



CERTIFICATE OF ANALYSIS

Product Description: mRNA-1273 Lipid Nanoparticle Moderna Part #: 50089
Manufacturer Name: Moderna Container/Closure: (b) (4)
Manufacturer Lot: 5008921005
Moderna Lot Number: 5008921005 Specification: SPC-1213
Date of Manufacture: 01Sep2021 Expiry Date: 30Nov2021

Product Attribute	Method	Parameter	Specification	Result
Appearance	SOP-0278	Appearance - Color	(b) (4)	
		Appearance - Particulates		
Identity	SOP-1032	Identity		
Concentration	SOP-0999	RNA Content		
Purity	SOP-0996	Purity		
		% IG1		
		% IG2		
		% IG3		
% RNA Encapsulation	SOP-1000	% Encapsulation		
Dynamic Light Scattering	SOP-0998	Particle Size		
		Polydispersity		
Lipid Identification	SOP-1001	SM102		
		Cholesterol		

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Database: (b) (4)

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Product Description: mRNA-1273 Lipid Nanoparticle Moderna Part #: 50089
Manufacturer Name: Moderna Container/Closure: (b) (4)
Manufacturer Lot: 5008921005
Moderna Lot Number: 5008921005 Specification: SPC-1213
Date of Manufacture: 01Sep2021 Expiry Date: 30Nov2021

Product Attribute	Method	Parameter	Specification	Result
Lipid Content		DSPC	(b) (4)	
		PEG-DMG		
		SM102		
		Cholesterol		
		DSPC		
		PEG-DMG		

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CERTIFICATE OF ANALYSIS

Product Description: mRNA-1273 Lipid Nanoparticle Moderna Part #: 50089
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Manufacturer Lot: 5008921005
Moderna Lot Number: 5008921005 Specification: SPC-1213
Date of Manufacture: 01Sep2021 Expiry Date: 30Nov2021

Product Attribute	Method	Parameter	Specification	Result
Lipid Impurities		% Area 1	(b) (4)	
		% Area 2		
		% Area 3		
		% Area 4		
		% Area 5		
		RRT 1		
		RRT 2		
		RRT 3		
		RRT 4		
		RRT 5		
		% Total Impurities		
pH	SOP-0288	pH		
Osmolality	SOP-0279	Osmolality		
Bacterial Endotoxins	USP <85>	Bacterial Endotoxins		
Bioburden	SOP-0480	TAMC		
		TYMC		

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CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273 Lipid Nanoparticle	Moderna Part #:	50089
Manufacturer Name:	Moderna	Container/Closure:	(b) (4)
Manufacturer Lot:	5008921005		
Moderna Lot Number:	5008921005	Specification:	SPC-1213
Date of Manufacture:	01Sep2021	Expiry Date:	30Nov2021

Product Attribute	Method	Parameter	Specification	Result
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This material meets specification: Yes

Revision History:

1.0 Original

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Document Approvals
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