

Stability Study : STY_00901

Lot Number: 6007320012

Product: 60073

Container: 10R Glass Vial, 20 mm Stopper, 20 mm Cap

Manufacturing Date: 03Dec2020

Construct/mRNA Code: mRNA-1273

Manufacturing Site: Catalent Biologics, Bloomington, Indiana

Table 1: Stability Data for Product 60073, Lot 6007320012 at -20°C ± 5°C

Test	Method	Shelf-Life Acceptance Criteria	Release	3 Month	6 Months	9 Months	12 Months	
Appearance	Visual	White to off-white dispersion.	White to off-white dispersion	-				
		May contain visible, white or translucent product-related particulates	Essentially free of particulates	-				
RNA Content	AEX-HPLC	(b) (4)		-				
Purity	RP-HPLC			(b) (4)				
Product-related Impurities	RP-HPLC							
% RNA Encapsulation	(b) (4)				-			
In vitro Translation	In vitro translation / methionine labelling				-			

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Table 1: Stability Data for Product 60073, Lot 6007320012 at -20°C ± 5°C (continued)

Test	Method	Shelf-Life Acceptance Criteria	Release	3 Month	6 Months	9 Months	12 Months
pH	USP <791>	(b) (4)		-			
Particle Size	Dynamic light scattering			(b) (4)			
Polydispersity							
Lipid Identification							
SM-102	UPLC-CAD			-			
Cholesterol				-			
DSPC				-			
PEG2000-DMG				-			
Lipid Content							
SM-102	UPLC-CAD			-			
Cholesterol				-			
DSPC				-			
PEG2000-DMG				-			
Lipid Impurities	UPLC-CAD			-			
				-			

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Table 1: Stability Data for Product 60073, Lot 6007320012 at -20°C ± 5°C (continued)

Test	Method	Shelf-Life Acceptance Criteria	Release	3 Month	6 Months	9 Months	12 Months
Particulate Matter							
≥ 10 µm	USP <788> Method 2	(b) (4)		-			
≥ 25 µm				-			
Bacterial Endotoxins	USP <85>, Ph. Eur. 2.6.14			-			
Sterility	USP <71>, Ph. Eur. 2.6.1			-			
Container Closure Integrity	USP <1207>	Pass	-	-			

NT*: Not Tested, Refer to QE-005517 "-": Not applicable per the stability protocol

Future Timepoint

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Table 2: Stability Data for Product 60073, Lot 6007320012 at -20°C ± 5°C

Condition	Time Point	Test	Parameter	Shelf-Life Acceptance Criteria	Result
Release	Release	Lipid Impurities	(b) (4)		
Release	Release	Lipid Impurities			
Release	Release	Lipid Impurities			
Release	Release	Lipid Impurities			
Release	Release	Lipid Impurities			
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Table 3: Stability Data for Product 60073, Lot 6007320012 at 5°C ± 3°C

Test	Method	Shelf-Life Acceptance Criteria	Release	1 Month	3 Months	4 Months
Appearance	Visual	White to off-white dispersion.	White to off-white dispersion	-	White to off-white dispersion	-
		May contain visible, white or translucent product-related particulates	Essentially free of particulates	-	Essentially Free of Particulates	-
RNA Content	AEX-HPLC	(b) (4)		-	(b) (4)	-
Purity	RP-HPLC			NT*		(b) (4)
Product-related Impurities	RP-HPLC			NT*		
				NT*		
				NT*		
				NT*		
% RNA Encapsulation	(b) (4)			-		-
In vitro Translation	In vitro translation / methionine labelling			-		-

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Table 3: Stability Data for Product 60073, Lot 6007320012 at 5°C ± 3°C (continued)

Test	Method	Shelf-Life Acceptance Criteria	Release	1 Month	3 Months	4 Months
pH	USP <791>	(b) (4)		-	(b) (4)	-
Particle Size	Dynamic light scattering			NT*		(b) (4)
Polydispersity				NT*		
Lipid Identification						
SM-102	UPLC-CAD			-		-
Cholesterol				-		-
DSPC				-		-
PEG2000-DMG				-		-
Lipid Content						
SM-102	UPLC-CAD			-		-
Cholesterol				-		-
DSPC				-		-
PEG2000-DMG				-		-
Lipid Impurities	UPLC-CAD			-		-
				-		-

NT*: Not Tested, Refer to QE-005517 "-" : Not applicable per the stability protocol

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Table 4: Stability Data for Product 60073, Lot 6007320012 at 5°C ± 3°C

Condition	Time Point	Test	Parameter	Shelf-Life Acceptance Criteria	Result
Release	Release	Lipid Impurities	(b) (4)		
Release	Release	Lipid Impurities			
Release	Release	Lipid Impurities			
Release	Release	Lipid Impurities			
Release	Release	Lipid Impurities			
Release	Release	Lipid Impurities			
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Table 4: Stability Data for Product 60073, Lot 6007320012 at 5°C ± 3°C (continued)

Condition	Time Point	Test	Parameter	Shelf-Life Acceptance Criteria	Result
5°C ± 3°C	3 Month	Lipid Impurities	(b) (4)		
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			
5°C ± 3°C	3 Month	Lipid Impurities			