

LIFTMODE 47 W. Polk St. STE 100-241 Chicago, IL 60605 liftmode@liftmode.com www.liftmode.com

# **CERTIFICATE OF ANALYSIS**

# Rutin

(CAS# 153-18-4; 2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-3-[α-L-rhamnopyranosyl-(1→6)-β-D-glucopyranosyloxy]-4#-chromen-4-one)

Material Lot #: Ru180502 Manufacture Date: 05/10/2018
Country of Origin: China Retesting Date: 02/22/2024

Botanical Source: Sophora japonica L.

Analysis Claim Result

Rutin ≥95.0% 98.6%

Test	Specification	Result
Appearance	Yellow or greenish-yellow powder	Complies
dentification	IR	Complles
ight Absorbing Impurities	≤0.10 (450-800nm)	Complies
substances insoluble in methanol	≤3%	0.04%
<b>dethanol</b>	≤300ppm	46ppm
Vater	7.5-9.5%	9.1ppm
Sulfated Ash	≤0.1%	0.02%
Related Substance		
Isoquercitroside	≤2.0%	0.24%
Kaempferol 3-rutinoside	≤2.0%	1.2%
Quercetin	≤2.0%	0.0%
Total Impurity	≤4.0%	1.7%
otal Plate Count	≤1000 cfu/g	Complies
Yeast & Mold	≤100 cfu/g	Complies
Salmonella	Not Detectable	Complles
E.coll	Not Detectable	Complles
Staphylococcus Aureus	Not Detectable	Complies

Rutin should be stored at or below room temperature in a tightly sealed durable container. Rutin should be protected from excess heat, direct sunlight, excess humidity and moisture. Rutin has a stable shelf life of 3 years from the date of testing when properly stored.



### S & N LABS

2021 E. Fourth Street

Santa Ana, California 92705

(714) 543-2211

25 February 2021

Job Number:	24771a
PO Number:	verbal

Synaptent LLC 47 W. Polk Street #100-241 Chicago, Illinois 60605

#### REPORT OF ANALYSIS

One jar labeled "Rutin (Vitamin P) #180502" was received on 18 February 2021. The powder in the jar was analyzed for purity using high pressure liquid chromatography (HPLC). The detector was set to  $256 \, \mathrm{nm}$ . The results are summarized in the table below.

Sample	Chromatographic Purity (% area)
Rutin (Vitamin P) #180502	98.6

The chromatogram is enclosed for your reference.

Neil E. Spingarn, Ph.D.

President



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812 Meadow Lark Lane, Goodlettsville, TN 37072 Telephone: 615-239-8604

Certificate of Analysis

Synaptent LLC 47 W Polk Street, 100-241 Chicago, IL 60654

Product Name	Rutin EP	Product Lot Number	180502
Report Date	06/28/18	Laboratory Number	10446

Description	Method	Result	
Identification	Proton NMR	Conforms to structure	
Assay	HPLC	98.5%	
Lead	ICP-MS USP <730>	0.008 ppm	
Arsenic	ICP-MS USP <730>	<0.001 ppm	
Cadmium	ICP-MS USP <730>	0.001 ppm	
Mercury	ICP-MS USP <730>	0.025 ppm	
Total Aerobic Count	Biolumix	<100 CFU/g	
Yeast & Mold	Biolumix	<100 CFU/g	
E. Coli	Biolumix	Negative	
Coliform	Biolumix	<10 CFU/g	
Salmonella	Biolumix	Negative	

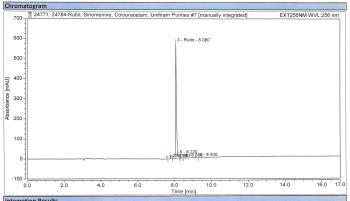
Collin Thomas ASC Laboratory Manager

 $\frac{06/28/2018}{\text{Date}} \left( / 24 / \right)$ 

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.

Instrument:Annex-2 Sequence:24771, 24784-Rutin, Sinomenine, Colouracetam, Unifiram Purities

Chromatogram and Results				
Injection Details				
Injection Name:	Rutin; 180502	Run Time (min):	20.00	
Vial Number:	GA4	Injection Volume:	10.00	
Injection Type:	Unknown	Channel:	EXT256NM	
Calibration Level:		Wavelength:	n.a.	
Instrument Method:	AD 250mm MaxRP 20min	Bandwidth:	n.a.	
Processing Method:	Processing Method	Dilution Factor:	1.0000	
Injection Date/Time:	24/Feb/21 18:20	Sample Weight:	1.0000	



	0.0	2.0	4.0	Tim	e [min]	12.0		1010
Integ	ration Results							
No.	Peak Name		Retention Time	Area	Height	Relative Area	Relative Height	Amount
			min	mAU*min	mAU	%	%	
1			7.633	0.005	0.126	0.01	0.02	n.a.
2			7.847	0.055	1.218	0.17	0.21	n.a.
3	Rutin		8.080	33.023	578.281	98.61	98.22	n.a.
5			8.220	0.362	9.109	1.08	1.55	n.a.
4			8.500	0.024	0.000	0.07	0.00	n.a.
6			9.300	0.018	0.000	0.06	0.00	n.a.
Total:				33.488	588.735	100.00	100.00	

Report Template/Integration

Chromeleon (c) Dionex Version 7.2.10.23925

