NEWS RELEASE

Bruker Introduces iNTApharma™, a Label-Free Platform for Nanoparticle Characterization in mRNA Drug and Gene Therapy Development and QC

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New iNTApharma system enables rapid, native-state size and concentration measurements with single-particle sensitivity for viral, vesicle, and nanoscale bioparticle workflows

BILLERICA, Mass.--(BUSINESS WIRE)-- **Bruker Corporation** today announced the launch of iNTApharma, a label-free characterization platform that provides single-particle sensitivity for the quantitative analysis of nanoscale bioparticles in native aqueous media. Introduced at SLAS 2026 in Boston, iNTApharma delivers size and concentration measurements within minutes, supporting research, therapy development and quality control workflows that require direct, native-state assessment of bio-nanoparticle populations without labeling or chemical modifications.

Bruker's iNTApharma system offers label-free, native characterization of vectors used in gene and cell therapy, and of LNPs used in mRNA drug delivery

Quantitative characterization of bioparticles under native buffer conditions is increasingly important in areas such as extracellular vesicle (EV) research, adenovirus (AdV and AAV) development, lentiviral vector analysis, and lipid nanoparticle (LNP) formulation for nucleic-acid delivery. Native-state nanoparticle tracking analysis (NTA) is becoming a requirement in biopharma quality control (QC), where reliable assessment of particle size distributions, concentration levels, and subpopulations is essential for process consistency. As mRNA drug development, as well as cell and gene therapy development expand at double-digit growth rates, demand is increasing for high-precision, native-state characterization of viral vectors, LNPs, and other nanoscale bioparticles. iNTApharma addresses these needs through native-state, unlabeled measurements that support analysis across diverse biological matrices.

Optimized for bioparticles from 50 to 300 nanometers, iNTApharma provides measurement conditions well-suited for lipid nanoparticles, lentiviral vectors, adenoviruses, and extracellular vesicles. The system enables analysis of heterogeneous samples, including the resolution of subpopulations within mixtures. Its built-in well-plate reader functionality supports unattended and automated acquisition of datasets in standard laboratory workflows, without specialized sample preparation steps.

iNTApharma builds on optical measurement approaches developed at the Max-Planck-Institute for the Science of Light (MPL) in Erlangen, Germany, which are also used in mass photometry (MP). The platform translates advanced interferometric scattering (iSCAT) detection methods into accessible instrumentation for research, therapy development and QC environments.

“The technology is based on iSCAT microscopy, which has been used in a wide range of quantitative label-free investigations with single-molecule sensitivity,” said Prof. Vahid Sandoghdar, Director at the MPL, Germany. “iNTApharma makes these capabilities broadly available and provides researchers with a tool that can deepen our understanding of nanoscale bioparticles.”

“Native-state, quantitative analysis of lipid nanoparticles, lentiviral vectors, and vesicle-scale bioparticles is a growing need across biopharma and translational research,” said Jürgen Srega, the President of the Bruker CALID Group. “With iNTApharma, we are introducing a fundamentally new tool that enables precise nanoparticle and bioparticle characterization for mRNA delivery, EV biology, gene therapy development, and nanoscale formulation science.”

Initial systems will be placed with early-access partners in the first half of 2026 to validate workflows under real-world conditions. Broader commercial availability is planned for H2 of 2026.

About Bruker Corporation – Leader of the Post-Genomic Era (Nasdaq: BRKR)

Bruker is enabling scientists and engineers to make breakthrough post-genomic discoveries and develop new applications that improve the quality of human life. Bruker’s high-performance scientific instruments and high value analytical and diagnostic solutions enable scientists to explore life and materials at molecular, cellular, and microscopic levels. In close cooperation with customers, Bruker is enabling innovation and customer success in post-genomic life science molecular and cell biology, in disease biology and translational research, in specialty diagnostics, in applied and biopharma applications, as well as in industrial and cleantech research and QC, and in next-gen semiconductor metrology in support of AI. Bruker offers differentiated, high-value life science and diagnostics systems and solutions in preclinical imaging, clinical phenomics research, proteomics and multiomics, spatial and single-cell biology, functional structural and condensate biology, as well as in clinical microbiology,

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