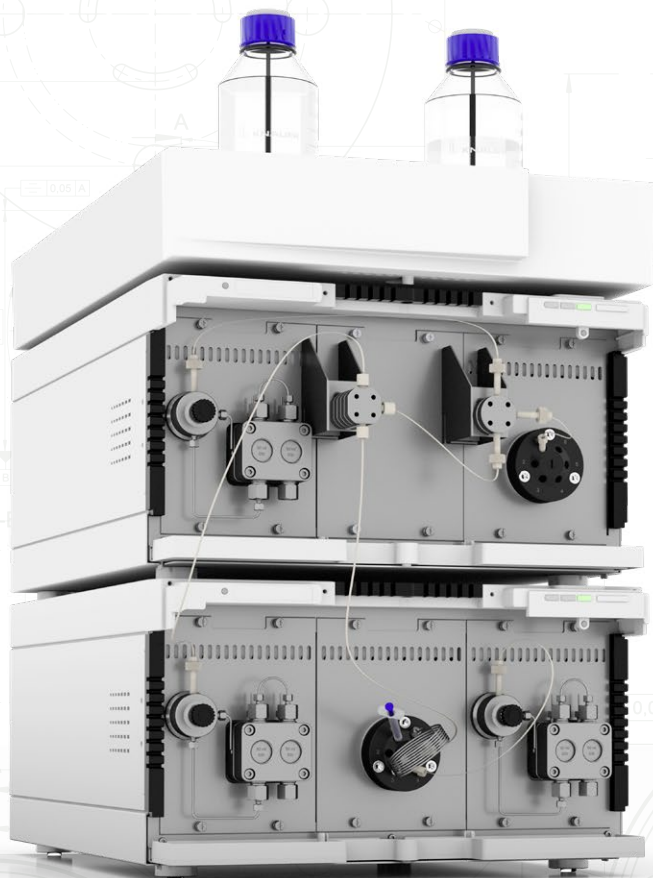


Science with Passion



 IJM NanoScaler

Lipid nanoparticle R&D system

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- **Flexible system** with choice of Impingement Jets Mixers
- Determine the **best conditions** for your therapy formulation
- **Produce LNP formulations** from 1ml to hundreds of milliliters
- Perfect for **proof-of-concept** testing and pre-clinical trials

The IJM NanoScaler: a benchtop system for lipid nanoparticle formulation

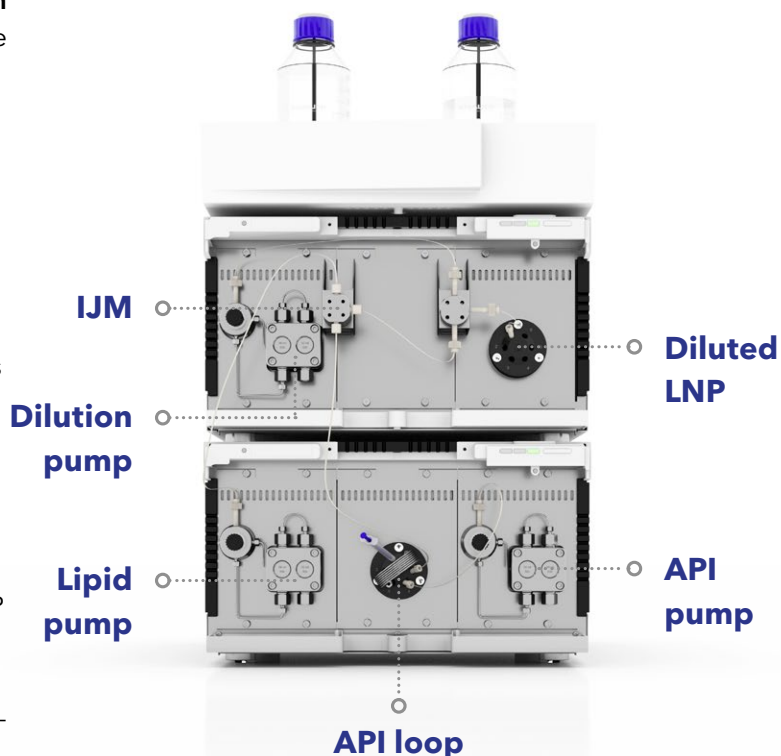
KNAUER's new benchtop IJM NanoScaler system is designed for lab-scale lipid nanoparticle formulation - allowing scientists to screen for optimal process parameters to formulate API-containing lipid nanoparticles.

The IJM NanoScaler is made for research and development as well as pre-clinical and small-scale production of lipid nanoparticles. Equipped with our lipid nanoparticle producing Impingement Jets Mixing (IJM) technology the NanoScaler allows researchers to optimize encapsulation conditions for their API-based therapy before scaling up the process to run on a larger IJM NanoProducer unit.

The NanoScaler can be used to produce lipid-encapsulated nucleotides at **a range from 1 ml to hundreds of milliliters** meaning the system is perfect for:

- **Proof of concept testing and process optimization** - pure nucleotides are an expensive resource. Carry out proof of concept testing and process optimization at the 1,000 µl scale to avoid wastage.
- **Pre-clinical trials** - Pre-clinical testing can be carried out using 100 ml of nucleotides such as, for *in vitro* studies to determine the tolerability, efficacy and potential toxicity of the mRNA therapy of interest.
- **Small scale production** - Once proof-of-concept and safety testing have been successfully conducted, production of LNP encapsulated API's can even be carried out at up to 0.1 Liter per minute with the IJM NanoScaler or using KNAUER's scaled-up IJM-NanoProducer Units.

The NanoScaler is made for low sample consumption so as not to waste valuable API. Its small footprint means it can comfortably sit on the benchtop of a research and development lab. The system comes with five different KNAUER Impingement Jets Mixers to help researchers determine which conditions result in the optimum level of API encapsulation. These active pharmaceutical ingredients include complex or delicate API like RNA, mRNA, siRNA, and DNA-based molecules, or products that need specific entry into target cells. In addition researchers can use their own custom mixing unit and benefit from the flexibility of the system set-up. The formulation process can be remotely controlled by software; ran from a conventional PC or laptop, or even a tablet.



think **LNP** | think **KNAUER**

Find out more at knauer.net/ijm-nanoscaler

(U)HPLC • FPLC • SMB • Osmometry and units for the production of lipid nanoparticles (LNP)

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