



LIFTMODE
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CERTIFICATE OF ANALYSIS

Piperine

(Piper nigrum extract)

Material Lot #: 2019041601
Country of Origin: India

Manufacture Date: 01/2019
Expiration Date: 12/2022

Analysis	Claim	Result
Piperine	≥95.0%	95.74%

Test	Specification	Result
Appearance	Off-white to pale yellow powder	Complies
Loss on Drying	≤5.0%	0.28%
Solubility	Insoluble in water and soluble in alcohol	Complies
Pesticide Residue	Meets USP/ICH standard	Complies
Residual Solvents	Meets USP/ICH standard	Complies
Heavy Metals	≤10 ppm	Complies
Lead	≤2.0 ppm	Complies
Arsenic	≤2.0 ppm	Complies
Cadmium	≤1.0 ppm	Complies
Mercury	≤0.1 ppm	Complies
Total Plate Count	≤10,000 cfu/g	Complies
Yeast and mold	<1,000 cfu/g	Complies
E.Coli	Negative	Complies
Salmonella	Negative	Complies
S. aureus	Negative	Complies

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



Colmaric Analyticals, LLC

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

Certificate of Analysis

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

Product Name	Piperine	Product Lot Number	2019041601
Report Date	04/18/2019	Laboratory Number	11764

Description	Method	Result
Identification	¹ H NMR	Conforms
Assay	HPLC	99.4 %
Lead	ICP-MS	0.009 ppm
Arsenic	ICP-MS	<0.001 ppm
Cadmium	ICP-MS	0.009 ppm
Mercury	ICP-MS	0.004 ppm
Total Aerobic Count	Biolumix	<1,000 CFU/g
Yeast and Mold	Biolumix	<100 CFU/g
E. Coli	Biolumix	Absent
Coliform	Biolumix	<10 CFU/g
Salmonella	Biolumix	Absent

Michael Robil

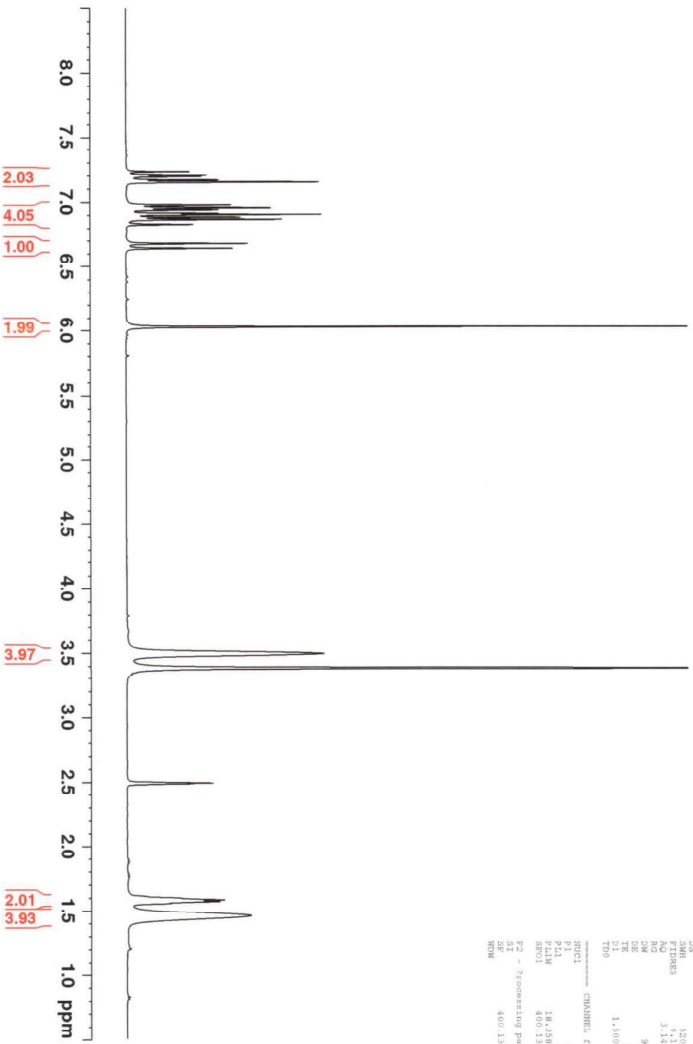
Michael Robil
QA Auditor

04/18/19

04/18/2019
Date

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**¹H NMR of Pipertrine
in DMSO
Lot # 11746
Colmaric Analytical
400 MHz**



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Current Data Parameters
=====
EXNO    1      Acq1-213-01.nmr
PROCNO   1
F2 - Acquisition Parameters
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Date_   201111
Time    11:12
INSTRUM  spect
PROBHD   5 mm BBO, spect
PULPROG zgpg30
SOLVENT  DMSO
NS       32
DS       2
SWH      12484.312 Hz
AQ       3.1457281 sec
RG       662.118
AQ       3.1457281 sec
SR       254.61
SI       1.0000000 sec
TD0      1
=====
Channel F1 Parameters
-----
P1      11.38 usec
P1LW   18.0562428 dB
SFO1    400.1320007 MHz
F2 - Processing parameters
-----
SI       32768
SF       400.1320007 MHz
WDW      EM
  
```