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## CERTIFICATE OF ANALYSIS

**PRODUCT NAME:** ECQU006-MP  
**CHEMICAL:** Mixture of MgSO<sub>4</sub>, CUPSA, CEC18, CUCARB  
**SILICA TYPE:** Irregular particles 40-63 micron, 60 Angstroms  
**LOT NUMBER:** 072671-FX

| <u>Test</u>                                    | <u>Method</u> | <u>Specification Values</u> |            | <u>Lot Analysis</u>     |
|--|---------------|-----------------------------|------------|-------------------------|
|  |               | <u>Min</u>                  | <u>Max</u> |                         |
| Average Pore Size                              | SOP82-4.042   | 55Å                         | 65Å        | 60Å                     |
| Surface Area (m <sup>2</sup> /g)               | SOP82-4.042   | 470                         | 530        | 496 m <sup>2</sup> /g   |
| Pore Volume (cm <sup>3</sup> /g)               | SOP82-4.042   | 0.70                        | 0.85       | 0.73 cm <sup>3</sup> /g |
| Appearance                                     | Visual        | White Fine Powder           |            | White Fine Powder       |
| <b>MgSO<sub>4</sub></b> (lot#223010-BO)        |               |                             |            |                         |
| Assay  | Ignition      | 99.50%                      | 100.5%     | 100.1%                  |
| • Total sorbent weight per pouch (900mg)       |               | 855                         | 945        | Conforms                |
| <b>CUPSA</b> (lot#127180-GY)                   |               |                             |            |                         |
| Carbon Analysis by Weight<br>(Organic Loading) | SOP82-4.024   | 10.50%                      | 12.50%     | 11.81%                  |
| Anion Exchange                                 | SOP82-4.028   | 1.00                        | 1.50       | 1.147meq/g              |
| • Total sorbent weight per pouch (300mg)       |               | 285                         | 315        | Conforms                |
| <b>CEC18</b> (lot#122021-CS)                   |               |                             |            |                         |
| Carbon Analysis by Weight<br>(Organic Loading) | SOP82-4.024   | 20.50%                      | 22.70%     | 21.14%                  |
| Endcapping                                     | SOP82-4.027   | 0.00abs                     | 0.90abs    | 0.610abs                |
| • Total sorbent weight per pouch (150mg)       |               | 143                         | 158        | Conforms                |
| <b>CUCARB</b> (lot#225290-EU)                  |               |                             |            |                         |
| Graphitized carbon                             | SOP82-4.042   |                             |            | 133 m <sup>2</sup> /g   |
| • Total sorbent weight per pouch (50mg)        |               | 47                          | 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:** D. Kearns

**TITLE:** QC Analyst

**Certificate issue DATE:** 12/07/2022

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