

### 3.2.S.4.1 Specification

The specification for mRNA-1273 LS Lipid Nanoparticle (LNP) are described in [Table 1](#).

**Table 1: mRNA-1273 LS LNP Specification**

Test	Analytical Method	Specification
Appearance	Visual	(b) (4)
Identity	Reverse Transcription/ Sanger Sequencing	
Total RNA content	Anion Exchange HPLC	
Purity	RP- HPLC	
Product-related impurities		
% RNA encapsulation	(b) (4)	
Mean particle size	Dynamic Light Scattering	
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	
pH	USP <791>	
Osmolality	USP <785>	
Bacterial endotoxin	USP <85>, EP 2.6.14	
Bioburden	USP <61>, EP 2.6.12	

RT= retention time

(b) (4)