

# BaseBulk

## CERTIFICATE OF ANALYSIS

<b>Product Name:</b>	Choline L-Bitartrate Coated
<b>Batch Number:</b>	CB24091702FCCS
<b>Manufacture Date:</b>	17/09/2024
<b>Expiration Date:</b>	16/09/2027

### Physical & Chemical Characteristics

Analysis Item	Specification	Result
Appearance	White hygroscopic crystal	Conform
Identification A & B	Passes FCC Test	Conform
Assay before coating	NLT 98.0%	99.63%
Assay after coating	NLT 97.0%	98.26%
Choline	NLT 39.9%	40.42%
Water	NMT 0.5%	0.04%
pH (1 in 10)	3.0–4.0	3.41
Specific Rotation	+17.5° – +18.5°	+17.75°
Residue on ignition	NMT 0.1%	0.03%
Silicon dioxide	0.5–1.0%	0.91%

### Heavy Metals

Analysis Item	Specification	Result
Heavy Metals (total)	NMT 10 ppm	Conform
Lead	NMT 2 ppm	Conform
Arsenic	NMT 1 ppm	Conform
Cadmium	NMT 0.2 ppm	Conform
Mercury	NMT 0.1 ppm	Conform

### Microbiological Tests

Analysis Item	Specification	Result
Total plate count	NMT 1000 cfu/g	Conform
Yeast & Mold	NMT 100 cfu/g	Conform
E. coli	Negative/10g	Conform
Salmonella	Negative/25g	Conform
Staphylococcus	Negative/10g	Conform

**Other Tests**

Analysis Item	Specification	Result
1,4-Dioxane	NMT 10 ppm	Conform
Ethylene oxide	NMT 0.1 ppm	Not Detected
Bulk density	0.60–0.80 g/ml	0.69 g/ml
Tapped density	Report	0.79 g/ml
Particle size through 20 mesh	Report	100%
Through 40 mesh	Report	46.68%
Through 60 mesh	Report	14.74%
Through 80 mesh	Report	4.91%
Through 100 mesh	Report	0.29%