



CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	85201
Manufacturer Name:	Moderna	Container/Closure:	2R Schott Vial, 13 mm Stopper, 13 mm PLASCAP 0.6 mL
Manufacturer Lot:	8520100102		
Moderna Lot Number:	8520100102	Specification:	SPC-0948
Date of Manufacture:	19Mar2020	Expiry Date:	19Sep2020

Product Attribute	Method	Parameter	Specification	Result
8410000102 - nCoV 2019 MPI-FPI				
Residual DNA template	SOP-0491	Residual DNA Template	(b) (4)	
% 5' Capped	SOP-0467	Cap1		
% PolyA tailed RNA / % Tailless RNA	SOP-0291	Pre-Main Peak Area		
		Main Peak Area		
8520100102 - 85201 mRNA-1273 nCoV DP				
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)	
Identity	SOP-0492	Identity		
Purity	SOP-0383	Purity		
		% IG1		
		% IG2		
		% IG3		
% RNA Encapsulation	SOP-0298	% Encapsulation		
In vitro Translation (Potency)	SOP-0973	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-0107	Particle Size		
		Polydispersity		
Lipid Identification	SOP-0502	SM102		
		Cholesterol		
		DSPC		
		PEG-DMG		
Lipid Content		SM102		
		Cholesterol		
		DSPC		
		PEG-DMG		
Lipid Impurities		% Total Impurities		
Particulate Matter	SOP-0509	10 µM particles per container		
		25 µM particles per container		
Bacterial Endotoxins	USP <85>	Bacterial Endotoxins		

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Product Attribute	Method	Parameter	Specification	Result
Sterility	SOP-0378	Sterility	(b) (4)	

This material meets specification: Yes

Revision History:

- 1.0 - Original
- 2.0 - Updated polydispersity reported result (rounded from 0.163 to 0.2)
 - Corrected Particulate Matter acceptance criteria