

## CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	60073
Manufacturer Name:	Catalent	Container/Closure:	10R Ompi Glass Vial, 20 mm Stopper, 20 mm Cap
Manufacturer Lot:	032H20		
Moderna Lot Number:	6007320004	Specification:	SPC-1128
Date of Manufacture:	13Sep2020	Expiry Date:	13Apr2021

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-0235	Concentration	(b) (4) (Target: 0.20 mg/mL)	
Identity	SOP-0544	Identity	(b) (4)	
Purity	SOP-0383	Purity		
		% IG1		
		% IG2		
		% IG3		
% RNA Encapsulation	SOP-0298	% Encapsulation		
In vitro Translation (Potency)	SOP-0937	Result		
pH	SOP-0288	pH		
Osmolality	SOP-0279	Osmolality		
Dynamic Light Scattering	SOP-0107	Particle Size		
		Polydispersity		
Lipid Identification	SOP-0502	SM102		
		Cholesterol		

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Product Attribute	Method	Parameter	Specification	Result
Lipid Content		DSPC	(b) (4)	
		PEG-DMG		
		SM102		
		Cholesterol		
		DSPC		
Lipid Impurities		PEG-DMG		
		% Area 1		
		% Area 2		
		% Area 3		
		% Area 4		
		RRT 1		
		RRT 2		
		RRT 3		
Particulate Matter	SOP-0509	RRT 4		
		% Total Impurities		
		10 µm particles per container		
		25 µm particles per container		

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## CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	60073
Manufacturer Name:	Catalent	Container/Closure:	10R Ompi Glass Vial, 20 mm Stopper, 20 mm Cap
Manufacturer Lot:	032H20		
Moderna Lot Number:	6007320004	Specification:	SPC-1128
Date of Manufacture:	13Sep2020	Expiry Date:	13Apr2021

Product Attribute	Method	Parameter	Specification	Result
Container Content	SOP-0950	Container Content	>= 5.0 mL (>=10 doses of 0.5 mL from one 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

2.0 - Revised expiration date to 13Mar2021

3.0 - Revised expiration date to 13Apr2021 per QC-OTH-0198, added Drug Substance Manufacturer information in lot version history

Drug Substance Manufacturer: Moderna, Norwood, MA

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Document Approvals  
Approved Date: 16 Dec 2020

Approval Verdict: Approved	Steven Anderson, (b) (6) @modernatx.com) Quality Control Approval 16-Dec-2020 02:03:59 GMT+0000
QA Approval Verdict: Approved	(b) (6) @modernatx.com) Quality Assurance Approval 16-Dec-2020 09:51:49 GMT+0000