



CERTIFICATE OF ANALYSIS

Product: Polysorbate 20

Batch No. 51745-15721

Date: 06/05/2023

Mfg Date: 05/11/2023

Expiration Date: 05/10/2025

| Items | Specifications | Results |
|---|--------------------|----------|
| Appearance | Yellow Liquid | Conforms |
| Identification A (IR) | Conforms to USP/NF | Conforms |
| Identification B (Fatty Acid Comp) | Conforms to USP/NF | Conforms |
| Color (Gardner) | 2 Max. | > 2 |
| Water, % | 3.0 Max | 2.10 |
| Saponification Value (mg KOH/1g sample) | 40 – 50 | 43.6 |
| Hydroxyl Value (mg KOH/1g sample) | 96 – 108 | 97.7 |
| Peroxide Value | 10.0 Max. | < 10 |
| Residue on Ignition | 0.25 Max. | 0.130 |
| Residual Solvents | Conforms to USP/NF | Conforms |
| Acid Value | 2.0 Max. | 0.2 |
| Ethylene Oxide | 1 Max. | Conforms |
| Dioxane | 10 Max. | Conforms |
| Fatty Acid (C6) | 1.0 % Max | 0.0 |
| Fatty Acid (C8) | 10.0 % Max. | 5.3 |
| Fatty Acid (C10) | 10.0 % Max. | 5.5 |
| Fatty Acid (C12) | 40 – 60 % | 48.4 |
| Fatty Acid (C14) | 14 – 25 % | 19.9 |
| Fatty Acid (C16) | 7 – 15 % | 10.0 |
| Fatty Acid (C18) | 11 % Max. | 5.3 |
| Fatty Acid (C18:1) | 11 % Max. | 0.0 |
| Fatty Acid (C18:2) | 3 % Max. | 0.0 |

Note: All product characteristics test methods conform to USP/NF unless noted with asterisk (*).

This product does not contain bovine, ovine, or caprine materials of any type.

The foregoing is a copy of the Certificate of Analysis as provided by our supplier. Note: While this product meets USP specifications, it is considered a cosmetic grade material once we repackage it.

