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CERTIFICATE OF ANALYSIS

PRODUCT NAME: CUMPSC1875CB2CT

Mixture of MgSO4, CUPSA, CUCARB, CEC18 CHEMICAL: SILICA TYPE: Irregular particles 40-63 micron, 60 Angstroms 041945-TM LOT NUMBER:

		Specification Values		Lot Analysis
<u>Test</u>	Method	<u>Min</u>	Max	
Average Pore Size	SOP82-4.042	55Å	65Å	60Å
Surface Area (m ² /g)	SOP82-4.042	470	530	$520 \text{ m}^2/\text{g}$
Pore Volume (cm ³ /g)	SOP82-4.042	0.70	0.85	$0.79 \text{ cm}^3/\text{g}$
Appearance	Visual	White F	Fine Powder	White Fine Powder
MgSO4 (lot#814160-BD)				
Assay	Ignition	99.50%	100.5%	99.90%
• Total sorbent weight per tube (150mg)		143	158	Conforms
CUPSA (lot#818011-GD)				
Carbon Analysis by Weight (Organic Loading)	SOP82-4.024	10.50%	12.50%	11.00%
Anion Exchange	SOP82-4.028	1.00	1.50	1.119meq/g
• Total sorbent weight per tube (50mg)		48	53	Conforms
CUCARB (lot#816021-DU)				
Graphitized carbon	SOP82-4.042			133m ² /g
• Total sorbent weight per tube (7.5mg)		7.13	7.88	Conforms
CEC18 (lot#813190-BH)				
Carbon Analysis by Weight	SOP82-4.024	20.50%	22.70%	20.85%
(Organic Loading)				
Endcapping	SOP82-4.027	0.00abs	0.90abs	0.372abs
• Total sorbent weight per tube (50mg)		48	53	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: 05/01/2019

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