



**JINAN JIUAN ESTER CHEMICAL CO.,LTD.**  
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## CERTIFICATE OF ANALYSIS

Product Name :	Betaine Hydrochloride	Country of Origin:	China
Batch No.:	20170501	Quantity:	800Kg
Manufacture Date:	May 02, 2017	Package:	25Kg/Drum
Expiration Date:	May 01, 2019	Standard:	In-house

Item	Specification	Results	Test Method
Appearance	White crystalline granular	Conform	Visual
Assay (on a dry basis)	NLT 98%	99.26%	USP<541>
Loss on Drying	NMT 0.5%	0.10%	USP<731>
pH (1 in 4 Solution)	0.8-1.2	0.98	USP<791>
Residue on Ignition	NMT 0.2%	0.11%	USP<281>
Heavy Metals	NMT 10 PPM	Conform	USP<231>
Lead	NMT 1 PPM	Conform	USP<730>
Arsenic	NMT 1 PPM	Conform	USP<730>
Mercury	NMT 0.2 PPM	Conform	USP<730>
Cadmium	NMT 0.2 PPM	Conform	USP<730>
Chromium	NMT 0.2 PPM	Conform	USP<730>
Total Plate Count	NMT 1000cfu/g	Conform	USP<61>
Yeast and Mold	NMT 100cfu/g	Conform	USP<61>
E.coli	Negative	Conform	USP<62>
Salmonella	Negative	Conform	USP<62>
Staphylococcus	Negative	Conform	USP<62>
Particle Size	Thru20 mesh	100%	USP<786>

Conclusion: The test results correspond to the standard of In-house.

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