LIFTMODE

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CERTIFICATE OF ANALYSIS

Rhodiola Rosea

(Rhodiola rosea rhizome extract)

Material Lot #: 20160901
Country of Origin: China

Analysis Date: 08/24/2020
Retesting Date: 08/24/2023

Analysis	Claim	Result
Rosavins	≥5.0%	5.2%
Salidroside	≥2.0%	3.5%

Test	Specification	Result
HPLC Assay		
Rosavins	≥5.0%	5.2%
Salidroside	≥2.0%	3.5%
ICP-MS		
Arsenic	≤1.5 ppm	0.450 ppm
Lead	≤0.5 ppm	0.139 ppm
Cadmium	≤0.5 ppm	0.052 ppm
Mercury	≤0.5 ppm	<0.001 ppm
Total Aerobic Count	<1000 cfu/g	Conforms
Yeast & Mold	<100 cfu/g	Conforms
Coliform	<10 cfu/g	Conforms
E.coli	Negative	Conforms
Salmonella	Negative	Conforms

Rhodiola Rosea should be stored at or below room temperature in a tightly sealed durable container.
Rhodiola Rosea should be protected from excess heat, direct sunlight, excess humidity, and moisture.
Rhodiola Rosea has a retesting period of 3 years from the date of analysis when properly stored.

CERTIFICATE OF ANALYSIS

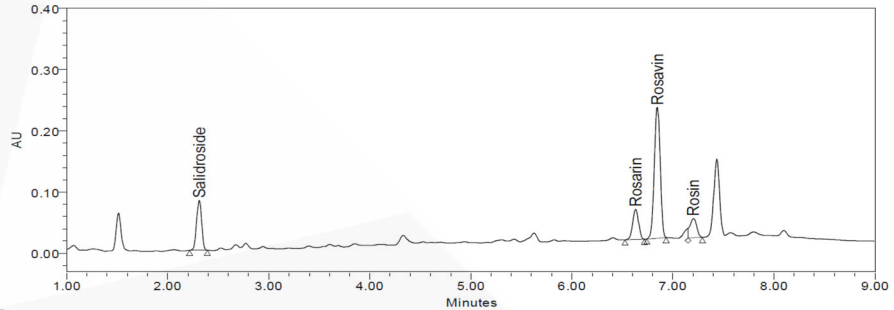
ALKEMIST LABS

12661 Hoover Street Garden Grove, CA 92841 | P. 714-754-4372 | F. 714-668-9972 | www.alkemist.com

Report Issued To: Synaptent
47 W. Polk St.
Chicago Illinois 60605

Sample Name: Rhodiola Rosea
Description: Powdered extract; Foil Pouch
Lot #: 20160901
AL #: 20220PEO_2
Analysis ID: 141464
Received: 08/07/20

Determination of Salidroside and Rosavins Content by HPLC



Ret. Time (min)	Compound Name	Prep 1 (%)	Prep 2 (%)	Average (%) As Is	Average (%) Dry Basis	Specification	Result
2.3	Salidroside	3.396	3.428	3.412	3.578	NLT 2%	Pass
6.6	Rosarin	0.846	0.859	0.853	0.894	N/A	N/A
6.9	Rosavin	3.577	3.626	3.602	3.776	N/A	N/A
7.2	Rosin	0.597	0.598	0.597	0.626	N/A	N/A
	Total Rosavins	5.020	5.083	5.052	5.296	NLT 5%	Pass

Chromatographic Conditions:

Method:	USP 42 - Powdered Rhodiola rosea Extract
Column:	AP277 Luna 2.5µm C18(2)-HST (100 x 3.0 mm)
Temperature:	40°C
Flow Rate:	1 mL/min
Injection Volume:	1 µL
UV Detection:	205 nm
Mobile Phase:	Water Acetonitrile
HPLC Instrument:	UPLC_1

Sample Preparation:
Mixed sample well, transferred approximately 200 mg to a 25 mL volumetric flask, and filled to volume with methanol. Vortexed 30 seconds and sonicated 15 minutes at room temperature. Let cool and filtered through a 0.45 µm PVDF syringe filter into a vial for analysis.

Report Summary:

Conclusion:	This "Rhodiola Rosea" test sample contains an average of 4% salidroside and 5% total rosavins on the dried basis.
Loss on Drying:	4.62%
OOS Reference:	N/A
Notebook Reference:	LC148 p. 136

Celine Deneuve
Senior Analytical Chemist

Digitally signed by Celine Deneuve
DN: cn=Celine Deneuve, o, ou, email=celine@alkemist.com, c=US
Date: 2020.08.24 16:54:29 -07'00'
Adobe Acrobat version: 2020.012.20043

Analysis Date : 08/24/20 **Analyzed By: C Gray**

Authorized By: Celine Deneuve, Analytical Chemistry Supervisor

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Colmaric Analyticals, LLC

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Tel: 615-239-8604, Fax: 615-239-8605

Certificate of Analysis

Synaptent LLC
47 W. Polk ST, STE 100-241
Chicago, IL 60605

Product Name	Rhodiola Rosea	Product Lot #	20160901
Report Date	11/20/2017	Lab #	9442

Description	Test Method	Results
Lead	ICP-MS USP<730>	0.139ppm
Arsenic	ICP-MS USP<730>	0.450ppm
Cadmium	ICP-MS USP<730>	0.052ppm
Mercury	ICP-MS USP<730>	<0.001ppm
Total Plate Count	BioLumix	<1,000 CFU/g
Yeast and Mold	BioLumi	<100 CFU/g
Salmonella	BioLumi	Negative
Coliform	BioLumi	<10 CFU/g
E. coli	BioLumi	Negative
Staphylococcus aureus	BioLumi	Negative
Pseudomonas aurginosa	BioLumi	Negative

Peter Yoho PhD
QA Auditor

11/20/2017
Date

11/20/17

The result(s) stated in this report is only for the sample submitted. This report may not be reproduced in whole or in part, nor may any reference be made to the work, the result, or the company in any news release, public announcements or advertising without our prior written consent.

Certificate Issued To:
Synaptent
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Work performed at:
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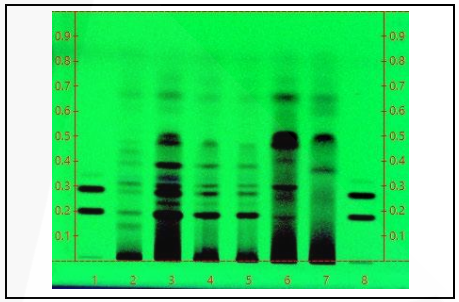
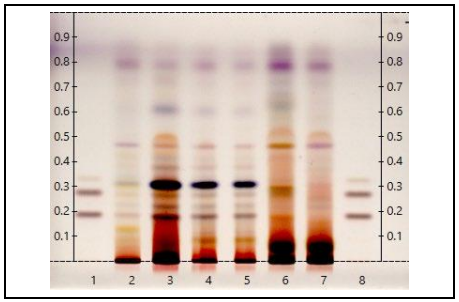
Certificate of Analysis: Rhodiola Rosea (20160901)

High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name:	Synaptent
Title:	Rhodiola Rosea
Plant Part:	rhizome
Sample Received:	08/07/20
Sample Packaging:	Foil Pouch
Form of Botanical:	powdered extract
Appearance:	Foil Pouch
Lot Number:	(20160901) →Lanes 4(0.5µl), 5(0.3µl)
Sample:	20220PEO_I
Latin Name:	*Rhodiola rosea* L. [Crassulaceae]
Reference Sample:	Lane 2(3µl) (PO00213AP1), Lane 3(3µl) (PO13909SYN) Rhodiola rosea (root); Lane 6(3µl) (AVQ09811SWH1), Lane 7(3µl) (AVQ10111MYWY1) Rhodiola crenulata (root); held at Alkemist Labs, Garden Grove, CA.
Analyst:	A. Davis, N. Afendikova, M. Edwards, S. Kabbaj, N. Hoang, K. Tran, J. Lopez, J. Mares 140801
Sample Preparation:	0.3g+3mL 70% grain Ethanol, sonicate/heat at 50° C for 30 min
Stationary Phase:	Silica gel 60, HPTLC plates
Mobile Phase:	ethyl acetate: Methanol: water [7.7/1.3/1]
Detection:	(1) UV 254 nm (2) Vanillin/Sulfuric, 110°C, 2min, vis (Reich, E., 2007)
Reference Standard:	Lanes 1(3µl) and 8(3µl) Rosavin (00018365-143, CHR), Rosarin (18366-515, CHR), Salidroside (19550-825, CHR)
Reference Source:	BTM 715-0166 IDT-SOP-72-01

Comments & Conclusions: Lanes 4, 5 are the test sample Rhodiola Rosea (20160901). Lanes 2, 3, 6, 7, are the reference samples used for comparison. This test sample, Rhodiola Rosea (20160901) is consistent with the chromatographic profile of the reference samples of *Rhodiola rosea,* used above. **This test sample Rhodiola Rosea (20160901) has characteristics of *Rhodiola rosea* rhizome.**

NOTE: The above conclusion may be a function of the natural variance found in botanicals &/or the extraction process used to create specific extracts. The growing and drying conditions, age, seasonal variations, geographic location, extraction solvents, etc. all play a role in the phytochemical fingerprint of botanicals as well as their extracts; hence, chromatographic variations are expected.

Khanh Tran
2020.08.13 12:02:45 -07'00'
2020.012.20041

Examined, Reviewed & Authorized by: Khanh N Tran, HPTLC, R&D Supervisor, Alkemist Labs

Report Date: 08/12/20

ISO/IEC 17025
ACCREDITED
CERTIFICATE #3851.01

Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to 20160901.

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Rhodiola Rosea Extract

Main Benefits

• Rhodiola Rosea is an herb that grows primarily in the Arctic regions and has a long history of traditional use as a tonic to prevent stress and fatigue.

• Rhodiola Rosea acts as a powerful antioxidant and helps to improve cognitive performance. It may also have a beneficial effect on mood.

• Rhodiola Rosea is considered an adaptogenic supplement as it helps the body to better adapt to environmental stresses.

Main Cautions

• Side effects are rare and mild but may include agitation, insomnia, anxiety, and occasional headaches, at large servings.

• Do not exceed the recommended serving size for this supplement. There is insufficient information about safety for pregnant and breast-feeding women.

• Rhodiola Rosea may interact with medication. Consult your doctor if you have any underlying medical conditions or are taking any medication.

Usage Tips

• A 0.625cc measuring scoop is included. One level scoop contains approximately one serving, or approximately **400mg of Rhodiola Rosea.** As a dietary supplement, take 1-2 servings 1-2 times per day. Start at the lower suggested quantity to assess response.

• The negative effects of Rhodiola Rosea are dependent on the amount taken, so use of a scale with 10mg/0.01g accuracy or better is highly recommended.

• Use of capsules, or mixing with tea, yogurt, apple sauce, or oatmeal may help make the powder more tolerable.

• This supplement is not intended to treat, diagnose, prevent, or cure any diseases. Consult your healthcare provider before use if you have a medical condition or if you are taking any prescription medications.

• It is safe to stack Rhodiola Rosea with other supplements, so long as the amount consumed does not exceed the suggested serving size.

• The benefits of Rhodiola Rosea are most effective when they are supported by a healthy diet and plenty of exercise.