NutraNorth

CERTIFICATE OF ANALYSIS

Manufactured for	**MACKISEN**				
Name of product:	**Berberine 500 mg**			**NPN**	**80135796**
Packaging Lot # :	**M2500512/1**	**Master Packaging Record #**		**Expiry Date :**	**08/2028**
		MPR	**MA-N796-60-V0**		
Manufacturing Lot # :	**M2500512**	**Master Manufacturing Record #:**		**MFG Date:**	**09/2025**
		MMR	**MA-N796-V0**		
Storage Conditions:	Store at room temperature (R.T), cool dry area keep away from direct sunlight and heat.				
Physical Description:	Yellowish powder in clear Veggie "00" capsules.		60 count in Bottle-150 cc-38/400 White HDPE Round with Cap-38-400 white HIS P/P,top dot,plain liner.		

Physical Tests:

TESTES	Results	Specifications Low	Target	High	Strength	Method
Average Wt. of Capsules	641 mg	622	691	760	mg	USP <2091>
Wt. variation of Capsules	Conforms	Conforms as per USP weight variation +/- 10 %				USP <2091>
Odour & Taste	Conforms	Characteristic, Conforms to Standard				Visual, Olfactory
Disintegration	14 min	NMT 30			min	USP <2040>
IDENTITY	Conforms	Conforms to standard				FTIR

Quantity / Potency :	**Results**		**Low**	**Target**	**High**	**Strength**	**Method**
By Qualitative Analysis							
Berberine (from Berberine Hydrochloride)	503.86	mg	400.00	500.00	600.00	mg	JPL-021.00 (Titration)
NON-MEDICINAL INGREDIENTS	Microcrystalline Cellulose , Ascorbyl Palmitate, Empty Clear Vegetable Capsule Size "00"						

Purity:

MICRO:	**Results**	**Limits**	**Method**
Total Plate Count	<10 c.f.u / g	< 100,000 c.f.u / g	USP <2021/2022>
Total Yeast	<10 c.f.u / g	< 10,000 c.f.u / g	USP <2021/2022>
Total Mold	<10 c.f.u / g	< 10,000 c.f.u / g	USP <2021/2022>
E.Coli	Not Detected	Not Detected	USP <2021/2022>
Salmonella Spp	Not Detected	Not Detected	USP <2021/2022>
Staphylococcus Aureus	Not Detected	Not Detected	USP <2021/2022>
HEAVY METALS:	**Results**	**Limits - 2 capsules / day**	**Method**
Arsenic	<0.0009 mcg / kg b.w./day	< 0.14 mcg / kg b.w./day	ICP-MS
Cadmium	0.0005 mcg / kg b.w./day	< 0.09 mcg / kg b.w./day	ICP-MS
Lead	0.0177 mcg / kg b.w./day	< 0.14 mcg / kg b.w./day	ICP-MS
Total Mercury	0.0001 mcg / kg b.w./day	< 0.29 mcg / kg b.w./day	ICP-MS
SOLVENT RESIDUES :	Complies	Meets USP requirements	USP/GC
PESTICIDE RESIDUES :	Complies	Meets USP requirements	USP/GC

Prepared by: Nadine Jan/29/2026

Approved by: BShargav.R Jan/29/2026

Quality Assurance

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CERTIFICATE OF ANALYSIS

Manufactured for	**MACKISEN**				
Name of product:	**Berberine 500 mg**			**NPN**	**80135796**
Packaging Lot # :	**M2500512/2**	**Master Packaging Record #**		**Expiry Date :**	**08/2028**
		MPR	**MA-N796-120-V0**		
Manufacturing Lot # :	**M2500512**	**Master Manufacturing Record #:**		**MFG Date:**	**09/2025**
		MMR	**MA-N796-V0**		
Storage Conditions:	Store at room temperature (R.T), cool dry area keep away from direct sunlight and heat.				
Physical Description:	Yellowish powder in clear Veggie "00" capsules.		120 count in Bottle-250 cc-45/400 White HDPE Round with Cap-45-400 white HIS P/P,ribbed,plain liner.		

Physical Tests:

TESTES	Results	Specifications Low	Target	High	Strength	Method
Average Wt. of Capsules	641 mg	622	691	760	mg	USP <2091>
Wt. variation of Capsules	Conforms	Conforms as per USP weight variation +/- 10 %				USP <2091>
Odour & Taste	Conforms	Characteristic, Conforms to Standard				Visual, Olfactory
Disintegration	14 min	NMT 30			min	USP <2040>
IDENTITY	Conforms	Conforms to standard				FTIR

Quantity / Potency :	**Results**		**Low**	**Target**	**High**	**Strength**	**Method**
By Qualitative Analysis							
Berberine (from Berberine Hydrochloride)	503.86	mg	400.00	500.00	600.00	mg	JPL-021.00 (Titration)
NON-MEDICINAL INGREDIENTS	Microcrystalline Cellulose , Ascorbyl Palmitate, Empty Clear Vegetable Capsule Size "00"						

Purity:

MICRO:	**Results**	**Limits**	**Method**
Total Plate Count	<10 c.f.u / g	< 100,000 c.f.u / g	USP <2021/2022>
Total Yeast	<10 c.f.u / g	< 10,000 c.f.u / g	USP <2021/2022>
Total Mold	<10 c.f.u / g	< 10,000 c.f.u / g	USP <2021/2022>
E.Coli	Not Detected	Not Detected	USP <2021/2022>
Salmonella Spp	Not Detected	Not Detected	USP <2021/2022>
Staphylococcus Aureus	Not Detected	Not Detected	USP <2021/2022>
HEAVY METALS:	**Results**	**Limits - 2 capsules / day**	**Method**
Arsenic	<0.0009 mcg / kg b.w./day	< 0.14 mcg / kg b.w./day	ICP-MS
Cadmium	0.0005 mcg / kg b.w./day	< 0.09 mcg / kg b.w./day	ICP-MS
Lead	0.0177 mcg / kg b.w./day	< 0.14 mcg / kg b.w./day	ICP-MS
Total Mercury	0.0001 mcg / kg b.w./day	< 0.29 mcg / kg b.w./day	ICP-MS
SOLVENT RESIDUES :	Complies	Meets USP requirements	USP/GC
PESTICIDE RESIDUES :	Complies	Meets USP requirements	USP/GC

Prepared by: Neeling Jan/29/2026

Approved by: BShargav.K Jan/29/2026

Quality Assurance

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