
KNAUER Is Expanding Its Business Activities into the Field of Lipid Nanoparticle Production Equipment

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In connection with the development of mRNA-based vaccines against Corona, lipid nanoparticles (LNPs) have shown to be a suitable delivery form. LNPs encapsulate and protect the delicate active ingredient and allow its transport to the target cells in the human body. This will be the first large-scale use of mRNA and lipid nanoparticles in vaccination history.

[KNAUER](#), the Berlin based manufacturer of high-tech laboratory instruments mostly known for its liquid chromatography systems, also supplies production equipment for pharmaceutical lipid nanoparticles. This development was made possible by combining the company's expertise in high pressure dosing and in laboratory systems engineering.

New and promising developments in medicine make pharmaceuticals and their active ingredients increasingly complex and bring new challenges. Oligonucleotides, for example, are very susceptible to degradation in the human body. LNPs have shown that they can form a stable basis for the administration of active ingredients like RNA, mRNA, siRNA, or DNA-based APIs. These types of APIs and optimization of delivery to the target cells are a very vivid field of research.

KNAUER's jet mixing technology has demonstrated outstanding performance for small and large-scale pharmaceutical production of vaccine lipid nanoparticles. The equipment manufacturer supplies small desktop devices to users in research and development as well as complete LNP skids for the pharmaceutical industry.

The systems for production, also called IJM skids (impingement jet mixing), are designed and optimized to meet customer's specifications and documentation requirements. System installations in clean rooms (class c) have been successfully carried out. The systems are equipped with all necessary interfaces for the integration into customer's own PLC (programmable logic controller) systems.

“I am delighted that we have been able to successfully deliver all our systems for vaccine production on time this year. It makes our team proud that we are helping to combat COVID-19 in this way.”, said KNAUER Business Development Manager Lilit Avagyan.

Read the [original article](#) on SelectScience.