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CERTIFICATE OF ANALYSIS

PRODUCT NAME: CSDAU
CHEMICAL: C8 + Benzyl Sulfonic Acid
SILICA TYPE: Irregular particles 40-63 micron, 60 Angstrom pores
LOT NUMBER: 915020-UO

<u>Test</u>	<u>Method</u>	<u>Specification Values</u>		<u>Lot Analysis</u>
		<u>Min</u>	<u>Max</u>	
Appearance	Visual	White Fine Powder		White Fine Powder
Average Pore Size	SOP82-4.042	55Å	65Å	60Å
Surface Area (m ² /g)	SOP82-4.042	470	530	493 m ² /g
Pore Volume (cm ³ /g)	SOP82-4.042	0.70	0.85	0.76 cm ³ /g
Carbon Analysis by Weight (Organic Loading)	SOP82-4.024	12.00%	12.80%	12.70%
Cation Exchange	SOP82-4.025	0.065meq/g	0.088meq/g	0.075meq/g
%Recovery - Amobarbital	SOP82-4.011	85.00%	110.0%	99.30%
%Recovery - Phencyclidine	SOP82-4.011	85.00%	110.0%	100.9%
%Recovery - Glutethimide	SOP82-4.011	85.00%	110.0%	99.68%
%Recovery - Imipramine	SOP82-4.011	85.00%	110.0%	95.70%

*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. Shawn Ream

TITLE: QC Manager

Certificate issue DATE: 02-15-2019

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