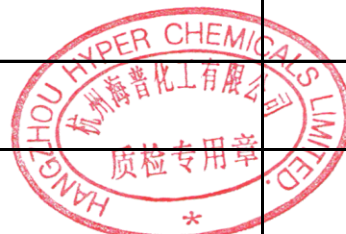


## CERTIFICATE OF ANALYSIS

<b>Product Name:</b>	<b>Hesperidin</b>		
<b>Batch No.</b>	230202	<b>CAS No.</b>	520-26-3
<b>Manufacturing Date</b>	February 11, 2023	<b>Expiry Date TO</b>	February 11, 2026
<b>Quantity</b>	1000KG	<b>Quality Standard</b>	USP2021
<b>Analytical results</b>			
<b>Items</b>	<b>Specifications</b>		<b>Results</b>
<b>Appearance</b>	Greyish-yellow or light yellow hygroscopic powder.		Light yellow hygroscopic powder.
<b>Solubility</b>	Practically insoluble in water, soluble in dimethyl sulphoxide, practically insoluble in ethanol (96%). It dissolves in dilute solutions of alkali hydroxides.		Practically insoluble in water, soluble in dimethyl sulphoxide, practically insoluble in ethanol (96%). It dissolves in dilute solutions of alkali hydroxides
<b>Infrared Absorption(197K)</b>	Comparison: Hesperidin RS		Conforms
<b>Examine the chromatograms obtained in the Assay</b>	The retention time of the major peak of the Sample solution corresponds to that of the Standard solution, as obtained in the Assay.		Conforms
<b>ASSAY(HPLC), on the dried basis (621)</b>	90.0%-102.0%		93.8 %
<b>Residue on Ignition</b>	≤ 0.2 %		0.13%
<b>Heavy metals, as Pb</b>	≤ 20 ppm		< 10 ppm
<b>Elemental impurities</b>	ICH Q3D		Conform
<b>Arsenic(As)</b>	≤ 1.5 ppm		0.02 ppm
<b>Cadmium (Cd)</b>	≤ 0.5 ppm		0.002 ppm
<b>Lead (Pb)</b>	≤ 0.5 ppm		0.06 ppm



<b>Mercury (Hg)</b>	≤ 3.0 ppm	0.01 ppm
<b>Eriocitrin</b>	≤ 1.0 %	0.001%
<b>Isonaringin</b>	≤ 4.0 %	1.60%
<b>Neohesperidin</b>	≤ 1.0 %	0.35%
<b>Diosmin</b>	≤ 1.0 %	0.56%
<b>Naringenin</b>	≤ 1.0 %	0.001%
<b>Didymin</b>	≤ 3.0 %	1.30%
<b>Hesperetin</b>	≤ 1.0 %	0.33%
<b>Any unspecified impurity</b>	≤ 1.0 %	Maximum unspecified impurity: 0.19 %
<b>Total unspecified impurities</b>	≤ 3.0 %	0.57%
<b>Total impurities</b>	≤ 10.0 %	4.70%
<b>Loss on drying</b>	≤ 5.0 %	4.10%
<b>Particle size distribution</b>	Not less than 95% pass 80 mesh sieve	100% pass 80 mesh sieve
<b>Methanol</b>	≤ 3000 ppm	0ppm
<b>Ethanol</b>	≤ 5000 ppm	0ppm
<b>Total aerobic microbial count</b>	≤ 10 <sup>3</sup> CFU/g	< 10 CFU/g
<b>Total yeasts and moulds count</b>	≤ 10 <sup>2</sup> CFU/g	< 10 CFU/g
<b>Escherichia coli</b>	Absent in 1 g	Absent in 1 g
<b>Salmonella Spp.</b>	Absent in 10 g	Absent in 1 g
<b>Conclusion</b>	THE TEST RESULTS CONFORM TO USP2021.	
<b>Packing and storage</b>	Preserve in well-closed, tight containers.	

Inspector: Carlifor Wu

Verifier: Jack He

