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CERTIFICATE OF ANALYSIS

PRODUCT NAME: CUMPSC18CT

CHEMICAL: Mixture of MgSO4, CUPSA, CEC18

SILICA TYPE: Irregular particles 40-63 micron, 60 Angstroms

042704-TN LOT NUMBER:

| | | Specification Values | | Lot Analysis |
|--|---|--------------------------------------|--|--|
| Test Average Pore Size Surface Area (m²/g) Pore Volume (cm³/g) Appearance MgSO4 (lot#919010-BE) | Method SOP82-4.042 SOP82-4.042 SOP82-4.042 Visual | Min 55Å 470 0.70 White F | Max 65Å 530 0.85 Tine Powder | 60Å 493 m²/g 0.76 cm³/g White Fine Powder |
| Assay Total sorbent weight per tube (150mg) | Ignition | 99.50% 143 | 100.5% 158 | 100.0% Conforms |
| CUPSA (lot#817221-GE) Carbon Analysis by Weight (Organic Loading) Anion Exchange Total sorbent weight per tube (50mg) | SOP82-4.024 SOP82-4.028 | 10.50% 1.00 48 | 12.50% 1.50 53 | 11.40% 1.041meq/g Conforms |
| CEC18 (lot#813190-BH) Carbon Analysis by Weight (Organic Loading) Endcapping Total sorbent weight per tube (50mg) | SOP82-4.024 SOP82-4.027 | | 22.70% 0.90abs 53 | 20.85% 0.372abs Conforms |

[•] All components of this product are individually weighed. The mass of each raw material meets method required tolerances.

The shelf life is only valid if the material is stored in the original unopened container. The specifications and lot analysis are only valid using the listed methods. The test methods and specifications were current when the product was lotted.

CERTIFIED BY: NAME: L. Bender

TITLE: QC ANALYST

Certificate issue DATE: 06/13/2019

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