



## PRESS RELEASE

# RENEWABLE SOLVENT CYRENE™ DELIVERS HIGH-PURITY NANOPARTICLES FOR MEDICAL APPLICATIONS

**OSLO, NORWAY – 13 July 2021** – A study using renewable solvent Cyrene™, produced by biotechnology company Circa Group, found that high-purity nanoparticles can be produced – opening up opportunities to use Cyrene™ as a more sustainable and safer replacement for current solvents used in drug delivery systems and medical implants.

[New research](#) out of Germany used bio-based Cyrene™ to produce poly(lactic-co-glycolic acid) nanoparticles for drug delivery systems. Cyrene™ itself and the nanoparticles were found to be biocompatible – meaning it is well suited to replace toxic harmful organic solvents more commonly used in their preparation. Using Cyrene™ produced high-quality nanoparticles and led to a significant decrease in preparation time when compared to industry-standard solvents.

Cyrene™ is an alternative to traditional dipolar aprotic solvents, which are used in large volumes – over one million tonnes per year – and under intense regulatory pressure due their toxicity.

Professor Dagmar Fischer, from the Friedrich-Alexander-Universität Erlangen-Nürnberg, and the lead researcher on the project, said, “In comparison to the standard techniques used for the formulation of drug loaded polymer nanoparticles, interestingly with Cyrene™ it is possible to effectively reduce process time and process steps.”

Tony Duncan, CEO of Circa Group, said, “We are not surprised that Cyrene™ continues to show performance benefits in a range of medical and pharmaceutical applications. Extensive research shows it is a safer and more sustainable, high-performance alternative.”

**About Circa**

Established in 2006, Circa Group converts waste, non-food biomass into advanced bio-based chemicals with its proprietary Furacell™ process. Circa's Furacell™ process reduces the carbon footprint of Cyrene by up to 80% compared to similar petro-based solvents. Reduction in GHG emissions are also expected in both the use and at the end-of-life stages of Cyrene™. By creating renewable chemicals from cellulose, Circa is extracting value from non-food, waste biomass and addressing a gap in the market by providing bio-based alternatives contributing to a more circular economy.

<https://circa-group.com/>

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