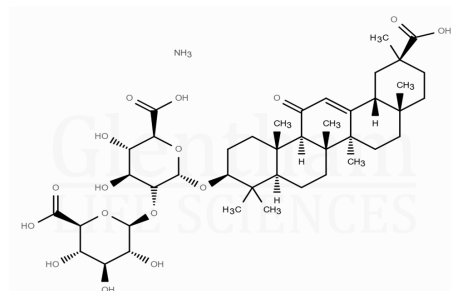


## Certificate of Analysis

Product Name Glycyrrhizic acid ammonium salt  
Glenthams Code GK2256  
CAS Number 53956-04-0  
EINECS 258-887-7  
MDL Number MFCD00167400  
PubChem SID 310274306  
Batch Number 351LZO

Molecular Weight 839.96 (anhydrous)  
Molecular Formula  $C_{42}H_{62}O_{16} \cdot NH_3 \cdot xH_2O$   
Storage Temp. +4°C



Property	Specification	Batch 351LZO
Physical Description	White or yellowish-white, hygroscopic powder	White hygroscopic powder
Identification	According to EP	Conforms
Appearance of Solution	According to EP	Conforms
Specific Optical Rotation	+49.0 - +54.0 °	+52.6°
Related Substances	18 α-glycyrrhizic acid: ≤ 10.0%	8.4%
	Impurity A: ≤ 5.0%	4.1%
	Any Other Impurity: ≤ 2.0%	≤ 2.0%
	Sum of Other Impurities: ≤ 7.0%	≤ 7.0%
Heavy Metals	≤ 20ppm	≤ 20ppm
Water	≤ 6.0%	3.7%
Sulphated Ash	≤ 0.2%	0.02%
Assay	98.0 - 102.0 % (anhydrous basis)	99.3%
Pharmacopoeia Specification(s)	EP	Conforms

Specification Version v1.1  
Manufacture Date 2024-02-20  
Re-Test Date 2032-05-29

Glenthams Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check [www.glenthams.com](http://www.glenthams.com) or contact us using the details above for the current version of this document.

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