

# Xi'an Jiuzhong Biotechnology Co., Ltd.

## CERTIFICATE OF ANALYSIS

Product name	4-Amino-3-phenylbutyric Acid HCL	Country of Origin	China
Batch Size	1000kg	Batch Number	PH220201
Manufacture Date	Feb.01, 2023	Test Date	Feb.01, 2023
CAS No.:	1078-21-3	Expiry Date	Feb.01, 2025

Item	Specification	Result	Method
Assay	4-Amino-3-phenylbutyric Acid HCL $\geq 99.0\%$	99.39%	HPLC
Appearance	White crystalline fine powder	Complies	Visual
Odor	Characteristic	Complies	Organoleptic
Melting Point	194°C-202°C	196.5°C-198.4°C	USP
Loss on Drying	$\leq 0.5\%$	0.29%	105°C/3hrs
Residue on Ignition	$\leq 0.1\%$	0.06%	750°C/5hrs
pH Value	2.3-2.7	2.4	pH meter
Sulfate	$\leq 0.05\%$	Complies	USP
Related Substances	$\leq 0.5\%$	0.37%	HPLC
Heavy Metals	$\leq 10\text{ppm}$	Complies	AAS
Iron	$\leq 60\text{ppm}$	Complies	AAS
Lead	$\leq 1\text{ppm}$	Complies	AAS
Arsenic	$\leq 1\text{ppm}$	Complies	AAS
Mercury	$\leq 1\text{ppm}$	Complies	AAS
Cadmium	$\leq 1\text{ppm}$	Complies	AAS
Microbiological Control			
Total Plate Count	$\leq 1000\text{cfu/g}$	90cfu/g	CP2015
Yeast & Mould	$\leq 100\text{cfu/g}$	25cfu/g	CP2015
E.Coli	Negative	Complies	CP2015
Salmonella	Negative	Complies	CP2015
S. aureus & P.aeruginosa	Negative	Complies	CP2015
Storage	Cool & dry place. Keep away from strong light and heat.		
Shelf	2 years when properly stored		

Conclusion: The product conforms with the above specification.

QA: Yang Jie

QC: Wang Yang