870,264	717,994
Sales through distributors	40,632	30,153
Total sales revenue	910,896	748,147

Point in time of transfer of goods and services

	2018	2017
Goods transferred at a point in time	831,251	676,309
Services transferred at a point in time	20,381	23,200
Service contracts and other services transferred over a period of time	59,264	48,638
Total sales revenue	910,896	748,147

Contractual balances

	12/31/2018	12/31/2017
Contract assets:		
Accrued income contract research	265	166
Contract liabilities:		
Prepaid income service contracts	46,623	31,699
Contractual balances, net	-46,358	-31,533

SEK 30,369 thousand of the contract liabilities that existed on December 31, 2017 were recognized as revenue in 2018.

Note 3 cont'd

Prepaid service contracts are expected to be recognized as revenue in the following years

2019	40,669
2020	4,478
2021	583
2022	274
2023	117
2024	120
2025	124
2026	127
2027	131
Total	46,623

Service contracts can be signed by customers purchasing the Company's systems. They normally extend over twelve months, and are recognized on a straight-line basis over the term of the contract. Costs for obtaining a contract and for services rendered are recognized in the period in which they are incurred. A small proportion of the revenue relates to contract research. This is distributed over the duration of the contract by reference to the project's stage of completion. The contractual balances for these types of revenue are presented above.

Intra-group sales and purchases of products and services

	Parent Company	
	2018	2017
Parent to subsidiary, products	–	–
Parent to subsidiary, services	2,537	2,304
Subsidiary to parent	–	–
Subsidiary to subsidiary	–	–
Total intra-group sales	2,537	2,304

NOTE 4 Administrative expenses

Administrative expenses include the following fees paid to auditors. Audit services include examination of the annual financial statements, interim reports, accounting records, internal control and administration of the business by the CEO and Board. They also include examination of the financial statements of subsidiaries, advice and other assistance relating to observations made during the audit. Other advice and assistance comes under other fees.

	Group		Parent Company	
	2018	2017	2018	2017
<i>Fees to the auditors Deloitte</i>				
Audit services	1,233	1,012	746	779
Other assistance arising from audit	294	18	293	18
Tax advisory services	67	119	–	–
Total	1,594	1,149	1,039	797

NOTE 5 Leases and rental agreements

For accounting purposes, all leases in the Group are classified as operating leases, with lease payments recognized over the term of the lease.

	Group		Parent Company	
	2018	2017	2018	2017
<i>Lease and rental agreements during the year</i>				
Remaining rental and lease payments	17,497	14,613	146	113
Within one year	18,671	15,175	157	252
Between one and five years	26,847	22,851	263	–
After five years	–	117	–	–
Total	45,518	38,143	420	252
The year's rental and lease payments relating to rent for premises	15,090	12,397		
Remaining rental and lease payments relating to rent for premises	37,831	33,651		

Leases in the acquired subsidiary Horizon Technology Inc. were added during the year and several leases for premises were extended. A number of new car leases have been signed.

The Group's leases include leases for premises and vehicles. Low-value leases for assets such as office machines have not been included.

The new IFRS 16 will be applied to leases with effect from 2019. Biotage intends to apply the simplified transition method and will not restate comparatives. The Group intends to apply the standard's practical expedient for short-term leases and leases of low-value assets. This means that leases with a maximum term of 12 months and leases for office machinery will be recognized as an expense on a straight-line basis over the lease term.

As allowed by the practical expedient, no assessment has been made of lease components in contracts that were not previously classified as leases under IAS 17. Right-of-use assets under leases will initially be measured at an amount corresponding to the lease liability at January 1, 2019. The liability has been calculated as the present value of future lease payments, discounted using the Group's incremental borrowing rate on January 1, 2019, which is estimated to be 1.3%. The value of this non-current asset and corresponding liability was SEK 65 million on December 31, 2018.

The rental and lease payments above include the cost for the periods in which the Company is bound by the lease in question. The transition to IFRS 16 also includes periods where it is reasonably certain that options to extend the leases will be exercised. If a lease renewal is imminent (within one year), an extension of the lease is assumed unless known circumstances indicate otherwise. If there are a number of leases for premises for the same establishment in a country, it is assumed that they are extended until the year of the

lease with the longest maturity. As the business is growing, it is not reasonable to make assumptions about leases beyond five years. Five years is therefore the longest lease term included in the calculations.

Estimated indexation of lease payments is included in the calculations, unless they are expected to be insignificant. For most subsidiaries, future rental payments are defined in the existing lease contract.

The interest rate used to calculate the present value of future lease payments has been set at 1.3%. As it is difficult to determine the interest rate implicit in the lease, the incremental borrowing rate has been estimated. The incremental borrowing rate has been calculated by reference to the five-year municipal bond rate on December 31, 2018, as the longest existing lease term is 5 years. The interest rate is adjusted to reflect the company's credit rating, based on loan negotiations that have been experienced, and the underlying risk in the leased assets.

The Group's financing is primarily arranged through borrowing in Sweden. Leases in Sweden account for almost half of the present value of existing leases, while leases in the US account for about 23 percent. Simulation using an estimated US interest rate for these contracts has an insignificant effect. The Swedish interest rate has therefore been applied to all leases, with no adjustment having been made for the economic environment. As the calculated incremental borrowing rate is less than what the Company actually pays as minimum interest on existing loans, the actual interest rate on December 31, 2018 is applied, with adjustment for the difference between the five-year municipal bond rate and the minimum interest on existing loans.

	Group
Operating lease obligations, December 31, 2018	46,548
Discounted using the Group's incremental borrowing rate of 1.3%	-1,176
Less: low-value leases	-1,030
Adjustments as a result of expected indexation	116
Adjustments as a result of a different treatment of extension options	20,498
Obligations under IFRS 16, January 1, 2019	64,956

NOTE 6 Depreciation, amortization and impairment of assets

Depreciation, amortization and impairment by class of assets

	Group		Parent Company	
	2018	2017	2018	2017
Capitalized research & development expenditure	17,310	17,184	–	–
Patents and licenses	9,511	5,265	669	669
Land and buildings	398	378	–	–
Improvement of third-party property	1,201	880	–	–
Plant and machinery	9,775	8,857	–	–
Total depreciation/amortization	38,195	32,564	669	669
Impairment arising from disposals	658	1,582	431	204
Total depreciation/amortization and impairment	38,853	34,146	1,100	873

Depreciation, amortization and impairment by function of expense

	Group		Parent Company	
	2018	2017	2018	2017
Cost of sales	4,821	3,905	–	–
Distribution costs	8,799	5,670	–	–
Administrative expenses	2,409	2,166	–	22
Research and development	22,824	22,405	1,100	851
Total depreciation/amortization	38,853	34,146	1,100	873

Amortization and impairment of capitalized research and development expenditure is reported under research & development expenses.

NOTE 7 Other operating income

Other operating income

	Group		Parent Company	
	2018	2017	2018	2017
Exchange differences	14,681	8,309	17	14
EU funding	215	191	–	–
Other operating income	1,500	463	–	–
Total other operating income	16,396	8,963	17	14

NOTE 8 Finance income, finance costs and borrowing

	Group		Parent Company	
	2018	2017	2018	2017
Finance income:				
Interest income on financial assets	630	410	–	–
Interest income, receivables from Group companies	–	–	216	150
Exchange gains from financing measures, net	5,496	2,800	3,335	4,608
Group contributions received	–	–	90,645	86,334
Total	6,126	3,210	94,196	91,093
Finance costs:				
Interest expense and similar payments to banks	1,737	2	1,613	–
Profit/loss from investments in associates	578	578	–	–
Interest expense on liabilities to Group companies	–	–	–	2,550
Exchange gains from financing measures, net	–	–	–	–
Total	2,315	580	1,613	2,550
Net finance income/expense	3,811	2,631	92,584	88,543

NOTE 9 Taxes

	Group		Parent Company	
	2018	2017	2018	2017
Current tax	-10,719	-5,906	–	–
Deferred tax	2,056	8,392	-14,872	8,649
Total	-8,662	2,487	-14,872	8,649

	Group				Parent Company			
	2018		2017		2018		2017	
	%	SEK thousands	%	SEK thousands	%	SEK thousands	%	SEK thousands
Tax reported in profit/loss for the year								
Profit before tax		176,289		136,260		70,673		69,976
Tax using parent's applicable tax rate	-21.6	-38,148	-22.0	-29,977	-22.0	-15,548	-22.0	-15,395
Effect of different tax rates for foreign subsidiaries	-0.3	-445	3.3	4,458	0.0	–	0.0	–
Correction, prior years	0.0	-81	-0.4	-509	0.0	–	0.0	–
Non-taxable income	0.1	190	0.0	–	0.0	–	0.0	–
Non-deductible expenses	-0.4	-676	-1.1	-1,440	-0.2	-119	-0.2	-117
Other taxable income statement items not included in profit for the year	-1.5	-2,562	-0.2	-309	0.0	–	0.0	–
Other deductible income statement items not included in profit for the year	0.9	1,561	1.5	2,084	0.0	–	0.0	–
Utilization of loss carryforwards	16.8	29,553	14.5	19,788	22.2	15,667	22.2	15,512
Other	-0.1	-110	0.0	–	0.0	–	0.0	–
Current tax expense	-6.1	-10,719	-4.3	-5,906	0.0	-0	0.0	–
Reversal of previously recognized loss carryforwards	-16.8	-29,553	0.0	–	-22.2	-15,667	0.0	–
Recognition of previously unrecognized loss carryforwards	16.3	28,771	6.2	8,392	1.1	794	12.4	8,649
Tax effect of accrual and reversal of temporary differences	1.6	2,838	0.0	–	0.0	–	0.0	–
Effect of changed tax rate	0.0	24	0.0	–	0.0	–	0.0	–
Other	0.0	-24	0.0	–	0.0	–	0.0	–
Deferred tax expense	1.2	2,056	6.2	8,392	-21.0	-14,872	12.4	8,649
Total tax reported in consolidated and parent income statements	-4.9	-8,662		2,487		-14,872		8,649
Items in other comprehensive income		16,542		-12,481		–		–
Tax effects of these items		-320		–		–		–

NOTE 10 Property, plant and equipment**Land and buildings**

	Group	
	12/31/2018	12/31/2017
Cost		
Opening balance, January 1	15,160	15,258
Acquisitions during the year	–	–
Sub-total	15,160	15,258
Translation differences for the year	318	-98
Closing balance, December 31	15,478	15,160
Accumulated depreciation and impairment:		
Opening balance, January 1	-4,908	-4,556
Depreciation for the year	-398	-378
Sub-total	-5,306	-4,934
Translation differences for the year	-100	26
Closing balance, December 31	-5,406	-4,908
Carrying amount	10,072	10,252

Improvement of third-party property

	Group	
	12/31/2018	12/31/2017
Cost		
Opening balance, January 1	9,973	8,121
Acquisitions during the year	458	2,104
Disposals/impairment during the year	-139	–
Sub-total	10,292	10,225
Translation differences for the year	450	-252
Closing balance, December 31	10,742	9,973
Accumulated depreciation and impairment:		
Opening balance, January 1	-5,426	-4,708
Depreciation for the year	-1,201	-880
Disposals/impairment during the year	139	–
Sub-total	-6,488	-5,588
Translation differences for the year	-235	162
Closing balance, December 31	-6,723	-5,426
Carrying amount	4,019	4,547

Plant and machinery

	Group	
	12/31/2018	12/31/2017
Cost		
Opening balance, January 1	103,350	96,828
Acquisitions during the year	11,507	9,140
Reclassifications	6,478	-321
Disposals/impairment during the year	-20,139	-146
Sub-total	101,196	105,501
Translation differences for the year	3,093	-2,151
Closing balance, December 31	104,289	103,350
Accumulated depreciation and impairment:		
Opening balance, January 1	-72,847	-65,496
Depreciation for the year	-9,775	-8,857
Reclassifications	-4,906	-117
Disposals/impairment during the year	20,012	66
Sub-total	-67,516	-74,404
Translation differences for the year	-2,235	1,557
Closing balance, December 31	-69,751	-72,847
Carrying amount	34,538	30,504

Summary of carrying amount:

	Group	
	12/31/2018	12/31/2017
Land and buildings	10,072	10,252
Improvement of third-party property	4,019	4,547
Plant and machinery	34,538	30,504
Total in consolidated balance sheet	48,630	45,303

NOTE 11 Goodwill

	Group	
	12/31/2018	12/31/2017
Cost:		
Opening balance, January 1	558,242	558,242
Acquisitions during the year	73,329	–
Sub-total	631,571	558,242
Translation differences for the year	8,703	–
Closing balance, December 31	640,274	558,242
Opening impairment	-454,219	-454,219
Total amortization and impairment	-454,219	-454,219
Closing accumulated impairment	-454,219	-454,219
Carrying amount	186,055	104,023

Goodwill impairment testing

Preparation of the 2018 annual financial statements included goodwill impairment testing. Management monitors goodwill for the Group as a whole. The Group consists of a single operating segment. The increase in goodwill for the year is related to the acquisition of Horizon Technology, Inc. During the year, these operations have been integrated into the Group's other operations to such an extent that cash flows from the originally acquired asset can no longer be identified as of December 31. The recoverable amount for the cash-generating unit has been assessed on the basis of the estimated value in use, which also involved calculation of projected cash flows from the Group's operations. The cash flows are based on the Group's budget for 2019 and business forecasts for 2020-2023. The budget and forecasts are based on management's past experience and as far as possible on external sources of information. Key parameters in the calculation of the recoverable amount are estimated sales growth and operating profit. Assumptions about the gross margin and the development of other operating expenses have greatest impact on the assessment of operating profit and sales growth.

An assumption of annual sales growth of 4.0 (4.0) percent has been used in the impairment testing until the end of the forecast period in 2023. After this period, the assumed growth rate will be 2 percent, which Biotage believes to be a reasonable estimate of the market's long-term growth rate. A sensitivity analysis shows that neither an adjustment of 2 percent in the discount rate, nor a change of 2 percent in sales growth, nor an adjustment of 2 percent in the operating margin would give rise to impairment. See also page 54.

	2018	2017
Equity financing	9.35%	9.27%
Debt financing	2.32%	2.33%
Average based on Group's capital structure	8.65%	8.58%
The pre-tax discount rate has been calculated as:	11.70%	12.70%

NOTE 12 Other intangible assets**Capitalized development expenditure**

	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Cost:				
Opening balance, January 1	207,797	189,902	–	–
Acquisitions during the year	24,010	22,799	–	–
Disposals during the year	-3,353	-4,904	–	–
Closing balance, December 31	228,454	207,797	–	–
Accumulated amortization and impairment:				
Opening balance, January 1	-112,759	-99,102	–	–
Amortization for the year	-17,310	-17,184	–	–
Disposals during the year	2,822	3,526	–	–
Closing balance, December 31	-127,247	-112,759	–	–
Carrying amount	101,207	95,038	–	–

Patents, licenses, trademarks, etc.

	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Cost:				
Opening balance, January 1	72,317	71,347	12,885	12,993
Acquisitions during the year	74,097	3,863	2,029	1,683
Reclassifications	6,662	–	–	–
Disposals during the year	–	-2,893	-1,197	-1,791
Sub-total	153,076	72,317	13,717	12,885
Translation differences for the year	2,461	–	–	–
Closing balance, December 31	155,537	72,317	13,717	12,885
Accumulated amortization and impairment:				
Opening balance, January 1	-48,708	-46,132	-2,832	-3,750
Amortization for the year	-9,511	-5,265	-669	-669
Reclassifications	-5,375	–	–	–
Disposals during the year	–	2,689	766	1,587
Sub-total	-63,594	-48,708	-2,734	-2,832
Translation differences for the year	-497	–	–	–
Closing balance, December 31	-64,091	-48,708	-2,734	-2,832
Carrying amount	91,446	23,608	10,983	10,053

	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Total property, plant & equipment and intangible assets reported:				
Land and buildings	10,072	10,252	–	–
Improvement of third-party property	4,019	4,547	–	–
Plant and machinery	34,538	30,504	–	–
Sub-total property, plant & equipment	48,630	45,303	–	–
Goodwill	186,055	104,023	–	–
Capitalized development expenditure	101,207	95,038	–	–
Patents, licenses, trademarks, etc.	91,446	23,608	10,983	10,053
Sub-total intangible assets	192,654	118,646	10,983	10,053
Total carrying amount of property, plant & equipment and intangible assets	427,339	267,972	10,983	10,053

Distribution by country:	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Sweden	244,416	231,522	10,983	10,053
USA	148,202	3,083	–	–
UK	28,693	27,501	–	–
Japan	4,433	4,229	–	–
Other countries	1,595	1,637	–	–
Total	427,339	267,972	10,983	10,053

NOTE 13 Investments in associates

	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Opening cost	17,838	18,645	19,284	19,284
Acquisitions during the year	–	–	–	–
Share of profit/loss	-1,690	-1,151	–	–
Translation differences	1,220	344	–	–
Closing accumulated cost	17,368	17,838	19,284	19,284
Closing accumulated carrying amount	17,368	17,838	19,284	19,284

Companies owned directly by the Parent

Company name	Reg. no.	Reg'd office	Number of shares	Share of capital	Share of votes	Group		Parent Company	
						12/31/2018	12/31/2017	12/31/2018	12/31/2017
Chreto ApS	33382170	Værløse, Denmark	50,000	22.70%	22.70%	17,368	17,838	19,284	19,284
Total carrying amount						17,368	17,838	19,284	19,284

NOTE 14 Financial assets

	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Miscellaneous non-current receivables	3	–	–	–
Miscellaneous long-term deposits	1,850	1,404	–	–
Total financial assets	1,853	1,404	–	–

NOTE 15 Inventories

	Group	
	12/31/2018	12/31/2017
Raw materials and consumables	29,039	21,261
Products in progress	12,726	9,551
Finished products	90,573	64,982
Total inventories	132,338	95,794

Inventory items recognized as an expense in 2018 amounted to SEK 249,187 (211,015) thousand. Obsolescence of SEK 3,574 (2,207) thousand was recognized during the year. The obsolescence reserve on December 31 was SEK 16,193 (14,090) thousand.

NOTE 16 Trade and other receivables

	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Trade receivables (a)	155,777	118,025	–	–
Prepayments and accrued income (b)	11,617	10,422	2,389	3,410
Other current receivables (c)	17,686	10,748	2,616	307
Total trade and other receivables	185,080	139,195	5,005	3,718

Management believes that the carrying amount of trade receivables, net of the allowance for expected credit losses, corresponds to their fair value. The entire allowance for expected credit losses relates to trade receivables.

	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
(a) Change in allowance for expected credit losses on trade receivables				
Allowance for expected credit losses at beginning of year	-1,697	-2,393	–	–
Trade receivables written off during the year	1,525	279	–	–
Allowance for expected credit losses for the year	-2,883	-1,316	–	–
Reversal of unused amounts	172	1,733	–	–
Total expected credit losses	-2,883	-1,697	–	–

Group

	12/31/2018			12/31/2017		
	Gross	Expected credit losses	Trade receivables	Gross	Provision for doubtful debts	Trade receivables
Aging of trade receivables						
Not due	119,402	- 1,162	118,240	92,862	–	92,862
Past due, 1-30 days	22,965	-223	22,742	16,279	–	16,279
Past due, 31-60 days	5,794	-56	5,738	3,863	–	3,863
Past due, > 61 days	10,499	-1,442	9,057	6,718	-1,697	5,021
Total	158,660	-2,883	155,777	119,722	-1,697	118,025

Implementation of IFRS 9 *Financial instruments* requires assessment of expected credit losses to be made immediately on billing. From 2018, expected credit losses on trade receivables are calculated according to the simplified matrix model. This model is based on previous experience of actual losses in each billing currency, but

also takes into account forward-looking factors such as the general economic development expected in the customers' industries. The calculation is made alongside an individual assessment. This consideration of relevant current circumstances and knowledge of customers may lead to a change in the credit loss allowance.

	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
(b) Prepayments and accrued income				
Accrued income	265	166	–	2,500
Prepaid rents	3,183	2,674	–	–
Prepaid insurance	1,214	891	362	518
Other items	6,955	6,691	2,027	392
Total	11,617	10,422	2,389	3,410
(c) Other current receivables				
VAT	8,774	5,772	219	250
Income tax	539	173	155	–
Other current receivables	8,373	4,803	2,242	58
Total	17,686	10,748	2,616	307

NOTE 17 Appropriation of profit

Proposed appropriation of profit for the fiscal year, SEK

Amounts at the disposal of the annual general meeting:

Retained earnings	380,532,355
Profit for the year	55,800,590
Total	436,332,945

Board and CEO's proposed appropriation:

Dividend payment of SEK 1.50 per share to share-holders	97,802,676
Carried forward	338,530,269
Total	436,332,945

NOTE 18 Liabilities to credit institutions

	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Current portion	–	–	–	–
Non-current portion				
Credit facilities: Credit granted	149,182	–	150,000	–
Unused portion of revolving credit facility	-39,782	–	-40,000	–
Total	109,400	–	110,000	–

Collateral has not been provided for the credit. All of the long-term liabilities mature between one and five years from the reporting date.

NOTE 19 Financial assets and liabilities**Classification**

Classification of the Group's financial instruments, which is described on pages 47–49, is as follows:

Assets	Classification	Carrying amount	Classification	Carrying amount
		12/31/2018		12/31/2017
Non-current receivables	1)	1,853	7)	1,404
Trade receivables	1)	155,777	7)	118,025
Other current receivables	1)	17,686	7)	10,094
Other current receivables	2)	–	4)	578
Derivatives	2)	–	4)	76
Accrued income	1)	265	7)	166
Cash and cash equivalents	1)	177,020	7)	174,263
Total		352,601		304,606

Liabilities	Classification	Carrying amount	Classification	Carrying amount
		12/31/2018		12/31/2017
Non-current liabilities to credit institutions	1)	109,400	9)	–
Trade payables	1)	54,764	9)	47,457
Derivatives	2)	5	4)	–
Other current liabilities	1)	4,842	9)	4,715
Accrued expenses	1)	60,411	9)	50,561
Total		229,422		102,733

Classification, December 31, 2018:

Classification according to IFRS 9:

- 1) Financial assets and liabilities at amortized cost
- 2) Financial assets and liabilities at fair value through profit or loss
- 3) Financial assets and liabilities at fair value through OCI

Classification, December 31, 2017:

Classification according to IAS 39:

- 4) Derivatives
- 5) Financial assets and liabilities at fair value through OCI
- 6) Held-to-maturity investments
- 7) Loans and receivables
- 8) Available-for-sale financial assets
- 9) Other liabilities

NOTE 20 Fair value**Group**

Financial assets at amortized cost	Total	Level 1	Level 2	Level 3
Non-current receivables	1,404	1,404	–	–
Current receivables	128,285	128,285	–	–
Cash and cash equivalents	174,263	174,263	–	–
Closing balance, 12/31/2017	303,952	303,952	–	–
Non-current receivables	1,853	1,853	–	–
Current receivables	173,728	173,728	–	–
Cash and cash equivalents	177,020	177,020	–	–
Closing balance, 12/31/2018	352,601	352,601	–	–

Financial liabilities at amortized cost	Total	Level 1	Level 2	Level 3
Non-current liabilities	–	–	–	–
Current liabilities	102,733	102,733	–	–
Closing balance, 12/31/2017	102,733	102,733	–	–
Non-current liabilities	109,400	109,400	–	–
Current liabilities	120,017	120,017	–	–
Closing balance, 12/31/2018	229,417	229,417	–	–

Estimated fair values based on discounted future cash flows, with a discount rate that reflects the counterparty's credit risk being the most significant input, are not expected to differ significantly from the carrying amount of financial assets and current financial liabilities measured at amortized cost. Consequently, the carrying amounts of these financial assets and liabilities are considered to represent a good approximation of the fair values.

There were no transfers between the levels during the periods. The tables below provide information on how fair value is determined

for financial instruments measured at fair value in the statement of financial position. Fair value is determined on the basis of inputs in one of the following three levels:

Level 1: inputs that are quoted prices in active markets for identical instruments

Level 2: inputs other than quoted market prices in Level 1 that are directly or indirectly observable market data

Level 3: inputs that are not observable in the market

Financial assets at fair value	Total	Level 1	Level 2	Level 3
Derivatives used for hedging	76	–	76	–
Other derivative assets	578	–	–	578
Closing balance, 12/31/2017	654	–	76	578
Closing balance, 12/31/2018	–	–	–	–
Financial liabilities at fair value	Total	Level 1	Level 2	Level 3
Closing balance, 12/31/2017	–	–	–	–
Derivatives used for hedging	5	–	5	–
Closing balance, 12/31/2018	5	–	5	–

There were no transfers between the levels during the periods.

The tables below present a reconciliation of opening and closing balances for instruments measured at fair value in the statement of financial position and which are included in level 3.

Biotage hedges currency risks in accordance with the Board's established financial policies. Currency hedging is based on the expected difference between the cash flow in SEK and other currencies.

Group

Changes in financial instruments in Level 3	Other derivative assets		Liabilities	
	2018	2017	2018	2017
At beginning of year	578	1,156	–	–
Total gains and losses recognized in profit or loss	-578	-578	–	–
Closing balance, December 31	–	578	–	–

The fair value disclosures provided for the Group in respect of derivatives also apply to the Parent Company.

Measurement of derivatives (level 2)

The fair value of derivatives used for hedging is determined by discounting future cash flows using a discount rate that reflects the counterparty's credit risk. Future cash flows are estimated based on the Swedish Central Bank's quoted exchange rates.

The option for Biotage to acquire all outstanding shares in Chreto Aps was measured at fair value. The fair value calculations were based on level 3 of the fair value hierarchy, which means that the value was determined based on a valuation model using significant inputs that are unobservable. The option expired on December 31, 2018, and has not been exercised.

NOTE 21 Other financial liabilities

Changes during the year	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Opening balance, January 1	810	970	–	–
New financial liabilities during the year	996	–	–	–
Amounts used during the year	-236	-160	–	–
Closing balance, December 31	1,570	810	–	–

The liability consists of:	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Non-current portion	1,201	656	–	–
Current portion	369	154	–	–
Total	1,570	810	–	–

NOTE 22 Provisions

	Group		
	12/31/2018	12/31/2017	
Provision for warranties	3,159	2,785	
Other personnel-related provisions	2,245	1,936	
Total provisions	5,404	4,721	
The provisions consist of:			
Non-current portion	2,245	1,936	
Current portion	3,159	2,785	
Total	5,404	4,721	
Changes during the year, Group	Warranties	Other provisions	Total
Opening balance 01/01/2018	2,785	1,936	4,721
New provisions during the year	3,159	309	3,468
Amounts used during the year	-2,785	–	-2,785
Closing balance, 12/31/2018	3,159	2,245	5,404

Provision for warranties:

Biotage normally provides a one-year warranty on its products. The recognized provision for warranties corresponds to a percentage of the year's sales. The percentage is calculated on the basis of actual

warranty costs during the fiscal year. The provision for warranties is classified as a short-term obligation as it is considered likely that the warranty obligations will be settled within 12 months of the reporting date.

NOTE 23 Deferred tax

	Group		Parent Company		
	12/31/2018	12/31/2017	12/31/2018	12/31/2017	
<i>Deferred tax assets</i>					
Tax loss carryforwards	59,953	60,735	33,623	48,495	
Other deferred tax assets	2,252	–	–	–	
Total deferred tax assets	62,205	60,735	33,623	48,495	
<i>Deferred tax liabilities</i>					
Intangible assets	-12,928	–	–	–	
Other deferred tax liabilities	-1,852	-1,621	–	–	
Total deferred tax liabilities	-14,780	-1,621	–	–	
Total deferred tax assets and liabilities	47,425	59,114	33,623	48,495	
Group					
Change in deferred tax	Deferred tax assets		Deferred tax liabilities		Net
January 1, 2017	52,344		-1,759		50,585
Recognized in income statement	8,391		137		8,528
December 31, 2017	60,735		-1,621		59,113
January 1, 2018	60,735		-1,622		59,113
Acquisitions	–		-13,424		-13,424
Change in OCI	312		-632		-320
Recognized in income statement	1,158		898		2,056
December 31, 2018	62,205		-14,780		47,425
Parent					
Change in deferred tax	Deferred tax assets		Deferred tax liabilities		Net
January 1, 2017	39,846		–		39,846
Recognized in income statement	8,649		–		8,649
December 31, 2017	48,495		–		48,495
January 1, 2018	48,495		–		48,495
Recognized in income statement	-14,872		–		-14,872
December 31, 2018	33,623		–		33,623

Recognition of loss carryforwards

The Group has tax losses of about SEK 157 million in Swedish legal entities prior to the 2019 tax year. These tax loss carryforwards continue indefinitely. Tax losses in US subsidiaries amount to approx. SEK 147 million and expire in the period 2021-2031. Tax losses in German subsidiaries amount to approx. SEK 8 million. In 2018, the Group utilized tax losses against taxable profits, corresponding to a tax effect of SEK 29.6 million, and new loss carryforwards of SEK

28.8 million were recognized. The net effect of SEK 0.8 million has affected tax expense reported for the year. The carrying amount of the Group's deferred tax assets on December 31, 2018 is SEK 60.0 (60.7) million, while the corresponding figure for the Parent Company is SEK 33.6 (48.5) million. On the basis of the assessment concerning future taxable income, the remaining loss carryforwards have not been recognized. Further information on significant accounting estimates can be found on page 54.

NOTE 24 Trade and other payables

	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Liabilities to suppliers	54,764	47,457	1,717	876
Other current liabilities	5,216	4,869	71	47
Accruals and deferred income (a)	107,126	87,367	8,041	8,014
Total trade and other payables	167,106	139,693	9,829	8,937
(a) Accruals and deferred income				
Personnel-related expenses	43,678	38,446	6,942	6,852
Deferred income	46,715	36,806	–	–
Other accruals	16,733	12,115	1,099	1,162
Total	107,126	87,367	8,041	8,014

NOTE 25 Statement of cash flows

	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Other adjustments for non-cash items				
Exchange differences	-13,868	591	–	–
Share of income of associates	1,690	1,151	–	–
Other	451	249	–	–
Total	-11,727	1,991	–	–

Changes in liabilities attributable to financing activities during the year consist of the Parent Company's borrowings and dividends paid. These items do not represent non-cash movements. All cash and cash equivalents consist of bank balances.

NOTE 26 Shares and participating interests

	12/31/2018	12/31/2017
Parent Company		
Opening cost	938,332	937,204
Investments during year	1,523	1,128
Closing accumulated cost	939,855	938,332
Opening impairment	-467,934	-467,934
Closing accumulated impairment	-467,934	-467,934
Closing accumulated carrying amount	471,922	470,399

Note 26 cont'd

Companies owned directly by the Parent

Company name	Reg. no.	Reg'd office	Number of shares	Share of capital	Share of votes	Opening carrying amount 2018	Investments during year	Impairment during year	Closing carrying amount 2018
Biotage Sweden AB	556487-4922	Uppsala, Sweden	19,336,284	100%	100%	276,224	–	–	276,224
CEMU Bioteknik AB	556011-2384	Uppsala, Sweden	100	100%	100%	120	–	–	120
Pyrosequencing AB	556554-3476	Stockholm, Sweden	100	100%	100%	100	–	–	100
MIP Technologies AB	556578-4674	Lund, Sweden	96,940	100%	100%	35,295	–	–	35,295
Pyrosequencing, Inc.	04-3484142	Boston, USA	100	100%	100%	77,695	–	–	77,695
Biotage GmbH	HRB 39374	Düsseldorf, Germany	1	100%	100%	0	–	–	0
Biotage SARL	434715785	Paris, France	500	100%	100%	68	–	–	68
Biotage Italy S.r.l	IT03617450964	Milan, Italy	1	90%	90%	0	–	–	0
Biotage Ltd.	0126-01-004032	Tokyo, Japan	200	100%	100%	0	–	–	0
Biotage GB Ltd.	1033865	Cardiff, Wales	100	100%	100%	76,744	–	–	76,744
Biotage Trading (Shanghai) Co., Ltd.	91310115580622067B	Shanghai, China	1	100%	100%	994	–	–	994
Biotage Korea Co., Ltd.	110111-6105476	Seoul, Korea	27,000	100%	100%	2,030	–	–	2,030
Biotage India Pvt Ltd.	27AAHCB4849G1ZH	Mumbai, India	2,045,000	100%	100%	1,128	1,523	–	2,651
Total carrying amount						470,399	1,523	–	471,922

Companies owned by other subsidiaries

Company name	Owner	Reg. no.	Reg'd office	Number of shares	Share of capital	Share of votes	Opening carrying amount 2018	Closing carrying amount 2018
Biotage LLC	Pyrosequencing, Inc.	04-3535072	Charlotte, USA		100%	100%	204,432	222,778
Horizon Technology, Inc.	Pyrosequencing, Inc.	02-0457387	Salem, USA	209,346	100%	100%	–	159,464
ESyTech AB	Biotage Sweden AB	556588-8350	Uppsala, Sweden	100,000	100%	100%	260	260
Biotage Italy S.r.l	Biotage GmbH	IT03617450964	Milan, Italy	1	10%	10%	10	10
Total							204,702	382,512

Horizon Technology Inc. was acquired during the year. Changes to the carrying value of other subsidiaries' shareholdings are due to translation differences during conversion to Swedish kronor.

Business combinations

Acquisition of Horizon Technology, Inc.

On January 16, 2018, Biotage AB acquired 100 percent of the privately-owned company Horizon Technology, Inc., based in New Hampshire, United States. Horizon is a supplier of automated systems and consumables for separation in water purification, food testing and the petrochemical and pharmaceutical industries. Horizon's product range is complementary to the Biotage product portfolio and strengthens the Company's position, particularly in food safety and environmental applications. Marketing of Horizon's products is also expected to benefit from the Biotage global direct sales organization. Biotage acquired all of the shares in Horizon by paying the entire consideration of SEK 142.5 million on the acquisition date.

The acquired business's sales and effect on the Group's cash flow are difficult to assess, as it has been integrated into the Group's other operations.

In this acquisition analysis, no differences between carrying amounts and fair values have been identified for other receivables. Inventories are measured at their carrying amounts. Deferred tax is attributable to surplus values relating to trademarks, customer relationships and patents/technologies. The useful lives of trademarks have been assessed as indefinite. The useful lives of customer relationships are 10 years and of patents/technologies 15 years.

The acquired company's net assets on the acquisition date	Acquisition analysis, SEK millions
Property, plant and equipment	0.6
Intangible assets - Customer relationships	26.4
Intangible assets - Trademarks	13.0
Intangible assets - Patents/technology	19.5
Other intangible assets	2.1
Inventories	8.2
Trade and other receivables	9.0
Cash and cash equivalents	12.7
Trade and other payables	-10.0
Deferred tax liability	-12.4
Net identifiable assets and liabilities	69.2
Goodwill on consolidation	73.3
Consideration transferred	142.5

Goodwill amounts to SEK 73 million in the acquisition analysis. The goodwill included in the acquisition corresponds to the expected scope for expanding sales of Horizon's products to a larger market with the Biotage global sales organization, the synergies that arise from broadening the Biotage product range, and the environmental and water purification expertise that the acquired company brings. This goodwill is not considered tax-deductible.

Acquisition-related costs amount to SEK 2.5 million and relate to fees to external legal representatives and consultants in connection with the preparation of agreements and due diligence analyses. The costs are reported under administrative expenses in the consolidated statement of comprehensive income.

Acquisition of PhyNexus Inc.

On January 15, 2019, Biotage AB acquired 100 percent of the privately-owned company PhyNexus, Inc., based in California, US. The acquisition has strengthened Biotage's position as a chemical separation company within the growing biomolecular segment. With PhyNexus's innovative technology platform and its patented pipette-based consumables, Biotage will be able to offer global customers automated solutions for efficient purification of biomolecules such as proteins, plasmids and antibodies at laboratory scale. Biotage predicts that this platform has the potential to eventually target a growing market worth several billion US dollars. The acquired technology platform will enable the development of new workflow approaches for clinical, forensic, food and environmental testing through dispersive solid phase extraction in combination with high throughput pipetting robotics and the new media development program.

The total purchase consideration is approx. USD 21.4 million, corresponding to SEK 191.3 million, translated at the SEK/USD exchange rate of 8.93 on the acquisition closing date, based on a debt-free and cash-free basis. Approx. USD 10.0 million (SEK 89.3 million) of the total purchase consideration consists of expected future additional consideration payments for the years 2019 to 2023, which will be based on future results. The remaining consideration of approx. USD 11.4 million (SEK 102.0 million) was paid on the closing date and comprised approx. USD 6.6 million (SEK 58.6 million) in 487,337 newly issued Biotage shares and approx. USD 4.8 million (SEK 43.3 million) in cash.

Consideration shares issued in connection with the acquisition have increased the number of Biotage shares from 64,714,447 to 65,201,784, resulting in dilution of 0.7 percent for existing shareholders. The newly issued shares have been subscribed by the principal owners of PhyNexus (including the largest shareholder Doug Gjerde,

representing about 60 percent of the shares and votes in PhyNexus). Additional shares may be issued in connection with the post-closing price adjustments and future additional consideration payments.

The acquisition analysis has not identified any differences between carrying amounts and fair values of other receivables. Inventories are measured at their carrying amounts.

The acquired company's net assets on the acquisition date	Acquisition analysis, SEK millions (preliminary)
Property, plant and equipment	0.0
Intangible assets - Customer relationships	49.2
Intangible assets - Trademarks	10.3
Intangible assets - Patents/technology	13.4
Inventories	8.3
Trade and other receivables	5.3
Cash and cash equivalents	3.7
Trade and other payables	-3.1
Deferred tax liability	-15.3
Net identifiable assets and liabilities	71.8
Goodwill on consolidation	119.4
Consideration transferred	191.3

The analysis shows goodwill of SEK 119 million. The goodwill included in the acquisition corresponds to the expected scope for expanding sales of PhyNexus products to a larger market with the Biotage global sales organization, the synergies that arise from broadening the Biotage product range, and the biomolecule expertise that the acquired company brings. This goodwill is not considered tax-deductible.

Acquisition-related costs amounted to SEK 3.2 million, with a cash-flow effect of SEK -3.1 million, and are related to fees paid to external legal representatives and consultants in connection with due diligence and similar services. The costs are reported under administrative expenses in the consolidated statement of comprehensive income.

NOTE 27 Pledged assets and contingent liabilities

	Group		Parent Company	
	12/31/2018	12/31/2017	12/31/2018	12/31/2017
Contingent liabilities				
Guarantees, subsidiaries	-	-	28,077	26,623
Total	-	-	28,077	26,623
Pledged assets	-	-	-	-

The Parent Company has provided sureties for the following subsidiaries' obligations with the Group's main creditor, Handelsbanken:

Biotage LLC	04-3535072	Charlotte, USA
Biotage GB Ltd	1033865	Cardiff, Wales
Biotage Sweden AB	556487-4922	Uppsala, Sweden

The Parent Company guarantees all liabilities of Biotage GB Ltd. (see above) at the reporting date. This exempts the Company from the requirement for audited accounts in accordance with section 479A of the Companies Act 2006.

NOTE 28 Related-party disclosures**Subsidiary**

Biotage AB does not engage in any operations described in its business concept; its subsidiaries develop, produce and market the Group's products and services. For this reason, there are considerable transactions between the Parent Company and its subsidiaries, and between subsidiaries themselves. A list of the subsidiaries can be found in note 26.

Summary of transactions with subsidiaries:

SEK thousands		Receivables from subsidiaries		Liabilities to subsidiaries		Services sales (+) purchases (-)		Interest received (+) paid (-)	
Subsidiary	Country	2018	2017	2018	2017	2018	2017	2018	2017
Biotage Sweden AB	SE	72,352	54,728	–	1,047	668	757	–	–
Biotage Sweden AB	SE	–	–	–	–	-3,348	-3,316	–	–
Cemu Bioteknik AB	SE	–	–	129	129	–	–	–	–
Pyrosequencing AB	SE	–	–	100	100	–	–	–	–
MIP Technologies AB	SE	–	–	–	–	63	101	–	–
Biotage LLC	US	–	177	139,744	49,393	686	732	–	-2,550
Biotage SARL	FR	20	–	–	–	20	–	–	–
Biotage GmbH	DE	31,722	30,205	–	–	54	–	158	150
Biotage Ltd.	JP	8,045	10,597	–	–	233	235	58	–
Biotage GB Ltd.	GB	–	–	–	–	345	424	–	–
Biotage China	CH	–	–	–	–	–	–	–	–
Biotage Korea Co., Ltd.	KO	12	–	–	–	47	55	–	–
Biotage India Pvt Ltd.	IN	27	142	–	–	30	–	–	–
Pyrosequencing, Inc.	US	160,377	–	–	–	–	–	–	–
Horizon Technology, Inc.	US	404	–	–	–	392	–	–	–
Impairment reserve		-29,798	-28,564	–	–	–	–	–	–
		243,161	67,285	139,974	50,669	-810	-1,012	216	-2,400

Key management personnel in the company or its parent

Payments to the Board and senior executives are described on pages 55-58. No other transactions have been conducted with Board members, senior executives or individuals or legal entities that are related parties thereof.

NOTE 29 Significant events after the reporting date

On January 2, the Board announced that a recruitment process had been initiated to appoint a new CEO. The current CEO Torben Jørgensen has announced that he intends to continue as CEO until a replacement has been engaged.

The acquisition of PhyNexus was finalized on January 15. The purchase consideration was approx. USD 21.4 million, which corresponds to about SEK 191.3 million based on an SEK/USD exchange rate of 8.93 on the transaction date. USD 4.8 million (SEK 43.3 million) was paid in cash and approx. USD 6.6 million (SEK 58.6 million) was settled in newly issued Biotage shares on the closing date. The remaining USD 10.0 million (SEK 89.3 million) consists of contingent consideration based on future results.

On January 15, the Board decided to issue consideration shares in connection with the acquisition of PhyNexus. The issue increased the number of Biotage shares from 64,714,447 to 65,201,784, resulting in dilution of 0.7 percent for existing shareholders.

NOTE 30 Definitions of key figures**Proportion of risk-bearing capital**

The total of equity and deferred tax liabilities in untaxed reserves divided by total assets. As the Group has no untaxed reserves, the proportion of risk-bearing capital is the same as the equity/assets ratio.

Return on equity

Net profit for the year divided by average equity.

Return on capital employed

Profit after financial items plus finance costs divided by average capital employed.

Return on total assets

Profit after financial items plus finance costs divided by average total assets.

Gross margin, %

Gross profit divided by net sales.

Gross profit

Net sales less cost of sales.

Equity per share

Equity divided by the number of shares outstanding at the end of the period.

Cash flow from operations per share

Cash flow from operating activities divided by the number of shares outstanding at the end of the period.

P/E ratio

Share price divided by earnings per share.

P/S ratio

Stock market price divided by sales per share outstanding at the end of the period.

Key figures and performance measures**Alternative performance measures**

The Company presents certain performance measures that are not defined under IFRS. The Company believes that these measures provide useful additional information to investors and Company management as they allow evaluation and benchmarking of its performance. As not all companies calculate performance measures in the same way, the measures are not always comparable with those used by other companies. These performance measures should therefore not be considered a substitute for measures defined under IFRS. The reported performance measures are not defined under IFRS unless otherwise stated.

ESMA's guidelines on alternative performance measures are applied with effect from July 3, 2016, which means enhanced disclosure requirements for performance measures not defined under IFRS. Below is an appraisal of the financial measures that Biotage considers relevant under the new guidelines.

Net sales at comparable exchange rates

As most of the Group's net sales are settled in currencies other than the reporting currency, SEK, the amount recognized is affected by exchange rate changes between periods to a relatively large extent.

Earnings per share *

Net profit for the period divided by the average number of shares during the period.

Operating margin

Operating profit/loss divided by sales.

Operating profit

Profit before net financial items and taxes. Consists of gross profit minus total operating expenses (sales expenses, administrative expenses, research and development costs, other operating income and other operating expenses).

Equity/assets ratio

Equity divided by total assets.

Capital employed

Total assets minus non-interest-bearing liabilities and provisions. Average capital employed is the sum of capital employed at the beginning and end of the fiscal year divided by two.

Total capital

Total assets. Average total assets is the sum of total assets at the beginning and end of the fiscal year divided by two.

Profit margin

Operating profit/loss plus finance income divided by sales.

Investments

Acquisition of property, plant and equipment, intangible assets and financial assets during the period.

*) Key figure defined under IFRS.

To enable stakeholders and management to analyze sales trends adjusted for currency effects, the Company reports sales trends compared with the comparative period at constant exchange rates. The current period's sales in each currency are translated at the exchange rates that were used in the reported financial statements for the comparative period.

	12 months			
	01/01/2018 -12/31/2018		01/01/2017 -12/31/2017	
	SEK thou- sands	%	SEK thou- sands	%
Change in net sales, %				
Net sales recognized in the comparative period	748,147		667,912	
Net sales recognized in the period	840,177		748,147	
Recognized change	92,031	12.3	80,235	12.0
Net sales for the period at the comparative period's exchange rates	808,108		752,422	
Change using comparative period's exchange rates	59,961	8.0	84,510	12.7

Net cash

To enable stakeholders and management to monitor and analyze the Group's financial strength, information on the Group's net cash position is reported, defined as cash less liabilities to credit institutions.

Net cash (SEK thousands)	12/31/2018	12/31/2017
Cash	177.0	174.3
Liabilities to credit institutions	-109.4	0.0
Net cash	67.6	174.3

Net sales and operating profit, rolling 12 months

Biotage has chosen to report net sales and operating profit on a rolling 12-month basis as the Company's management also follows performance over time for the total of the last 12 months' results and considers that this provides additional information to the calendar-based interim data otherwise presented in the report.

Rolling 12 months	01/01/2018 -12/31/2018	01/01/2017 -12/31/2017
Net sales	910.9	748.1
Operating profit	172.5	133.6
Sales growth, %	21.8	12.0

EBIT

In its reports, Biotage uses the performance measure EBIT (Earnings Before Interest and Taxes) as an alternative term for operating profit.

STATEMENT BY THE BOARD OF DIRECTORS

The Board and CEO confirm that the consolidated annual financial statements have been prepared in accordance with international financial reporting standards (IFRS) as adopted by the EU and provide a true and fair view of the Group's financial performance and position. The Parent Company's annual financial statements have been prepared in accordance with generally accepted accounting principles

in Sweden and provide a true and fair view of the Parent Company's financial performance and position. The Board of Directors' report for the Group and Parent Company provides a true and fair overview of the development of their operations, financial position and performance, and describes material risks and uncertainties to which the Parent Company and its subsidiaries are exposed.

The consolidated statement of comprehensive income and statement of financial position and the Parent Company's income statement and balance sheet will be presented for adoption at the annual general meeting on April 24, 2019.

Uppsala, March 25, 2019

Thomas Eklund
Chairman of the Board

Nils Olof Björk
Board Member

Peter Ehrenheim
Board Member

Karolina Lawitz
Board Member

Yvonne Mårtensson
Board Member

Love Amcoff
Employee Representative

Annika Gärdlund
Employee Representative

Dan Ohlsson
*Employee Representative
(Deputy)*

Torben Jørgensen
President and CEO

Our Audit Report was submitted on March 25, 2019
Deloitte AB

Jonas Ståhlberg
Authorized Public Accountant

AUDITOR'S REPORT

**To the general meeting of the shareholders of Biotage AB (publ)
corporate identity number 556539-3138**

Report on the annual accounts and consolidated accounts

Opinions

We have audited the annual accounts and consolidated accounts of Biotage AB (publ) for the fiscal year 2018-01-01 - 2018-12-31 except for the statutory sustainability report on pages 22-27. The annual accounts and consolidated accounts of the company are included on pages 22-27 and 30-77 in this document.

In our opinion, the annual accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the parent company as of December 31, 2018 and its financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act. The consolidated accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the group as of December 31, 2018 and their financial performance and cash flow for the year then ended in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU, and the Annual Accounts Act. Our opinions do not cover the statutory sustainability report on pages 22-27. The statutory administration report is consistent with the other parts of the annual accounts and consolidated accounts.

We therefore recommend that the general meeting of shareholders adopts the income statement and balance sheet for the parent company and the group.

Our opinions in this report on the the annual accounts and consolidated accounts are consistent with the content of the additional report that has been submitted to the parent company's audit committee in accordance with the Audit Regulation (537/2014) Article 11.

Basis for Opinions

We conducted our audit in accordance with International Standards on Auditing (ISA) and generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements. This includes that, based on the best of our knowledge and belief, no prohibited services referred to in the Audit Regulation (537/2014) Article 5.1 have been provided to the audited company or, where applicable, its parent company or its controlled companies within the EU.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

Key Audit Matters

Key audit matters of the audit are those matters that, in our professional judgment, were of most significance in our audit of the annual accounts and consolidated accounts of the current period. These matters were addressed in the context of our audit of, and in forming our opinion thereon, the annual accounts and consolidated accounts as a whole, but we do not provide a separate opinion on these matters.

Capitalized development expenditure

The Group's recognized capitalized development costs on December 31, 2018 were SEK 101 million. The item is material from a financial reporting perspective. The purpose of the projects is to develop new products and improve existing ones. Expenditure on development projects is recognized as an asset in the consolidated financial statements when it is probable that the projects will generate future economic benefits. Decisions to recognize these costs as an asset are based on an assessment made by management.

Management's estimates regarding capitalized development costs and their subsequent measurement may affect the group's earnings and financial position and are therefore of particular importance to our audit.

Further information can be found in the Summary of Significant Accounting and Measurement Policies for the group and parent company on page 54 and in note 12 of the annual report.

Our audit procedures included, but were not limited to, the following procedures:

- We have obtained an understanding of the Company's processes for capitalizing development costs and subsequent valuation. We have also tested important relevant controls.
- We have examined a sample of the year's capitalized costs to obtain assurance that they qualify for capitalization.
- We have examined whether required disclosures have been provided in relevant notes to the financial statements.

Revenue from the sale of products

The Group develops and sells systems, re-agents, accessories, spare parts and services on a global basis directly to end users and through distributors. The Group's revenue for 2018 amounted to SEK 911 million and consisted of sales of goods, SEK 824 million, sales of services, SEK 80 million, and other income, SEK 7 million.

Revenue from the sale of goods is recognized when control of the products has been transferred from the seller to the buyer, which normally occurs on delivery. Revenue from the sale of products is material from a financial reporting perspective.

There is a risk of incorrectly accrued revenue in connection with delivery of goods and is therefore of particular importance to our audit.

Further information can be found in the Summary of Significant Accounting and Measurement Policies for the group and parent company on page 49-50 and in note 3 of the annual report.

Our audit procedures included, but were not limited to, the following procedures:

- We have obtained an understanding of the Company's processes for revenue recognition according to the criteria contained in IFRS 15.
- We have examined a sample of product deliveries to obtain assurance of correct accrual.
- We have examined whether required disclosures have been provided in relevant notes to the financial statements.

Measurement of goodwill

The Group's recognized goodwill on December 31, 2018 was SEK 186 million. The account is material from a financial reporting perspective and exceeds our materiality level. Goodwill is tested for impairment annually when the annual financial statements are prepared, or as soon as any changes indicate impairment. Goodwill testing involves calculating the value in use for the cash-generating unit to which the carrying amount of goodwill is allocated.

As the total value of the balance sheet item represents a significant proportion of the company's total assets and is sensitive to assumption changes such as growth and discount rate, this area is an important part of our audit.

Further information can be found in the Summary of Significant Accounting and Measurement Policies for the group and parent company on page 54 and in note 11 of the annual report.

Our audit procedures included, but was not limited to, the following procedures:

- We have examined and assessed the Company's procedures for goodwill impairment testing to obtain assurance that the assumptions are reasonable, the procedures are applied consistently and the calculations are conducted with integrity.
- We have examined whether appropriate accounting policies have been applied and whether required disclosures have been provided in relevant notes to the financial statements.

Other information than the annual accounts and consolidated accounts

This document also contains other information than the annual accounts and consolidated accounts and is found on pages 1-21, 28-29 and 81-85. The Board of Directors and the Managing Director are responsible for this other information.

Our opinion on the annual accounts and consolidated accounts does not cover this other information and we do not express any form of assurance conclusion regarding this other information.

In connection with our audit of the annual accounts and consolidated accounts, our responsibility is to read the information identified above and consider whether the information is materially inconsistent with the annual accounts and consolidated accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit and assess whether the information otherwise appears to be materially misstated.

If, based on the work performed concerning this information, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors and the Managing Director

The Board of Directors and the Managing Director are responsible for the preparation of the annual accounts and consolidated accounts and that they give a fair presentation in accordance with the Annual Accounts Act and, concerning the consolidated accounts, in accordance with IFRS as adopted by the EU. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of annual accounts and consolidated accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts and consolidated accounts, The Board of Directors and the Managing Director are responsible for the assessment of the company's and the group's ability to continue as a going concern. They disclose, as applicable, matters related to going concern and using the going concern basis of accounting. The going

concern basis of accounting is, however, not applied if the Board of Directors and the Managing Director intend to liquidate the company, to cease operations, or have no realistic alternative but to do so.

The Audit Committee shall, without prejudice to the Board of Director's responsibilities and tasks in general, among other things oversee the company's financial reporting process.

Auditor's responsibility

Our objectives are to obtain reasonable assurance about whether the annual accounts and consolidated accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and generally accepted auditing standards in Sweden will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users made on the basis of these annual accounts and consolidated accounts.

A further description of our responsibilities for the audit of the annual accounts and consolidated accounts is located at the Swedish Inspectorate of Auditors website: www.revisorsinspektionen.se/revisorsansvar This description forms part of the auditor's report.

From the matters communicated with the Board of Directors, we determine those matters that were of most significance in the audit of the annual accounts and consolidated accounts, including the most important assessed risks for material misstatement, and are therefore the key audit matters. We describe these matters in the auditor's report unless law or regulation precludes disclosure of the matter.

Report on other legal and regulatory requirements

Opinions

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Directors and the Managing Director of Biotage AB (publ) for the fiscal year 2018-01-01 - 2018-12-31 and the proposed appropriations of the company's profit or loss.

We recommend to the general meeting of shareholders that the profit be appropriated in accordance with the proposal in the statutory administration report and that the members of the Board of Directors and the Managing Director be discharged from liability for the fiscal year.

Basis for Opinions

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

Responsibilities of the Board of Directors and the Managing Director

The Board of Directors is responsible for the proposal for appropriations of the company's profit or loss. At the proposal of a dividend, this includes an assessment of whether the dividend is justifiable considering the requirements which the company's and the group's type of operations, size and risks place on the size of the parent company's and the group's equity, consolidation requirements, liquidity and position in general.

The Board of Directors is responsible for the company's organization and the administration of the company's affairs. This includes among other things continuous assessment of the company's and the group's financial situation and ensuring that the company's organization is designed so that the accounting, management of assets and the company's financial affairs otherwise are controlled in a reassuring manner. The Managing Director shall manage the ongoing administration according to the Board of Directors' guidelines and instructions and among other matters take measures that are necessary to fulfill the company's accounting in accordance with law and handle the management of assets in a reassuring manner.

Auditor's responsibility

Our objective concerning the audit of the administration, and therefore our opinion about discharge from liability, is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the Board of Directors or the Managing Director in any material respect:

- has undertaken any action or been guilty of any omission which can give rise to liability to the company, or
- in any other way has acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association.

Our objective concerning the audit of the proposed appropriations of the company's profit or loss, and therefore our opinion about this, is to assess with a reasonable degree of assurance whether the proposal is in accordance with the Companies Act.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the company, or that the proposed appropriations of the company's profit or loss are not in accordance with the Companies Act.

A further description of our responsibilities for the audit of the management's administration is located at the Swedish Inspectorate of Auditors website: www.revisorsinspektionen.se/rn/showdocument/documents/rev_dok/revisors_ansvar.pdf. This description forms part of the auditor's report.

The auditor's opinion regarding the statutory sustainability report

The Board of Directors is responsible for the statutory sustainability report on pages 22-27, and that it is prepared in accordance with the Annual Accounts Act.

Our examination has been conducted in accordance with FAR's auditing standard RevR 12 The auditor's opinion on the statutory sustainability report. This means that our examination of the statutory sustainability report is different and substantially less in scope than an audit conducted in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden. We believe that the examination has provided us with sufficient basis for our opinion.

A statutory sustainability report has been prepared.

Deloitte AB, was appointed auditor of Biotage AB by the general meeting of the shareholders on the 2018-04-27 and has been the company's auditor since 2000-04-26.

Stockholm, March 25, 2019
Deloitte AB

Jonas Ståhlberg
Authorized Public Accountant



» Biotage offers systems, consumables and services across the three product areas Organic Chemistry, Analytical Chemistry and Industrial Products.

Biotage

BOARD



Thomas Eklund (1967)
Chairman of the Board
Education: MBA, Stockholm School of Economics.
Occupation: Independent adviser, consultant and director.
Other assignments: Chairman of Moberg Pharma AB, Calliditas Terapeutics AB and Sedana Medical AB. Director of Boule Diagnostics AB, Memira AB, Rodebjer Form AB and Surgical Science AB.
Board service (years): 13.
Shares: 111,538, including shares owned via endowment and pension insurance
Thomas Eklund attended all board meetings during the year..



Peter Ehrenheim (1955)
Board Member
Education: M.Sc., Mechanical Engineering, KTH Stockholm.
Occupation: Entrepreneur.
Other assignments: Chairman of Boule Diagnostics AB, Sophion A/S, Grönsöo Säteri AB and Färjsundet Industri AB. Director of Nanologica AB.
Board service (years): 6.
Shares: 0.
Peter Ehrenheim attended all board meetings during the year.



Yvonne Mårtensson (1953)
Board Member
Education: M.Sc. (Industrial and Management Engineering)
Occupation: Business advisor and Board member
Other assignments: Chair of Elos Medtech AB, Director of SyntheticMR AB, Xvivo AB and 3Brain AG.
Board service (years): 2.
Shares: 2,000.
Yvonne Mårtensson attended all board meetings during the year.



Nils-Olof Björk (1947)
Board Member
Education: Engineer, Ph.D. Ph.D., inorganic chemistry
Occupation: Management Consultant.
Other assignments: Chairman of Österlens Kraft AB, Österlens Kraft e.f., Björk Consulting AB and Nippon Sake Sweden AB.
Board service (years): 8.
Shares: 17,230.
Nils-Olof Björk attended all board meetings during the year.



Karolina Lawitz (1956)
Board Member
Education: M.Sc., Uppsala University.
Occupation: Director, Red Glead Discovery.
Other assignments: Director, Red Glead Discovery AB.
Board service (years): 7.
Shares: 19,500.
Karolina Lawitz attended all board meetings during the year.



Love Amcoff (1974)
Employee Representative
Education: M.Sc. (Engineering) Uppsala Institute of Technology.
Occupation: Project Manager.
Other assignments: –
Board service (years): 7.
Shares: 2,200.
Love Amcoff attended all board meetings during the year.

Annika Gärdlund (1966)
Employee Representative
Education: Uppsala University.
Occupation: Senior Accountant.
Other assignments: –
Board service (years): 3.
Shares: –
Annika Gärdlund attended 8 out of 9 board meetings during the year.

Dan Ohlsson (1980)
Employee Representative (deputy)
Education: M.Sc. (Engineering), Space Electronics, Luleå Technical University.
Occupation: Electronic Engineer.
Other assignments: –
Board service (years): 1.
Shares: 400.
Dan Ohlsson attended all board meetings during the year.

Jonas Ståhlberg (1975)
Chief auditor
Authorized Public Accountant, Deloitte AB.

Information on shareholdings and other assignments is based on data that applied on submission of this annual report.

GROUP MANAGEMENT



Left to right: Anders Wikström, Erika Söderberg Johnson, Torben Jørgensen, Rikke Rytter, Steve Jordan, Cecilia Hållner and Lars Bäckman.

Torben Jørgensen * (1952)

Position: President and CEO.

Education: B.Sc. (Econ.)

Employment in the Group (years): 13.

Shares: 520,200.

Other assignments: Chairman of Microp-
os Medical AB and Atlas Antibodies AB.
Director of Intervacc.

Erika Söderberg Johnson * (1970)

Position: CFO.

Education: MBA, Stockholm School of
Economics

Employment in the Group (years): 7.

Shares: 7,700.

Other assignments: Director of Saab AB
and Qliro Group AB.

Lars Bäckman * (1961)

Position: VP Corporate Development.

Education: LL.B.

Employment in the Group (years): 12.

Shares: 20,000.

Other assignments: Director of Chreto
ApS.

Cecilia Hållner (1972)

Position: Global Human Resources
Director

Education: Uppsala University, Human
Resource Management.

Employment in the Group (years): 1.

Shares: 322

Other assignments: –

Rikke Rytter (1967)

Position: VP Global Marketing.

Education: Bachelor of Biomedical
Laboratory Science

Employment in the Group (years): 1.

Shares: 0

Other assignments: –

Anders Wikström (1973)

Position: VP Operations.

Education: B.Sc., CS

Employment in the Group (years): 16.

Shares: 3,150.

Other assignments: –

Steve Jordan (1953)

Position: CSO.

Education: Fellow, Royal Society of
Chemistry.

Employment in the Group: 14.

Shares: –

Other assignments: –

* Group Management

Information on shareholdings and other
assignments is based on data that
applied on submission of this annual
report.

PRODUCT REGISTER

ORGANIC CHEMISTRY

MICROWAVE-ASSISTED ORGANIC SYNTHESIS

Systems	Consumables
Biotage® Initiator+	Reaction vials
Biotage® Initiator+ Robot	Resins
Eight/Robot Sixty	

PURIFICATION (FLASH CHROMATOGRAPHY)

Systems	Consumables
Biotage® Dalton 2000	Biotage® Sfär
Biotage® Selekt	Biotage® SNAP Bio
Isolera™ Dalton	Biotage® SNAP Ultra
Isolera™ Spektra One/Four	Biotage® SNAP
Isolera™ One/Four	Biotage ZIP® Sphere
Isolera™ Prime	Biotage ZIP®
Isolera™ LS	Resins

The offering also includes the Biotage system for evaporation, Biotage® V-10, and consumables from the Analytical Chemistry product range, such as scavengers and filtering columns.

PEPTIDE SYNTHESIS

Systems	Consumables
Biotage® Initiator+ Alstra™	Biotage® SNAP Bio
Biotage® Initiator+ SP Wave	ChemMatrix®
Syro I/II	

INDUSTRIAL PRODUCTS

PURIFICATION (FLASH CHROMATOGRAPHY)

Systems
Biotage® Flash 75/150
Biotage® Flash 400

The offering also includes consumables for Biotage flash systems.

RESINS IN BULK

Systems
Development and production of silicate-based and polymer-based materials.

CUSTOMIZED DEVELOPMENT PROJECTS

Research services.

ANALYTICAL CHEMISTRY

SAMPLE PREPARATION

Systems	Consumables
Biotage® Extrahera™	AFFINILUTE™
Biotage® Horizon 5000	EVOLUTE®
Biotage® Horizon 3100	ISOLUTE®
Biotage® Horizon SmartPrep	ISOLUTE® SLE+
Biotage® PRESSURE+	Resins
Biotage® Lysera	DryDisk®
RapidTrace®+	Atlantic® SPE Disks
	Pacific® SPE Disks

EVAPORATION OF SAMPLES

Systems
Biotage® SPE Dry
TurboVap® II
TurboVap® LV
TurboVap® 96
TurboVap® EH
XcelVap®
DryVap®
SpeedVap® IV



GLOSSARY

CMO

Contract manufacturing organization.

CRO

Contract research organization.

Evaporation

Accelerated evaporation of a liquid.

Flash chromatography

A method of separating the substances included in a reaction mixture. Depending on their physical characteristics, the substances move at different speeds through a solid phase with the help of a flow of solvents.

LLE (Liquid Liquid Extraction)

A method of separating compounds based on their relative solubility in two different immiscible liquids, usually water and an organic solvent. This is an extraction of a substance from one liquid phase into another liquid phase.

Microwave synthesis

A synthesis where microwave energy is used to speed up the reaction.

MIP

Molecularly imprinted polymers.

Re-agent

A substance that is added during synthesis to restructure the starting material into the desired product.

Purification

Involves the synthesized compound being isolated from impurities.

Purification column

The physical unit where the medium needed to carry out flash chromatography is packaged. The sample that is to be purified in the column is then applied and purification is carried out as the solvent flows through the column.

SLE (Supported Liquid Extraction)

A product and method representing an efficient alternative to traditional LLE that has higher recovery rates and lends itself well to automation. The extraction of a substance is performed by the sample first being absorbed onto a solid support and then eluted off using an organic solvent.

SPE (Solid Phase Extraction)

A method for separating substances according to how much they prefer a solid phase to a liquid phase. The same principle applies as for flash chromatography, although on a smaller scale.

Synthesis

Involves creating a new substance by combining (synthesizing) several different substances.

Work-up

A process that removes various substances that may have been added to speed up or create reactions.

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