

**Your Premier Partner for LNP Development**

JenKem Technology Co., Ltd (Stock Code: 688356.SH) is specialized in large scale GMP manufacture of high-quality drug delivery products, custom synthesis and PEGylation services. The company supplies products for R&D, clinical trials, and commercial applications for pharmaceutical, biotechnology, medical devices, and diagnostics marketplaces worldwide since 2001.

- Laboratory Synthesis to Large Scale GMP Manufacturing with Flexibility to Meet Customers' Specifications
- 111 Active Patents and over 600 Catalogue Products
- Supporting 9 Commercial Drugs and 11 Commercial Medical Devices Worldwide
- 21 DMFs Filed with US FDA and China CDE
- Following ICHQ7 Guidelines for GMP Manufacture
- Certified ISO 13485, ISO 9001, ISO 45001, ISO 14001, ISO 50001 and ISO 27001
- Large scale GMP manufacture of conventional lipid products
- Innovative lipid products and LNP formulation development
- CDMO services for Lipid products
- Research Grade LNP encapsulation services for RNA
- Analytical testing services (for LNP, RNA, LNP-RNA)



Tianjin Facility: Annual Capacity of 2MT with Batch Size up to 10kg



Liaoning Facility: Annual Capacity of 12-20 MT with Batch Size up to 100 kg

**JenKem Technology USA Inc.**  
4105 W Spring Creek Pwky #606B  
Plano, TX 75024, USA

Tel: +01-866-9JENKEM (+01-866-953-6536)  
Tel: 1-972-673-0603  
Fax: 1-469-327-2615  
Email: sales@jenkemusa.com

**Follow Us**  
X: <https://x.com/JenKemUSA>  
LinkedIn: <https://www.linkedin.com/company/jenkem-technology-usa>  
YouTube: <https://www.youtube.com/@JenKemUSA>  
Website: <https://jenkemusa.com>



**LNP  
Excipients**

- ▶ GMP Manufacture
- ▶ Custom Synthesis and Encapsulation
- ▶ IND-Related Services
- ▶ Quality Studies

## LNP-Related Analytical Testing Services

JenKem's analytical method development platform provides analytical services for biopharmaceuticals such as LNP-mRNA or siRNA, for efficient analytical support at the initial stage of compound screening and optimization.

Our mRNA analytical method development platform method aids with the characterization of the capping and tailing of mRNA based on high-resolution mass spectrometry, the purity of mRNA based on CGE-LIF, and the characterization of polymer based on SEC-UV/MALS.

mRNA Specification	Test Item	Method
<b>Content</b>	RNA Concentration	UV
<b>Integrity</b>	mRNA Integrity	CGE
<b>Purity</b>	5' capping rate	LC-qTOF
	3' tailing rate	LC-MS/MS
	Product related impurity-polymer	SEC
	Product related impurity-fragment	RP-HPLC
	Process related impurity-Template RNA residue	Quantitative PCR/MS
<b>Others</b>	Appearance	USP<790>
	Solvent residue	USP<467>
	Osmotic Pressure	USP<785>

LNP-mRNA Specification	Test Item	Method
<b>Discrimination</b>	Isoelectric points	CIEF
	Liposome confirmation	RP-HPLC-CAD
<b>Content</b>	RNA content/ RNA encapsulation rate	MALS
	Liposome content	RP-HPLC-CAD
<b>Integrity</b>	LNP size and PDI	DLS
	RNA size and integrity	CGE
<b>Purity</b>	Product related impurity-polymer	SEC
	Product related impurity-fragment	RP-HPLC
<b>Others</b>	Appearance	USP<790>
	Solvent residue	USP<467>
	Osmotic Pressure	USP<785>
	Insoluble particle	USP<787>
	pH	USP<791>

## LNP Excipients

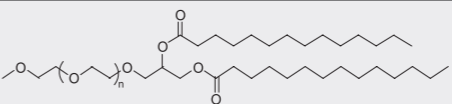
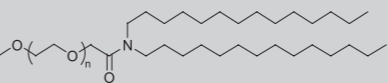
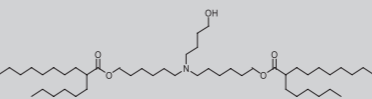
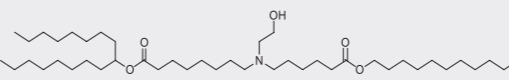
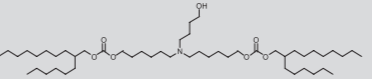
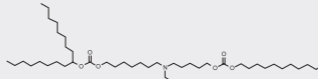
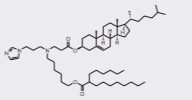
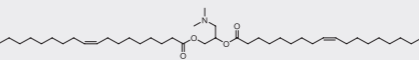
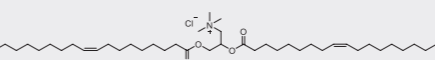
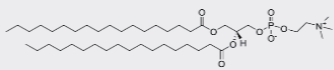
Lipid nanoparticles (LNPs) are designed to facilitate the cellular uptake of nucleic acids such as mRNA and siRNA. The delivery mechanism of LNPs typically involves non-covalent interactions with the cell membrane, followed by internalization through endocytosis, where the genetic material is released from the endosome into the cytoplasm to exert its therapeutic effect.

JenKem Technology offers a wide range of LNP delivery excipients, in both laboratory and GMP grades, to meet the diverse needs of your LNP projects.

Several LNP components have Drug Master File (DMF) registration, with additional DMF filings in progress.

We proudly introduce our innovative LNP excipients, which are designed with independent IP to enhance the delivery efficiency and therapeutic effects of nucleic acid drugs. Please feel free to contact us to learn more about our patented delivery systems.

## LNP Product Catalogue

Product Code	Product Name	Product Structure	DMF Information
<b>PEG Lipids</b>			
M-DMG-2000	Methoxy PEG Dimyristoyl-rac-glycero, MW 2000		CDER (037950) China CDE (F20210000376)
ALC-0159*	Methoxy PEG Ditetradecylacetamide (MW 2000), Or M-DTDAM-2000		CDER(038522) CBER(029757) China CDE(F20210000577)
<b>Ionizable Lipids</b>			
ALC-0315*	[(4-hydroxybutyl)azanediy]bis(hexane-6,1-diyl) bis(2-hexyldecanoate), Cas No: 2036272-55-4		CDER(038435) CBER(029647) China CDE(F20210000466)
SM-102*	heptadecan-9-yl8-((2-hydroxyethyl)(6-oxo-6-(undecyloxy)hexyl)amino)octanoate, Cas No:2089251-47-6		CDER(039154) CBER(030165) China CDE(F20220000268)
JK-0315-CA	bis(2-hexyldecyl) (((4-hydroxybutyl)azanediy) bis(hexane-6,1-diyl)) bis(carbonate)		Filing in Progress
JK-102-CA	heptadecan-9-yl (7-((2-hydroxyethyl) (5-(((undecyloxy)carbonyl)oxy)pentyl)amino) heptyl) carbonate		
JK-0039	6-((3-(1H-imidazol-1-yl)propyl)(3-(((3S,8S,9S,10R,13R,14S,17R)-10,13-dimethyl-17-((R)-6-methylheptan-2-yl)-2,3,4,7,8,9,10,11,12,13,14,15,16,17-tetradecahydro-1H-cyclopenta[a]phenanthren-3-yl)oxy)-3-oxopropyl)amino)hexyl 2-hexyldecanoate		
DODAP	1,2-Dioleoyl-3-dimethylammonium-propane		
<b>Cationic Lipids</b>			
DOTAP	1,2-Dioleoyl-3-trimethylammonium-propane, Chloride Salt		Filing in Progress
<b>Phospholipids (Helper Lipids)</b>			
DSPC	17 DSPC (R)-2,3bis(stearoyloxy)propyl (2-(trimethylammonio)ethyl) phosphate China CDE F20230000331		China CDE(F20230000331)

Should the desired structures not be listed in our catalogue, please do not hesitate to make an inquiry. JenKem Technology is prepared to offer custom synthesis for custom fatty acid side-chain compounds to provide comprehensive support for your R&D and commercial initiatives.

Products with \* will require patent authorization.