NutraNorth®

CERTIFICATE OF ANALYSIS

Manufactured for	**MACKISEN**				
Name of product:	**Glutathione & selenium**				
Packaging Lot # :	**M2500518/1**	**Master Packaging Record #**		**Expiry Date :**	**08/2028**
		MPR	**MA-N127-90-V0**		
Manufacturing Lot # :	**M2500518**	**Master Manufacturing Record #:**		**MFG Date:**	**09/2025**
		MMR	**MA-N127-V0**		
Storage Conditions:	Store at room temperature (R.T), in closed dry containers and Keep away from high temperature & moisture.				
Physical Description:	White powder in clear Veggie "2" capsules.		90 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	295 mg	279	310	341	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	04 mins	NMT 30			min	USP <2040>
IDENTITY	Conforms	Conforms to standard				Organoleptic

Quantity / Potency :	**Results**		**Low**	**Target**	**High**	**Strength**	**Method**
By Qualitative Analysis							
Selenium (Selenomethionine)	51.68	mcg	45.00	50.00	62.50	mcg	JPL-375.00 (ICP-OES)
L-Glutathione (Glutathione)	205.98	mg	160.00	200.00	240.00	mg	JPL-252.00 (HPLC)
NON-MEDICINAL INGREDIENTS	Rice Powder, Empty Clear Vegetable Capsule Size "2"						

Purity:

MICRO:	**Results**	**Limits**	**Method**
Total Plate Count	<10 c.f.u / g	< 3,000 c.f.u / g	USP <2021/2022>
Total Yeast	<10 c.f.u / g	< 300 c.f.u / g	USP <2021/2022>
Total Mold	<10 c.f.u / g	< 300 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 - 3 capsules / day**	**Method**
Arsenic	<0.0001 mcg / kg b.w./day	< 0.14 mcg / kg b.w./day	ICP-MS
Cadmium	<0.0001 mcg / kg b.w./day	< 0.09 mcg / kg b.w./day	ICP-MS
Lead	0.0003 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

Prepared by: Sainithal Dec/31/2025

Approved by: Bhargav.R Dec/31/2025

Quality Assurance

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CERTIFICATE OF ANALYSIS

Manufactured for	**MACKISEN**				
Name of product:	**Glutathione & selenium**				
Packaging Lot # :	**M2500518/2**	**Master Packaging Record #**		**Expiry Date :**	**08/2028**
		MPR	**MA-N127-180-V0**		
Manufacturing Lot # :	**M2500518**	**Master Manufacturing Record #:**		**MFG Date:**	**09/2025**
		MMR	**MA-N127-V0**		
Storage Conditions:	Store at room temperature (R.T), in closed dry containers and Keep away from high temperature & moisture.				
Physical Description:	White powder in clear Veggie "2" 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	295 mg	279	310	341	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	04 mins	NMT 30			min	USP <2040>
IDENTITY	Conforms	Conforms to standard				Organoleptic

Quantity / Potency :	**Results**		**Low**	**Target**	**High**	**Strength**	**Method**
By Qualitative Analysis							
Selenium (Selenomethionine)	51.68	mcg	45.00	50.00	62.50	mcg	JPL-375.00 (ICP-OES)
L-Glutathione (Glutathione)	205.98	mg	160.00	200.00	240.00	mg	JPL-252.00 (HPLC)

NON-MEDICINAL INGREDIENTS	Rice Powder, Empty Clear Vegetable Capsule Size "2"

Purity:

MICRO:	**Results**	**Limits**	**Method**
Total Plate Count	<10 c.f.u / g	< 3,000 c.f.u / g	USP <2021/2022>
Total Yeast	<10 c.f.u / g	< 300 c.f.u / g	USP <2021/2022>
Total Mold	<10 c.f.u / g	< 300 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 - 3 capsules / day**	**Method**
Arsenic	<0.0001 mcg / kg b.w./day	< 0.14 mcg / kg b.w./day	ICP-MS
Cadmium	<0.0001 mcg / kg b.w./day	< 0.09 mcg / kg b.w./day	ICP-MS
Lead	0.0003 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

Prepared by: Srinivas Jan/01/2026

Approved by: Bhargav. R Jan/01/2026

Quality Assurance

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