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CERTIFICATE OF ANALYSIS

PRODUCT NAME: CHEMICAL: SILICA TYPE: LOT NUMBER: ECPSAC1856 CUPSA (bottom layer), CEC18 (top layer) Irregular particles 40-63 micron, 60 Angstroms 040914-GD

		Specification Values		Lot Analysis
<u>Test</u>	<u>Method</u>	<u>Min</u>	<u>Max</u>	
Average Pore Size	SOP82-4.042	55Å	65Å	60Å
Surface Area (m^2/g)	SOP82-4.042	470	530	520 m²/g
Pore Volume (cm ³ /g)	SOP82-4.042	0.70	0.85	$0.78 \text{ cm}^{3}/\text{g}$
Appearance	Visual	White F	ine Powder	White Fine Powder
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 (500mg)		475	525	Conforms
CEC18 (lot#913010-BK)				
Carbon Analysis by Weight (Organic Loading)	SOP82-4.024	20.50%	22.70%	20.70%
Endcapping	SOP82-4.027	0.00abs	0.90abs	0.830abs
• Total sorbent weight per tube (500mg)		475	525	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: D. Kearns

TITLE: QC ANALYST

Certificate issue DATE: 03/26/2019

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