

Wuhan ZSC bio Pharmaceutical Technology Co., Ltd.

CERTIFICATE OF ANALYSIS

Product name	Alpha Arbutin	Cas No.	497-76-7
Quantity	250kg	Batch NO.	2018121604
Producing Date	2018.12.16	Expiry Date	2020.12.15

Test Items	Specifications	Result
Appearance	White crystals or crystalline powder,IR spectrum conforms	Conforms
Assay(HPLC)	$\geq 99.0\%$	99.52%
Loss on Drying	$\leq 0.5\%$	0.07%
Residue on ignition	$\leq 0.5\%$	0.05%
Specific Optical Rotation	$[\alpha]_{D20} = +175.0^{\circ} \sim +185.0^{\circ}$	$+179.2^{\circ}$
Transparency in water	Transparent colorless no suspended	Conforms
pH(1%water solution)	5.0~7.0	6.16
Melting Point	202.0°C~210.0°C	206.8°C
Hydroquinone	Negative	Negative
Lead(mg/kg)	≤ 10	< 10
Arsenic(mg/kg)	≤ 2	< 2
Mercury(mg/kg)	≤ 1	< 1
Methanol(mg/kg)	≤ 2000	< 1000
Plumbum	$< 2\text{ppm}$	Conforms
Microbiological tests		
Aerobic bacterial count	$\leq 1000\text{cfu/g}$	Conforms
Total Yeast and Molds	$\leq 100\text{cfu/g}$	Conforms
Fecal Coliforms	Negative	Negative
Pseudomonas Aeruginosa	Negative	Negative
Staphylococcus	Negative	Negative
Conclusion	Conforms to the in-house standard	

