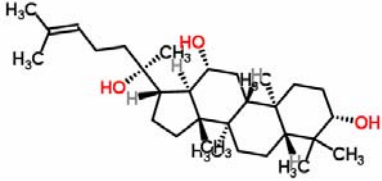


## Certificate of Analysis

<b>Product Name</b>	20(S)-Protopanaxadiol/ 20(S)-原人參二醇	
<b>Catalog Number</b>	10022	
<b>Lot Number</b>	100221	

<b>Chemical Name</b>	<b>20(S)-Protopanaxadiol</b>
<b>Chemical Formula</b>	<b>C<sub>30</sub>H<sub>52</sub>O<sub>3</sub></b>
<b>Chemical Family</b>	<b>Saponin</b>
<b>Molecular Weight</b>	<b>460.73</b>
<b>CAS Number</b>	<b>30636-90-9</b>
<b>Appearance (Color)</b>	<b>White</b>
<b>Appearance (Form)</b>	<b>Powder</b>

### Analytical Test

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

### Storage Conditions:

<b>Storage:</b>	<b>Refer to label</b>
<b>Before use:</b>	<b>Keep container tightly closed</b>

*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: 23/01/2013

## Product Analysis Report

### Analytical Test

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

### Spectral and Physical Data

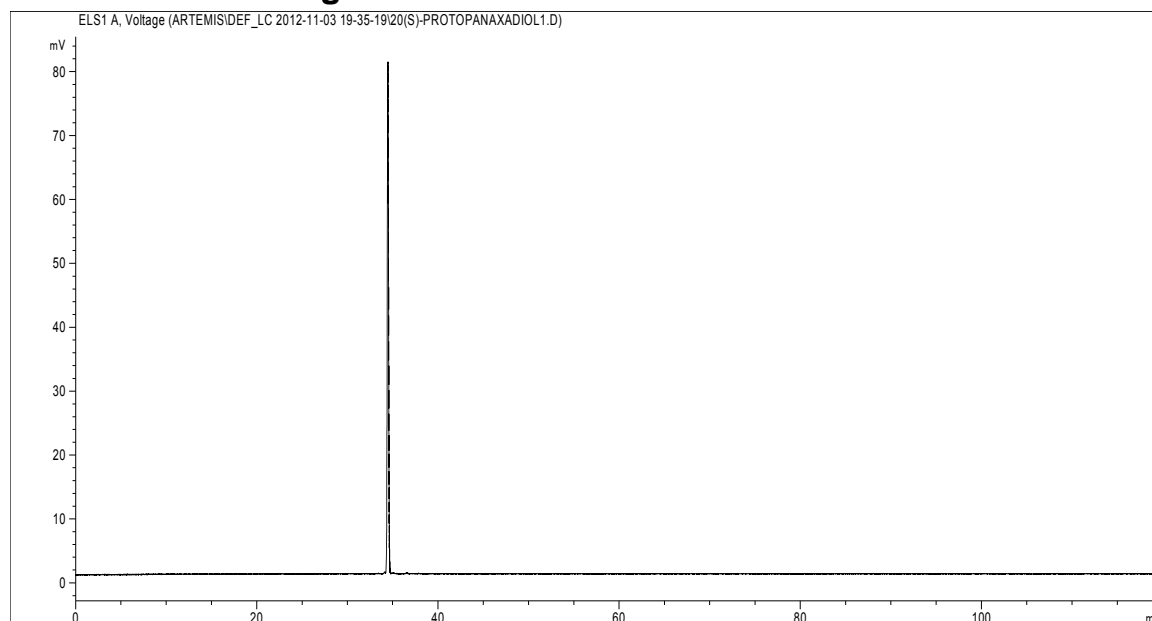
#### HPLC

HPLC system : Agilent Technologies 1200 Series  
Column : Inertsil, C18, 4.6 x 250 mm, 5µm or equivalent  
Injection volume : 10 µl  
Detector : ELSD  
Tube temperature : 60 °C  
N2 Gas : 3.5 bar  
Flow rate : 1.0 mL/min  
Mobile phase :

Time (min)	% 10%ACN +0.1%FA	% 90% ACN+0.1 %FA	Flow rate (mL/min)
0→60	90→10	10→90	1.0
60→120	10	90	1.0

Date File Name : A1-D:\Chem32\1\DATA\ARTEMIS  
Operator : DUAN Ran  
Sample Lot Number : 100221  
Method File : RS-SEPERATING-TEST  
Acquired : 04/11/2012

### I. HPLC chromatogram



Product	RT (min)	Area (mAu*s)	Relative Area %
20(S)-Protopanaxadiol	34.47	828.46	100.00