## 3.2.P.2.1 Components of the Drug Product

The mRNA-1273 Injection manufacturing process consists of the dilution of the mRNA-1273 LS Lipid Nanoparticle (LNP) with a formulation buffer containing 20 mM Tris and 87 mg/mL sucrose, pH 7.5. The name, function and unit quantity of the components of mRNA-1273 Drug Product are shown in Table 1.

**Table 1: Components of mRNA-1273 Injection**

| Component | Function | Quantity (mg/mL) |
|---|---|---|
| CX-024414 | mRNA that encodes for the pre-fusion stabilized Spike protein of 2019-novel Coronavirus (SARS-CoV-2) | 0.20 |
| SM-102 | Lipid components in the SM-102 LNP | [redacted] |
| Cholesterol (plant-based) | | |
| 1,2-distearoyl-sn-glycero-3-phosphocholine (DSPC) | | |
| PEG2000-DMG | | |
| Trometamol | Buffer component (Tris buffer) | 0.61 |
| Trometamol-HCl | | 2.35 |
| Acetic Acid | Components from Sodium Acetate in process | 0.085 |
| Sodium Acetate | | [redacted] |
| Sucrose | Cryoprotection | 87 |
| Water for injection | Medium | q.s. to 1 mL |

a) PEG2000-DMG quantity is from SM-102 LNP content and PEG2000-DMG addition step.
b) Sodium acetate quantity is from buffer(s) manufactured with glacial acetic acid and 10 N sodium hydroxide (30% w/w).