

## CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	50068
Manufacturer Name:	Moderna	Container/Closure:	(b) (4)
Manufacturer Lot:	5006820002		
Moderna Lot Number:	5006820002	Specification:	SPC-1005
Date of Manufacture:	15May2020	Expiry Date:	15Aug2020

Product Attribute	Method	Parameter	Specification	Result
Appearance	SOP-0278	Appearance - Color	(b) (4)	
		Appearance - Particulates		
Identity	SOP-0544	Identity		
Concentration	SOP-0235	Concentration		
Purity	SOP-0383	Purity		
		% IG1		
		% IG2		
		% IG3		
		% Total Impurities		
% RNA Encapsulation	SOP-0298	% Encapsulation		
Dynamic Light Scattering	SOP-0107	Particle Size		
		Polydispersity		
Lipid Identification	SOP-0502	SM102		
		Cholesterol		
		DSPC		
		PEG-DMG		

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Generated Date: 19-Jun-2020

FDA-CBER-2022-1614-4622393

## CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	50068
Manufacturer Name:	Moderna	Container/Closure:	(b) (4)
Manufacturer Lot:	5006820002		
Moderna Lot Number:	5006820002	Specification:	SPC-1005
Date of Manufacture:	15May2020	Expiry Date:	15Aug2020

Product Attribute	Method	Parameter	Specification	Result
Lipid Content		SM102	(b) (4)	
		Cholesterol		
		DSPC		
		PEG-DMG		
Lipid Impurities		% Area 1		
		% Area 2		
		% Area 3		
		% Area 4		
		RRT 1		
		RRT 2		
		RRT 3		
		RRT 4		
pH	SOP-0288	pH		
Osmolality	SOP-0279	Osmolality		
USP <467>	Advantar MRNA-C0000-GTM0018	Ethanol		
Bacterial Endotoxins	USP <85>	Bacterial Endotoxins		
Bioburden	SOP-0480	TAMC		
		TYMC		

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Generated Date: 19-Jun-2020

FDA-CBER-2022-1614-4622394

## CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	50068
Manufacturer Name:	Moderna	Container/Closure:	(b) (4)
Manufacturer Lot:	5006820002		
Moderna Lot Number:	5006820002	Specification:	SPC-1005
Date of Manufacture:	15May2020	Expiry Date:	15Aug2020

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

Revision History:

1.0 - Original

Document Approvals  
Approved Date: 19 Jun 2020

Approval Verdict: Approved	Steven Anderson, (b) (6) @modernatx.com) Quality Control Approval 19-Jun-2020 14:12:28 GMT+0000
QA Approval Verdict: Approved	(b) (6) (b) (6) @modernatx.com) Quality Assurance Approval 19-Jun-2020 15:26:54 GMT+0000

## CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	50068
Manufacturer Name:	Moderna	Container/Closure:	(b) (4)
Manufacturer Lot:	5006820003		
Moderna Lot Number:	5006820003	Specification:	SPC-1005
Date of Manufacture:	16Jun2020	Expiry Date:	16Sep2020

Product Attribute	Method	Parameter	Specification	Result
Appearance	SOP-0278	Appearance - Color	(b) (4)	
		Appearance - Particulates		
Identity	SOP-0544	Identity		
Concentration	SOP-0235	Concentration		
Purity	SOP-0383	Purity		
		% IG1		
		% IG2		
		% IG3		
		% Total Impurities		
% RNA Encapsulation	SOP-0298	% Encapsulation		
Dynamic Light Scattering	SOP-0107	Particle Size		
		Polydispersity		
Lipid Identification	SOP-0502	SM102		
		Cholesterol		
		DSPC		
		PEG-DMG		

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Generated Date: 20-Jul-2020

FDA-CBER-2022-1614-4622397

## CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	50068
Manufacturer Name:	Moderna	Container/Closure:	(b) (4)
Manufacturer Lot:	5006820003		
Moderna Lot Number:	5006820003	Specification:	SPC-1005
Date of Manufacture:	16Jun2020	Expiry Date:	16Sep2020

Product Attribute	Method	Parameter	Specification	Result
Lipid Content		SM102	(b) (4)	
		Cholesterol		
		DSPC		
		PEG-DMG		
Lipid Impurities		% Area 1		
		% Area 2		
		% Area 3		
		% Area 4		
		RRT 1		
		RRT 2		
		RRT 3		
		RRT 4		
pH	SOP-0288	pH		
Osmolality	SOP-0279	Osmolality		
Bacterial Endotoxins	USP <85>	Bacterial Endotoxins		
Bioburden	SOP-0480	TAMC		
		TYMC		

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Generated Date: 20-Jul-2020

FDA-CBER-2022-1614-4622398

## CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	50068
Manufacturer Name:	Moderna	Container/Closure:	(b) (4)
Manufacturer Lot:	5006820003		
Moderna Lot Number:	5006820003	Specification:	SPC-1005
Date of Manufacture:	16Jun2020	Expiry Date:	16Sep2020

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

Revision History:

1.0 - Original

Document Approvals  
Approved Date: 20 Jul 2020

Approval Verdict: Approved	Steven Anderson, (b) (6) @modernatx.com) Quality Control Approval 20-Jul-2020 14:49:08 GMT+0000
QA Approval Verdict: Approved	(b) (6) (b) (6) @modernatx.com) Quality Assurance Approval 20-Jul-2020 16:16:10 GMT+0000



## CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	50068
Manufacturer Name:	Moderna	Container/Closure:	(b) (4)
Manufacturer Lot:	5006820004		
Moderna Lot Number:	5006820004	Specification:	SPC-1005
Date of Manufacture:	24Jun2020	Expiry Date:	24Sep2020

Product Attribute	Method	Parameter	Specification	Result
Appearance	SOP-0278	Appearance - Color	(b) (4)	
		Appearance - Particulates		
Identity	SOP-0544	Identity		
Concentration	SOP-0235	Concentration		
Purity	SOP-0383	Purity		
		% IG1		
		% IG2		
		% IG3		
		% Total Impurities		
% RNA Encapsulation	SOP-0298	% Encapsulation		
Dynamic Light Scattering	SOP-0107	Particle Size		
		Polydispersity		
Lipid Identification	SOP-0502	SM102		
		Cholesterol		
		DSPC		
		PEG-DMG		

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Generated Date: 24-Jul-2020

FDA-CBER-2022-1614-4622401

## CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	50068
Manufacturer Name:	Moderna	Container/Closure:	(b) (4)
Manufacturer Lot:	5006820004		
Moderna Lot Number:	5006820004	Specification:	SPC-1005
Date of Manufacture:	24Jun2020	Expiry Date:	24Sep2020

Product Attribute	Method	Parameter	Specification	Result
Lipid Content		SM102	(b) (4)	
		Cholesterol		
		DSPC		
		PEG-DMG		
Lipid Impurities		% Area 1		
		% Area 2		
		% Area 3		
		RRT 1		
		RRT 2		
		RRT 3		
pH	SOP-0288	pH		
Osmolality	SOP-0279	Osmolality		
Bacterial Endotoxins	USP <85>	Bacterial Endotoxins		
Bioburden	SOP-0480	TAMC		
		TYMC		

This material meets specification: Yes

Revision History:  
1.0 - Original

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FDA-CBER-2022-1614-4622402 10

Document Approvals  
Approved Date: 24 Jul 2020

Approval Verdict: Approved	Steven Anderson, (b) (6) @modernatx.com) Quality Control Approval 24-Jul-2020 13:04:25 GMT+0000
QA Approval Verdict: Approved	(b) (6) (b) (6) @modernatx.com) Quality Assurance Approval 24-Jul-2020 13:51:11 GMT+0000

## CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	50068
Manufacturer Name:	Moderna	Container/Closure:	(b) (4)
Manufacturer Lot:	5006820005		
Moderna Lot Number:	5006820005	Specification:	SPC-1005
Date of Manufacture:	02Jul2020	Expiry Date:	02Oct2020

Product Attribute	Method	Parameter	Specification	Result
Appearance	SOP-0278	Appearance - Color	(b) (4)	
		Appearance - Particulates		
Identity	SOP-0544	Identity		
Concentration	SOP-0235	Concentration		
Purity	SOP-0383	Purity		
		% IG1		
		% IG2		
		% IG3		
		% Total Impurities		
% RNA Encapsulation	SOP-0298	% Encapsulation		
Dynamic Light Scattering	SOP-0107	Particle Size		
		Polydispersity		
Lipid Identification	SOP-0502	SM102		
		Cholesterol		
		DSPC		
		PEG-DMG		

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FDA-CBER-2022-1614-4622404

## CERTIFICATE OF ANALYSIS

Product Description:	mRNA-1273	Moderna Part #:	50068
Manufacturer Name:	Moderna	Container/Closure:	(b) (4)
Manufacturer Lot:	5006820005		
Moderna Lot Number:	5006820005	Specification:	SPC-1005
Date of Manufacture:	02Jul2020	Expiry Date:	02Oct2020

Product Attribute	Method	Parameter	Specification	Result
Lipid Content		SM102	(b) (4)	
		Cholesterol		
		DSPC		
		PEG-DMG		
Lipid Impurities		% Area 1		
		% Area 2		
		% Area 3		
		% Area 4		
		RRT 1		
		RRT 2		
		RRT 3		
		RRT 4		
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	Moderna Part #:	50068
Manufacturer Name:	Moderna	Container/Closure:	(b) (4)
Manufacturer Lot:	5006820005		
Moderna Lot Number:	5006820005	Specification:	SPC-1005
Date of Manufacture:	02Jul2020	Expiry Date:	02Oct2020

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

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1.0 - Original

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QA Approval Verdict: Approved	(b) (6) (b) (6) @modernatx.com) Quality Assurance Approval 12-Aug-2020 11:09:01 GMT+0000