

Certificate of Analysis

Product Name: Betaine Hydrochloride

CAS#: 590-46-5 Molecular Formula: $C_5H_{11}NO_2$ •HCI

Molecular Weight: 153.61
Solvents: None
Country of Origin: China
Batch Number: Varies
Manufacture Date: Varies
Retest Date: Varies

Test Results Obtained by PureBulk

Betaine HCI (on dried basis) (HPLC) ≥98% 100.94% Betaine HCI <identification> (HPLC) Positive Positive Positive <identification (usp<731="" 10%="" compares="" drying="" loss="" on="" peak="" positively="" retention="" standard="" time="" times="" to="" within="" ±="">) ≤0.50% 0.091% Aerobic Plate Count ≤1000 cfu/g <20 cfu/g Coliforms ≤100 cfu/g <20 cfu/g E. Coli Negative/10g Absent Staph aureus Negative/10g Absent Yeast & Mold ≤100 cfu/g <20 cfu/g Absent Absent <20 cfu/g Absent Absent <20 cfu/g Absent Absent Absent</identification></identification>	Toot Hoodito Obtainod	, , , , , , , , , , , , , , , , , , ,	
Betaine HCl <identification> (HPLC) Positive Positive < Conforms> Sample peak retention time compares positively to standard peak retention times within ± 10% Loss on Drying (USP<731>) Aerobic Plate Count Coliforms ≤1000 cfu/g ≤1000 cfu/g E. Coli Negative/10g Negative/10g Absent Yeast & Mold ≤1000 cfu/g ✓20 cfu/g Absent Yeast & Mold ≤100 cfu/g Absent Yeast & Mold ≤100 cfu/g Absent ✓20 cfu/g Absent Absent Absent</identification>	ITEMS	SPECIFICATIONS	RESULTS
peak retention time compares positively to standard peak retention times within ± 10% Loss on Drying (USP<731>) ≤0.50% 0.091% Aerobic Plate Count ≤1000 cfu/g <20 cfu/g Coliforms ≤100 cfu/g <20 cfu/g E. Coli Negative/10g Absent Staph aureus Negative/10g Absent Yeast & Mold ≤100 cfu/g <20 cfu/g Absent Yeast & Mold ≤100 cfu/g Absent Yeast & Mold ≤100 cfu/g Absent Pseudo. aeruginosa Negative Absent Absent	Betain <mark>e H</mark> Cl (on <mark>dried ba</mark> sis) (HPLC)	≥98%	100.94%
Aerobic Plate Count ≤1000 cfu/g <20 cfu/g	Betaine HCI < Identification > (HPLC)	Positive	peak retention time compares positively to standard peak
Coliforms ≤100 cfu/g <20 cfu/g	Loss on Drying (USP< <mark>731</mark> >)	≤0.50%	0.091%
E. Coli Negative/10g Absent Staph aureus Negative/10g Absent Yeast & Mold ≤100 cfu/g <20 cfu/g	Aerobic Plate Count	≤1000 cfu/g	<20 cfu/g
Staph aureus Negative/10g Absent Yeast & Mold ≤100 cfu/g <20 cfu/g	Coliforms	≤100 cfu/g	<20 cfu/g
Yeast & Mold ≤100 cfu/g <20 cfu/g Salmonella Negative/25g Absent Pseudo. aeruginosa Negative Absent	E. Coli	Negative/10g	Absent
Salmonella Negative/25g Absent Pseudo. aeruginosa Negative Absent	Staph <i>aureus</i>	Negative/10g	Absent
Pseudo. aeruginosa Negative Absent	Yeast & Mold	≤100 cfu/g	<20 cfu/g
	Salmonella	Negative/25g	Absent
Conclusion (PureBulk): This product conforms to standards	Pseudo. aeruginosa	Negative	Absent
	Conclusion (PureBulk):	This product conforms to standards	

The following information is an indirect translation of information provided from the Manufacturer's Certificate of Analysis, and should not be used solely as an instrument for strict quality control.

ITEMS	SPECIFICATIONS	RESULTS	
Clarity of Solution	Clear	Conforms	
Appearance	White Crystal	Conforms	
pH (1 in 4)	0.8~1.2	0.81	
Residue on Ignition	≤0.1%	0.08%	
Heavy Metals	≤10 ppm	Conforms	
Lead (Pb)	≤1 ppm	Conforms	
Arsenic (As)	≤1 ppm	Conforms	
Cadmium (Cd)	≤0.2 ppm	Conforms	
Mercury (Hg)	≤0.1 ppm	Conforms	
Bulk Density	0.60~0.80 g/ml	0.69 g/ml	
Tapped Density	-	0.80 g/ml	
Particle Size	Through 20 mesh	100%	
	Through 40 mesh	45.23%	
	Through 60 mesh	14.02%	
	Through 80 mesh	3.03%	
	Through 100 mesh	1.16%	
Conclusion (Manufacturer):	This product Conformss to USP41 s	This product Conformss to USP41 standards	

Additional Information: Vegan | BSE/TSE Free | Food

Grade "

GMO Statement: Non-GMO

 Composition:
 Betaine Hydrochloride 98%

 Sterilization Method:
 Non-Irradiated ∥ Non-EtO

Storage Conditions: Keep in sealed container under 25°C.

Keep away from strong light, heat and moisture.

Toll Free: 1-888-280-0050

Fax: 1-541-393-9005

Purebulk.Inc verifies that the information contained herein is true and correct to the best of our knowledge.

Verified By: Ann Foote / Candace Gibson

(This document was produced electronically and is valid without signature.)

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