

CERTIFICATE OF ANALYSIS

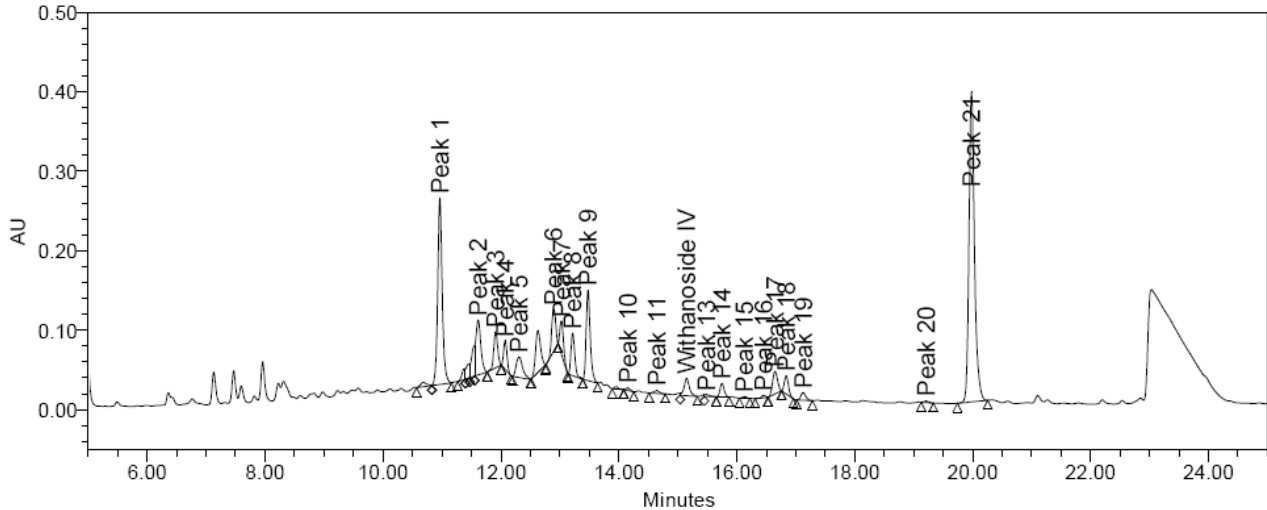


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Report Issued To: Yaju
Merwedeweg 5c2
Breukelen 3621 LP
Netherlands

Sample Name: Ashwagandha Extract, Shoden
Description: Powdered extract; Fine powder (white reclosable)
Lot #: SH-PR100 A/2309/B-22
AL #: 23318LCH_1
Analysis ID: 216828
Received: 11/14/23

Determination of Withanolide Glycosides Content by HPLC



| Ret. Time (min) | Compound Name | Prep 1 (%) | Prep 2 (%) | Average (%) | Specification | Result |
|-----------------|--------------------|------------|------------|-------------|---------------|--------|
| 10.9-20.0 | Total Withanolides | 35.430 | 35.135 | 35.283 | 35% | Pass |

Chromatographic Conditions:

Method: NutriScience NSI Method 001.1 - HPLC Analytical Method for the Measurement of Withanolide Glycosides Content
Column: AP224 Luna 5 µm C18(2) 100A (250 x 4.6 mm)
Temperature: 25°C
Flow Rate: 1.5 mL/min
Injection Volume: 20 µL
UV Detection: 227 nm
Mobile Phase: 1 mM Phosphate Buffer in 0.05% H3PO4 Acetonitrile
HPLC Instrument: Alliance_5

Sample Preparation:

Transferred approximately 62.5 mg of sample into a 25 mL volumetric flask and filled to volume with 50% methanol. Vortexed 30 seconds and sonicated for 10 minutes at room temperature. Let cool and mixed by inversion. Filtered through 0.22µm PTFE filter into an HPLC vial for analysis.

Report Summary:

Conclusion: This " Ashwagandha Extract, Shoden " test sample contains 35% total glycowithanolides on the as-is basis.
OOS Reference: N/A
Empower Reference: 33823 Shoden Withanolide
Revision 1: Corrected spelling of compound name Total Wothanolides to Total Withanolides.

Analysis Date : 12/05/23

Analyzed By: Z Herrera

Authorized By: Celine Decasiano
Analytical Chemistry Supervisor

Revision 1: ZH 03/06/24

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