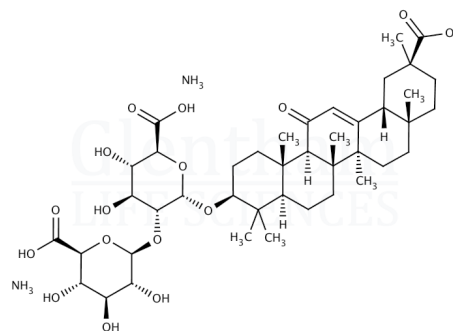


Certificate of Analysis

Product Name Glycyrrhizic acid ammonium salt
Glentham Code GK2256
CAS Number 53956-04-0
EINECS 258-887-7
MDL Number MFCD00167400
PubChem SID 310274306
Batch Number 116ZGC

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 116ZGC
Physical Description	White or yellowish-white, hygroscopic powder	Yellowish-white, hygroscopic powder
Identification	According to EP	Conforms
Appearance of Solution	According to EP	Conforms
Specific Optical Rotation	+49.0 - +54.0 °	+53.8°
Related Substances	18 α-glycyrrhizic acid: ≤ 10.0%	8.3%
	Impurity A: ≤ 5.0%	4.2%
	Any Other Impurity: ≤ 2.0%	Conforms
	Sum of Other Impurities: ≤ 7.0%	Conforms
Heavy Metals	≤ 20ppm	Conforms
Water	≤ 6.0%	3.7%
Sulphated Ash	≤ 0.2%	0.03%
Assay	98.0 - 102.0 % (anhydrous basis)	99.3%
Pharmacopoeia Specification(s)	EP	Conforms

Specification Version v1.1
Manufacture Date 2022-05-22
Re-Test Date 2030-07-26

Glentham Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check www.glentham.com or contact us using the details above for the current version of this document.

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