



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

newmind@newmind.com
www.newmind.com

CERTIFICATE OF ANALYSIS

Sunifiram

(1-benzoyl-4-propanoylpiperazine)

Material Lot #: 20160307 Manufacture Date: 03/09/2016
Country of Origin: China Retesting Date: 03/08/2018

Analysis	Claim	Result
Sunifiram	>99.0%	>99.68%

Test	Claim	Result
Appearance	Off-white white crystalline powder.	Conforms
Loss on Drying	≤ 1.0%	0.2%
Melting Point	93.0°-97.0°	
Related Substances		
Largest Single Impurity	≤ 0.1%	0.08%
Total Impurity	≤ 0.5%	0.32%

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




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


newmind@newmind.com
www.newmind.com

CERTIFICATE OF ANALYSIS

Product Name	Sunifiram	Client Lot Number	5/1/17 Sample
Report Date	05/22/17	Laboratory #	8663

Test	Method	Result
Identification	II-NMR	Conforms
Assay	HPLC-UV	101.6%
Lead	ICP-MS USP <730>	1.005 ppm
Arsenic	ICP-MS USP <730>	<0.001 ppm
Cadmium	ICP-MS USP <730>	<0.001 ppm
Mercury	ICP-MS USP <730>	<0.001 ppm

Collin Thomas 
Laboratory Manager

05/22/2017 
Date

1H NMR of Sunifiram
in DMSO
Lot # 8663
Colmaric Analytical
400 MHz

Current Data Parameters
NAME: May17-2017-sunifiram
EXPNO: 2
PROCNO: 1

F2 - Acquisition Parameters
Date_: 20170517
Time: 17.03
INSTRUM: spect
PROBHD: 5 mm PABBO ED-
PULPROG: zg30
TD: 32768
SOLVENT: DMSO
NS: 32
DS: 0
SHE: 8268.133 Hz
FIDRES: 0.152914 Hz
AQ: 3.2457201 sec
RG: 114
DE: 95.000 umm
DC: 25.43 umm
TE: 298.0 K
D1: 1.51000000 sec
ED0: 1

----- CHANNEL f1 -----
NUC1: 1H
P1: 11.38 umm
PL1: -2.50 dB
PL12: 18.31805508 W
SFO1: 400.1426007 MHz

F2 - Processing parameters
SI: 32768
SF: 400.1404008 MHz
NM: 818

