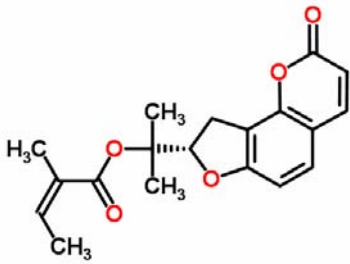


Certificate of Analysis

Product Name	Columbianadin/ 二氫歐山芹醇當歸酸酯	
Catalog Number	5003	
Lot Number	50035	

Chemical Name	Columbianadin
Chemical Formula	C ₁₉ H ₂₀ O ₅
Chemical Family	Coumarin
Molecular Weight	328.36
CAS Number	5058-13-9
Appearance (Color)	White
Appearance (Form)	Powder

Analytical Test

Test	Result
Identity by LC/MS Analysis	Consistent with structure
Purity by HPLC/DAD Analysis	≥98.0%

Storage Conditions:

Storage:	Refer to label
Before use:	Keep container tightly closed

TLCM certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated criteria. Warranty does not apply after opening.

Date of Certificate: 01/02/2013

Product Analysis Report

Analytical Test

Test	Results
Identity by LC/MS Analysis	Consistent with structure
Purity by HPLC/DAD Analysis	≥98.0%

Spectral and Physical Data

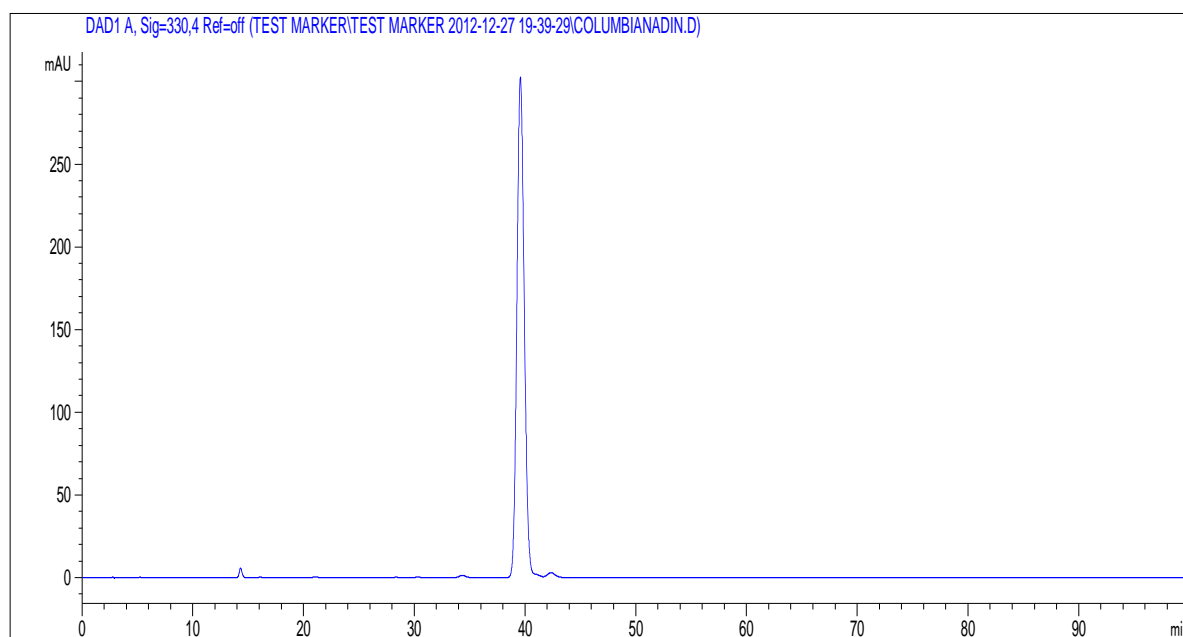
HPLC

HPLC system : Agilent 1200 series
Column : Inertsil, C18, 4.6 x 250 mm, 5µm or equivalent
Injection volume : 10 µl
Detector : DAD
Detector wavelength : 330 nm
Flow rate : 1.0 mL/min
Mobile phase :

Time (min)	% H2O	% ACN	Flow rate (mL/min)
0 → 120	51	49	1.0

Date File Name : A5-C:\CHEM32\1\DATA\TESTMARKER\TEST
MARKER2012-12-27 19-39-29\ COLUMBIANNADIN.D
Operator : DUAN Ran
Sample Lot Number : 50035
Method File : COLUMBIANNADIN
Acquired : 27/12/2012

I. HPLC chromatogram



Product	RT (min)	Area (mAu*s)	Relative Area %
Columbianadin	39.583	13880	98.193