LIP@Z@ID



LIPOSOMAL GLUTA THIONE



Call Us +91-6304249095



Visit Our Website/Email www.nrchembio.com info@nrchembio.com



Our Location Hyderabad, India





Liposomal Glutathione with LIPOZOID[™] Technology Enhancing Bioavailability, Elevating Efficacy.

Glutathione is a powerful intracellular antioxidant critical for detoxification, immune support, and cellular health. However, its oral bioavailability is traditionally limited due to degradation in the gastrointestinal tract.

Using proprietary LIPOZOID[™] liposomal delivery technology, we have developed a liposomal glutathione formulation that overcomes conventional absorption challenges by encapsulating glutathione in nanosized liposomes, enabling enhanced stability and efficient cellular delivery.

Key Highlights

• Proprietary Liposomal Delivery

LIPOZOID[™] ensures glutathione is protected from degradation in the GI tract and facilitates direct transport across the intestinal barrier.

• Proven Higher Bioavailability

In pre-clinical pharmacokinetic studies, our liposomal glutathione exhibited:

16.6% higher bioavailability compared to native glutathione

Improved systemic absorption and faster onset of action

• Nanoparticle Size Range:

Average liposome size: <500 nm – ensuring optimal absorption and enhanced cellular penetration.

• Good Zeta Potential Stability :

The zeta potential of our liposomes ensures electrostatic repulsion, preventing aggregation and enhancing stability in suspension. This results in a longer shelf life and better dispersibility in physiological conditions





Liposomal Glutathione with LIPOZOID[™] Technology Enhancing Bioavailability, Elevating Efficacy.

Test System Details:

Test Species, Strain	Rat, Wistar
Sex	Male
Age	Age 8-10Weeks
Body Weight	180-200 grams
Number of Animals	06 Rats

Test System Details:

Groups	Group Description	Treatment Description	No. of Animals	
G1	L -Glutathione reduced	59.39 mg/kg b.wt	03	
G2	Liposomal glutathione 40%	128.54 mg/kg b.wt	03	

Pharmacokinetic parameters of L-Glutathione reduced and Liposomal Glutathione 40% in male wistar rats

Group	S. No.	Cmax (µg/mL)	Tmax (Hr)	Elimination rate	Half life	AUCo-t	AUC0-inf
G1	01	82.184	2	0.0315	22.0220	1145.6170	2356.3151
reduced	02	74.957	2	0.0346	20.0226	1070.3755	2032.2080
	03	84.831	2	0.0361	19.2211	1178.3635	2211.4790
Mean		80.657	2.000	0.034	20.422	1131.452	2200.001
SD		5.111	0.000	0.002	1.443	55.370	162.358
G2 (Liposomal	04	93.482	2	0.0406	17.0600	1252.5015	2138.9647
glutathione 40%)	05	90.362	2	0.0432	16.0436	1159.1010	1914.6550
	06	98.472	2	0.0424	16.3324	1280.0980	2139.7134
Mean		94.105	2.000	0.042	16.479	1230.567	2064.444
SD		4.091	0.000	0.001	0.524	63.411	129.722







Liposomal Glutathione with LIPOZOID[™] Technology Enhancing Bioavailability. Elevating Efficacy.

Liposomal Glutathione Structural details

Particle Size	203 nm
Zeta Potential	-64.4mv



CONCLUSION:

The study also concludes that Liposomal glutathione 40% is better bioavailable by 16.67% over the L -Glutathione reduced. The pre-clinically validated formula ensures optimal cellular delivery, making it a preferred choice for skin health and liver support therapies.

Get in Touch with us +91-6304249095



•91-0304249095



Visit Our Website/Email www.nrchembio.com info@nrchembio.com