



CERTIFICATE OF ANALYSIS

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| | | | |
|--------------|--|--------------------|------------|
| Product Name | Hindcel® 200 (Bulk Dried) - MICROCRYSTALLINE CELLULOSE BP 2023, USP-NF 40 | | |
| Lot No. | MCC/25011499 | | |
| T.R. No. | BD/TR/1500/2025 | | |
| Lot Size. | 4001.00 Kg | | |
| Mfg. Date | Jan.-25 | | |
| Re Test Date | Jan.-30 | Date of Analysis : | 21/01/2025 |

| SR. NO. | TESTS | SPECIFICATION | RESULTS | TEST METHOD |
|---------|-------|---------------|---------|-------------|
|---------|-------|---------------|---------|-------------|

A. CHEMICAL TEST

| | | | | |
|-----|--|--|---|------------|
| 1. | Appearance | White or almost white, fine or granular, slightly hygroscopic powder. | Fine, white Odourless powder. | BP, USP-NF |
| 2. | Solubility | (1) Solubility in water, acetone, in anhydrous ethanol, in toluene, in dilute acids and in a 50 g/L solution of sodium hydroxide. | Practically insoluble in water acetone, in anhydrous ethanol, in toluene, in dilute acids and in a 50 g/L solution of sodium hydroxide. | Complies |
| | | (2) Dissolve 50 mg in 10 mL of ammoniacal solution of copper tetrammine R. | It should be dissolves completely, leaving no residue. | Complies |
| 3. | Identification Tests: | | | BP, USP-NF |
| | Test (A) By IR | The sample spectrum should be concordant with that of the Reference spectrum. | Complies | |
| | Test (B) By chemical | The substance becomes should be violet-blue. | Complies | |
| | Test (C) The degree of polymerization | The degree of polymerization should not be more than 350. | Complies | |
| 4. | pH of Solution [5.0 g with 40 mL CO ₂ free water] | 5.0 to 7.5 | 5.88 | BP, USP-NF |
| 5. | Conductivity | The conductivity of the test solution should be does not exceed the conductivity of the water by more than 75 μ S.cm ⁻¹ | 40 μ S.cm ⁻¹ | BP, USP-NF |
| 6. | Ether-soluble substances | Maximum 0.05% | 0.03 % | BP, USP-NF |
| 7. | Water-soluble substance | Maximum 0.25% | 0.18 % | BP, USP-NF |
| 8. | Heavy Metals | Maximum 10 ppm | Complies | BP, USP-NF |
| 9. | Loss on drying (at 105° C for 3 h) | Maximum 7.00 % | 5.40 % | BP, USP-NF |
| 10. | Sulphated ash (Calculated on dried basis) | Maximum 0.1% | 0.06 % | BP, USP-NF |

B. PHYSICAL TEST

| | | | | |
|----|--|---|------------------------|----------|
| 1. | Bulk Density (Untapped) | 0.35 to 0.55 g/cm ³ | 0.52 g/cm ³ | In House |
| 2. | Sieve analysis (% Retention by Sieve shaker) | 60 Mesh- Minimum 10.0 % 100 Mesh- Minimum 50.0 % | 33.60 % 70.20 % | |

C. MICROBIAL TEST

| | | | | |
|----|-------------------------------|--------------------------|----------|------------|
| 1. | Total Aerobic microbial Count | Not more than 1000 CFU/g | Complies | BP, USP-NF |
| 2. | Total yeasts and molds count | Not more than 100 CFU/g | Complies | |
| 3. | Escherichia coli & Salmonella | Should be Absent | Absent | |
| 4. | Pseudomonas aeruginosa | Should be Absent | Absent | |
| 5. | Staphylococcus aureus | Should be Absent | Absent | |

Remark: The Product passes as per BP 2023 ,USP-NF 40,IH (Type 200) Specifications.

| | Designation | Stamp | Signature | Date |
|--------------------------|-----------------|-------|-----------|------------|
| Prepared by : | Q.C. Chemist | | | 21/01/2025 |
| Reviewed & Approved by : | Manager Q.C./QA | | | 21/01/2025 |