



Certificate of Analysis

| | | | |
|--------------|-----------------------|-------------------|----------|
| Product Name | Retinyl Palmitate Oil | | |
| INCI Name: | RETINYL PALMITATE | | |
| CAS | 79-81-2 | Molecular Formula | C36H60O2 |
| Batch Number | 20260605 | Manufacture Date | 20260605 |
| Report Date | 20260605 | | |

| Items Tested | Specifications | Results | Test Method |
|---------------------------------------|--|-----------|----------------------------|
| Physical and Chemical Analysis | | | |
| Appearance | Light yellow oily liquid or crystals | Complies | Organoleptic examination |
| Solubility | Insoluble in water, soluble in vegetable oil | Conforms | Visual inspection |
| Refractive index | 20°C should be 1.510 - 1.530 | 1.523 | USP<831> |
| Relative density | 20°C should be 0.906 - 0.930 | 0.921 | USP<851> |
| Content | 55% – 62% | 58.4% | USP<921> UV |
| Physical Characteristics | | | |
| Loss on drying | No more than 0.5% | 3.64% | USP <786> / Sieve analysis |
| Residue on ignition | No more than 0.1% | 0.05% | USP <731> / Ph.Eur. 2.2.32 |
| Heavy metals | No more than 0.002% | Complies | USP<561> |
| Isotretinoin | No more than 5% | Complies | USP <616> / Ph.Eur. 2.9.34 |
| Heavy Metals (ICP-MS) | | | |
| Lead (Pb) | ≤ 10 ppm | <0.5 ppm | ICP-MS |
| Arsenic (As) | ≤ 2 ppm | <0.1 ppm | ICP-MS |
| Cadmium (Cd) | ≤ 1 ppm | <0.1 ppm | ICP-MS |
| Mercury (Hg) | ≤ 1 ppm | <0.05 ppm | ICP-MS |
| Microbial Limits | | | |
| Total Aerobic Microbial Count | ≤ 1000 CFU/g | <10 CFU/g | USP <61> / Ph. Eur. 2.6.12 |
| Total Yeast and Mold Count | ≤ 100 CFU/g | <10 CFU/g | USP <61> / Ph. Eur. 2.6.12 |
| E. coli | Absent in 1g | Absent | USP <62> / Ph. Eur. 2.6.13 |
| Salmonella spp. | Absent in 10g | Absent | USP <62> / Ph. Eur. 2.6.13 |
| Pseudomonas aeruginosa | Absent in 1g | Absent | USP <62> / Ph. Eur. 2.6.13 |

Quality Statement: This product is manufactured under a quality system compliant with cGMP principles for both food and cosmetic applications. Specifications and test methods are established with reference to the relevant ISO Standards, Chinese National Standards (GB), United States Pharmacopeia (USP), and European Pharmacopoeia (Ph. Eur.).

For cosmetic use, the batch fully complies with the requirements of EU Cosmetic Regulation (EC) No 1223/2009, China's Safety Technical Standards for Cosmetics (2015 Edition), and U.S. FDA cosmetic GMP guidelines. For food use, the batch meets the applicable requirements of China's national food safety standards (including GB 2762, GB 2763, GB 7101) and the U.S. FDA Food Safety Modernization Act (FSMA) and applicable food additive regulations.

Storage: Store in tight, light-resistant containers. Avoid exposure to direct sunlight, moisture, and excessive heat.

Shelf Life: 24 months if stored under the above conditions and remains in original packaging.