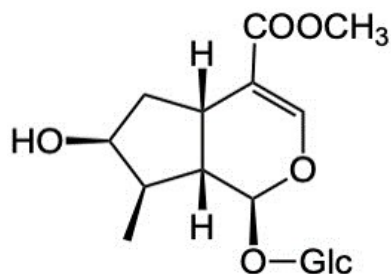


Certificate of Analysis

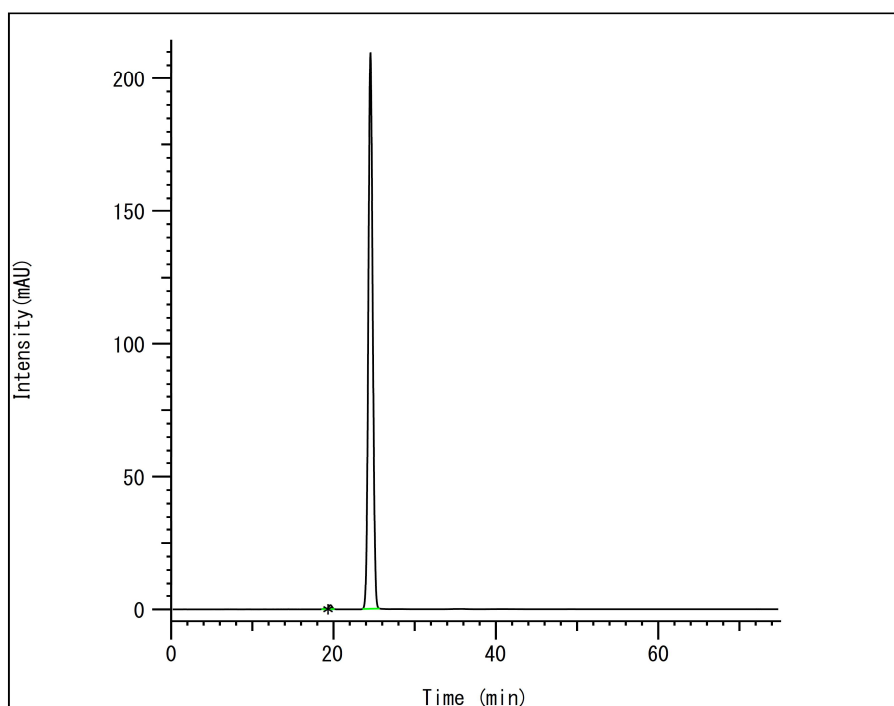
Product No.	43	Product Name	Loganin
Lot. No.	432310	Unit Quantity	20mg
Analysis Date	2023-11-27	Storage Conditions	Refrigerate ($\leq 10^{\circ}$ C)


 $C_{17}H_{26}O_{10}$

MW : 390.38

CAS RN: 18524-94-2

This product conforms to the specifications in the 18th edition of the Japanese Pharmacopoeia (Supplement I), Reagents, Test Solutions, " Loganin for assay" and in the 18th edition of the Japanese Pharmacopoeia , Reagents, Test Solutions, "Loganin for thin-layer chromatography".



Retention time	Peak area	%
18.883	3875	0.05
19.620	43393	0.55
24.543	7810665	99.40
Total	7857933	100.00

Area percentage : Not less than 99.0%

Detector : An ultraviolet absorption photometer (238nm)

Purity Related substances (HPLC)	Column	: Wakosil- II 5C18 HG (4.6 × 150mm)	Passed (99.4%)
	Column temperature	: A constant temperature of about 50°C.	
	Mobile phase	: A mixture of water, acetonitrile and methanol (55:4:1).	
	Flow rate	: 1.2 mL per minute (the retention time of loganin is about 25 minutes).	
	Time span of measurement	: About 3 times as long as the retention time of loganin, beginning after the peak of solvent.	
assay (qNMR)			98.3%
Unity of peak			Passed
Water (by coulometric titration)			0.4%
Description			Passed
Purity Related substances (TLC)			Passed
Precautions			
Order quantities that can be used immediately, and after receipt of a reference standard, store it at the specified temperature and use it as soon as possible.			
Expiration Date		October 2027(unopened)	

IWASHIMA YAKUHIN Co., Ltd.

4-201, Sakurazaka, Moriyama-ku, Nagoya City, Aichi Prefecture 463-0018, Japan

TEL : +81-52-715-5601

FAX : +81-52-715-5602