

New Technology Slashes Development Times for Nanoparticle Drugs Used in Gene Therapies, Vaccines and Cancer Treatments

Marama Labs Announces Launch of CloudSpec Instrument for Quantification of Lipid Nanoparticle Payloads

DUBLIN, DUBLIN, IRELAND, April 9, 2025 /EINPresswire.com/ -- Marama Labs, a rapidly growing scientific instrumentation innovator, announces the launch of its revolutionary new CloudSpec instrument for nanomedicine developers. CloudSpec's patented technology slashes development times for advanced nanoparticle drug formulations used in gene therapies, vaccines, and cancer treatments.



CloudSpec Instrument for Drug Payload Quantification in LNPs

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Brendan Darby

Lipid Nanoparticle (LNP) therapies are a hugely valuable class of biopharmaceutical nanomedicines; their use in Covid vaccines demonstrated the power and speed-to-market that RNA-loaded LNPs enable. The LNP market is expected to grow 7x within the next 10 years, as new therapies are developed for some of the hardest-to-drug diseases in cancer, genetic disorders and even the common cold. CloudSpec accelerates LNP development by solving a critical bottleneck - quantifying the drug payload in seconds - current methods take hours.

Breaking the bottleneck in nanomedicine development

LNPs are tiny insoluble particles embedded with RNA or DNA. They are difficult to analyse directly due to their small size and light-scattering properties. CloudSpec's Scatter-Free Absorption (SFA) technology enables fast and accurate results using a new approach based on easy-to-use UV analysis. CloudSpec eliminates the need to break up the particles for analysis

and doesn't require hard-to-use fluorescent dyes. CloudSpec measurements take 15 seconds compared to 2 hours using existing methods. By measuring intact particles, CloudSpec provides results from sample to answer in just a few minutes.

CloudSpec is expected to revolutionise how lipid nanoparticles are analysed and quantified. "We are thrilled to introduce the CloudSpec instrument to the market," said Brendan Darby, CEO of Marama Labs. "This innovative technology represents a significant advancement in the field of nanomedicine, and we are confident that it will transform research with lipid nanoparticles."

"We worked with some of the leading names in RNA-LNP biopharma to develop CloudSpec for this market. It has received a hugely positive response from our users, who are desperate to get away from the current slow, labour-intensive and inaccurate fluorescence measurements. CloudSpec gets them over the drug assay bottleneck and will speed up delivery to market", said Darren Andrews, CCO of Marama Labs.

CloudSpec's launch to market will be spearheaded by a [webinar](#) on 7 May 2025 from two of CloudSpec's users from our Early Access Programme – Dr. Emily Young of 4basebio (UK) and Dr. Johanna Simon of Merck KGaA (Germany).

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