

Certificate of Analysis

Trademark name	ProGBB™		
Product name	Gamma-Butyrobetaine Ethyl Ester Chloride		
Batch No.	18P006C0060222	CAS No.	51963-62-3
Quantity	500KG	Manufacture Date	2017-10-14
Reference	In-house	Expiry Date	2019-10-13

Items	Specifications	Results	Method
Description			
Assay	NLT 98.0%	99.50%	HPLC
Appearance	White crystal powder	Confirmed	Visual
Particle size	100% pass through 20mes	Confirmed	Visual
Chemical Tests			
Water	NMT 10.0%	5.8%	/
Residue on ignition	NMT 0.2%	0.09%	GC
Heavy metal	NMT 10ppm	Confirmed	USP<231>
Arsenic	NMT 2ppm	Confirmed	ICP-MS
Microbiological Tests			
Total Aerboic	≤1000cfu/g	Negative	USP<2021>
Yeast and mold	≤100cfu/g	Negative	USP<2021>
E.Coli	Negative	Negative	USP<2022>
Salmonella	Negative	Negative	USP<2022>
Staphylococcus Aureus	Negative	Negative	USP<2022>
Conclusion	Product Conforms to Specification		

Packaging: 25KG/DRUM,packed with double layer polyethylene bag as liner.

Storage and Handling: Store in cool,dry area and not in direct sunlight.

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