

CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	70065
Manufacturer Name:	Catalent	Container/Closure:	10R Velocity Glass Vial, 20 mm Stopper, 20 mm Cap
Manufacturer Lot:	031H21A		
Moderna Lot Number:	7006521151	Specification:	SPC-1128
Date of Manufacture:	24Aug2021	Expiry Date:	24Mar2022

Product Attribute	Method	Parameter	Specification	Result
Appearance	SOP-0278	Appearance - Color	White to off-white dispersion.	White to off-white dispersion
		Appearance - Particulates	May contain visible, white or translucent product-related particles	Essentially Free of Particulates
Concentration	SOP-0999	RNA Content	(b) (4)	
			(Target: 0.20 mg/mL)	
Identity	SOP-1032	Identity	(b) (4)	
Purity	SOP-0996	Purity		
		% IG1		
		% IG2		
		% IG3		
% RNA Encapsulation	SOP-1000	% Encapsulation		
In vitro Translation	SOP-0937	Result		

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Product Attribute	Method	Parameter	Specification	Result
pH	SOP-0288	pH	(b) (4)	
Osmolality	SOP-0279	Osmolality		
Dynamic Light Scattering	SOP-0998	Particle Size		
		Polydispersity		
Lipid Identification	SOP-1001	SM102		
		Cholesterol		
		DSPC		
		PEG-DMG		
Lipid Content		SM102		
		Cholesterol		
		DSPC		
		PEG-DMG		

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Product Attribute	Method	Parameter	Specification	Result
Lipid Impurities		% Area 1	(b) (4)	
		% Area 2		
		% Area 3		
		% Area 4		
		% Area 5		
		% Area 6		
		% Area 7		
		% Area 8		
		% Area 9		
		RRT 1		
		RRT 2		
		RRT 3		
		RRT 4		
		RRT 5		
		RRT 6		
		RRT 7		
		RRT 8		

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Product Attribute	Method	Parameter	Specification	Result
		RRT 9	(b) (4)	
		% Total Impurities		
Particulate Matter	SOP-0509	>= 25 µm particles per container		
		>= 10 µm particles per container		
Container Content	SOP-0950	>= 5.0 mL (>= 10 doses of 0.5 mL from 1 vial)	>= 5.0 mL (>= 10 doses of 0.5 mL from 1 vial)	(b) (4)
Bacterial Endotoxins	USP <85>	Bacterial Endotoxins	(b) (4)	
Sterility	USP <71>	Sterility		

This material meets specification: Yes

Revision History:

1.0 - Original

Unlabeled Drug Product Lot Numbers: 6010721028 (Moderna), 031H21 (Catalent)

Drug Substance Manufacturer: Moderna, Norwood, MA

Drug Substance Lot Numbers: 5007521551

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Document Approvals
Approved Date: 07 Oct 2021

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QA Approval Verdict: Approved	(b) (6) (b) (6) @modernatx.com) Quality Assurance Approval 07-Oct-2021 14:49:28 GMT+0000