



LIFTMODE
47 W. Polk St. STE 100-241
Chicago, IL 60605

liftmode@liftmode.com
www.liftmode.com

CERTIFICATE OF ANALYSIS

Berberine Hcl

(5,6-Dihydro-9,10-dimethoxy-benzof[1,3-benzodioxol[5,6-a]quinolinizinium hydrochloride)

Material Lot #: 180510
Country of Origin: China
Botanical Source: *Phellodendron amurense*

Manufacture Date: 05/10/2018
Retesting Date: 09/19/2021

Analysis **Claim** **Result**

Berberine Hcl $\geq 98.0\%$ **98.02%**

Test **Specification** **Result**

Appearance Yellow-Orange Fine Powder Complies
Loss on Drying <12.0% 9.6%
Residue on Ignition $\leq 0.06\%$ 0.06%
Heavy Metals ≤ 10 ppm Complies
Solvent Residue ≤ 5000 ppm Complies
Total Plate Count ≤ 1000 CFU/g Complies
Yeast & Mold ≤ 100 CFU/g Complies
E.Coli Negative Complies
Pseudomonas aeruginosa Negative Complies

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

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



Colmaric Analyticals, LLC

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

Certificate of Analysis

Product Name	Berberine HCL	Product Lot Number	180510
Report Date	09/20/2018	Laboratory Number	10854

Description	Method	Result
Identification	IH NMR	Conform
Assay	HPLC	99.6 %
Lead	ICP-MS	0.071 ppm
Arsenic	ICP-MS	<0.001 ppm
Cadmium	ICP-MS	0.384 ppm
Mercury	ICP-MS	0.130 ppm
Total Aerobic Count	Biolumix	<10 CFU/g
Yeast and Mold	Biolumix	<10 CFU/g
E. Coli	Biolumix	Absent
Coliform	Biolumix	<10 CFU/g
Salmonella	Biolumix	Absent

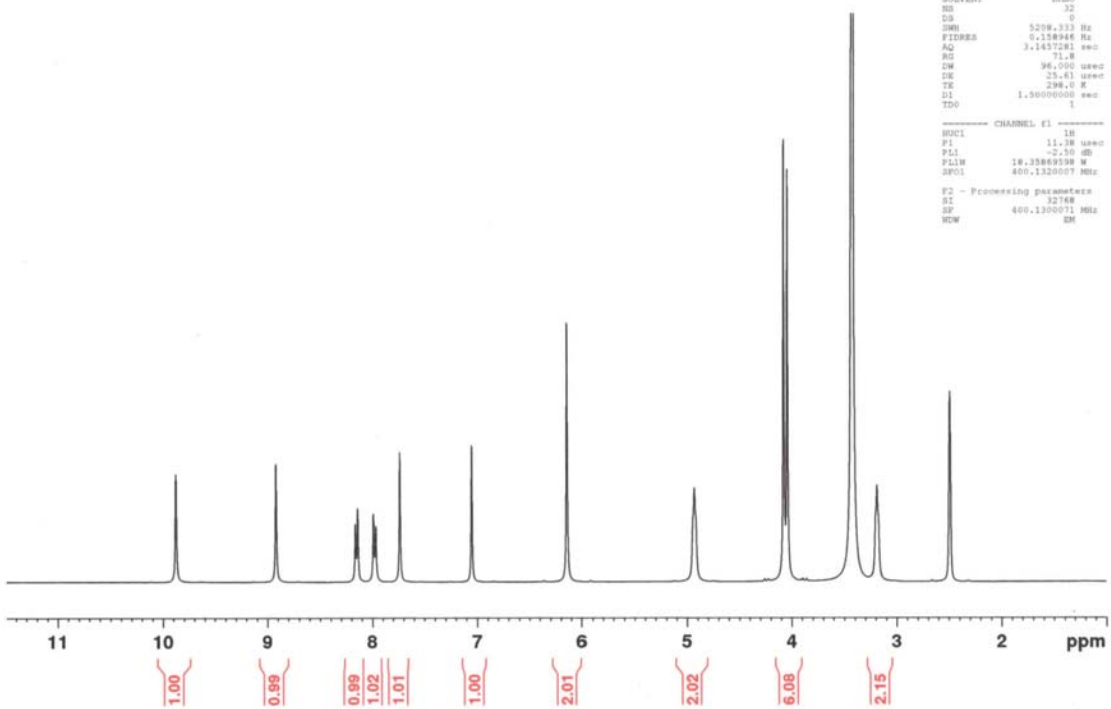
Michael Robil

Michael Robil
QA Auditor

09/20/18
09/20/2018
Date

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1H NMR of Berberine HCl
in DMSO
Lot #10854
Colmaric Analytical
400 MHz
09-18-18



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Current Data Parameters
NAME      Sep18-2018-colmaric
EXPNO    1
PROCNO   1

F2 - Acquisition Parameters
Date_    20180918
Time     12:42
INSTRUM  spect
PROBHD   5 mm PABBO BB-
PULPROG  zg30
TD        32768
SOLVENT  DMSO
NS        32
DS        0
SWH       5208.933 Hz
FIDRES    0.138864 Hz
AQ         3.1457281 sec
RG         71.8
DM         96.000 usec
DE         25.61 usec
TE         298.0 K
D1         1.5000000 sec
TDO        1

----- CHANNEL f1 -----
NUC1      1H
P1         11.18 usec
PL1        -2.50 dB
PL12       18.33869358 W
SFO1       400.1326007 MHz

F2 - Processing parameters
SI         32768
SF         400.1326007 MHz
WDW        EM
  
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