



INDOFINE Chemical Company, Inc.

121 Stryker Lane, Bldg. 30, Suite 1 • Hillsborough, NJ 08844 • U.S.A.

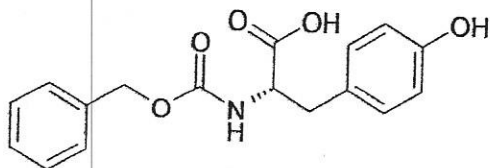
Phone: (908) 359-6778 • FAX: (908) 359-1179

website: www.indofinechemical.com

e-mail: chemical@indofinechemical.com

CERTIFICATE OF ANALYSIS

<u>Catalog Number:</u>	04-2615
<u>Product Name:</u>	Z-TYROSINE
<u>Cas Number:</u>	[1164-16-5]
<u>Lot Number:</u>	1410515
<u>Chemical Formula:</u>	C ₁₇ H ₁₇ NO ₅
<u>Molecular Weight:</u>	315.33
<u>Melting Point:</u>	90-99°C
<u>Appearance:</u>	White powder
<u>Moisture(KF):</u>	0.35%
<u>Loss on drying:</u>	0.18%
<u>Solubility:</u>	Soluble in chloroform
<u>NMR Spectrum:</u>	Enclosed (conforms to the structure)
<u>Storage:</u>	Store in a cool, dry place
<u>Purity(HPLC):</u>	98.45%





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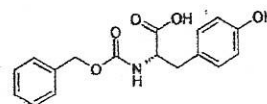
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HPLC ANALYSIS

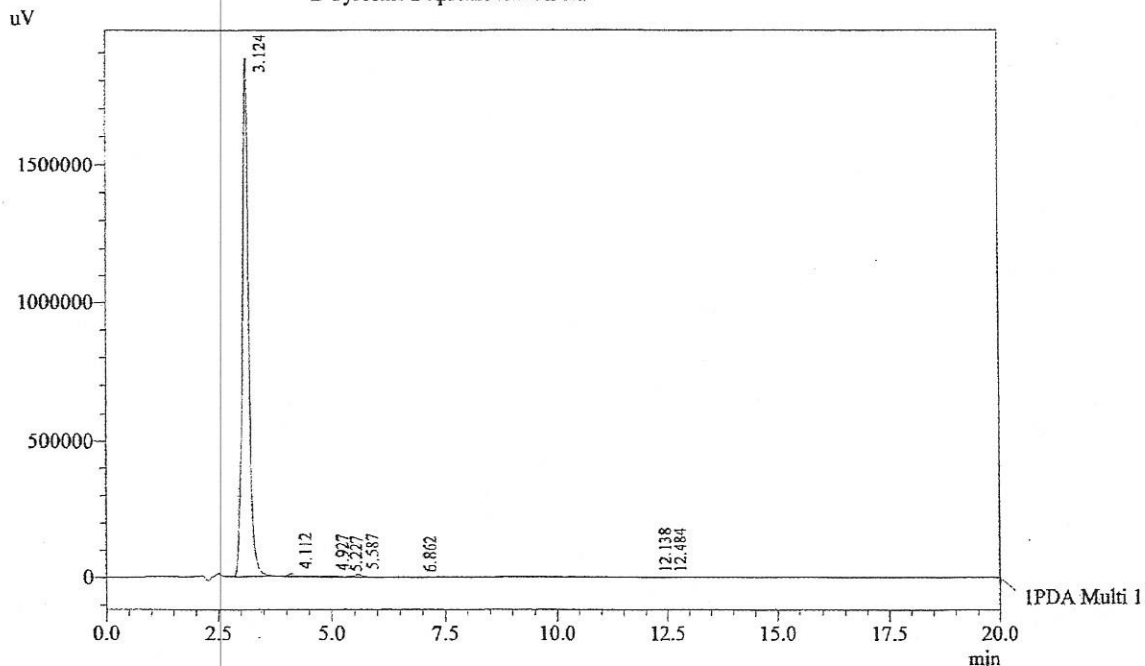
Acquired by : Sanjeev
Sample Name : Z-Tyrosine
Sample ID : BBML (UNIT-2)
Injection Volume : 20 uL
Data Filename : 270414K.lcd
Method Filename : Linear Isocratic.M.lcm

Catalog No.: 04-2615
Product Name: Z-Tyrosine
Lot No.: 1410515



Column : LUNA C-18(2), (250mm x4.6mm 5.0µ)
Flow : 1.000 mL/min.
Mobile Phase : A(30% of 0.05% TFA in water) B(70% of Acetonitrile)

Chromatogram
Z-Tyrosine D:\promonence\Data



1 PDA Multi 1 / 220nm 4nm

PeakTable

PDA Ch1 220nm 4nm

Peak#	Name	Ret. Time	Area	Area %	Relative Retention Time
1	Z-Tyrosine	3.124	17906202	98.45	1.00
2	RT:4.112	4.112	107208	0.59	1.32
3	RT:4.927	4.927	53490	0.29	1.58
4	RT:5.227	5.227	4292	0.02	1.67
5	RT:5.587	5.587	109332	0.60	1.79
6	RT:6.862	6.862	1918	0.01	2.20
7	RT:12.138	12.138	1943	0.01	3.89
8	RT:12.484	12.484	4623	0.03	4.00
Total			18189006	100.00	



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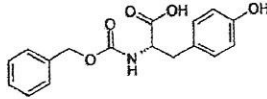
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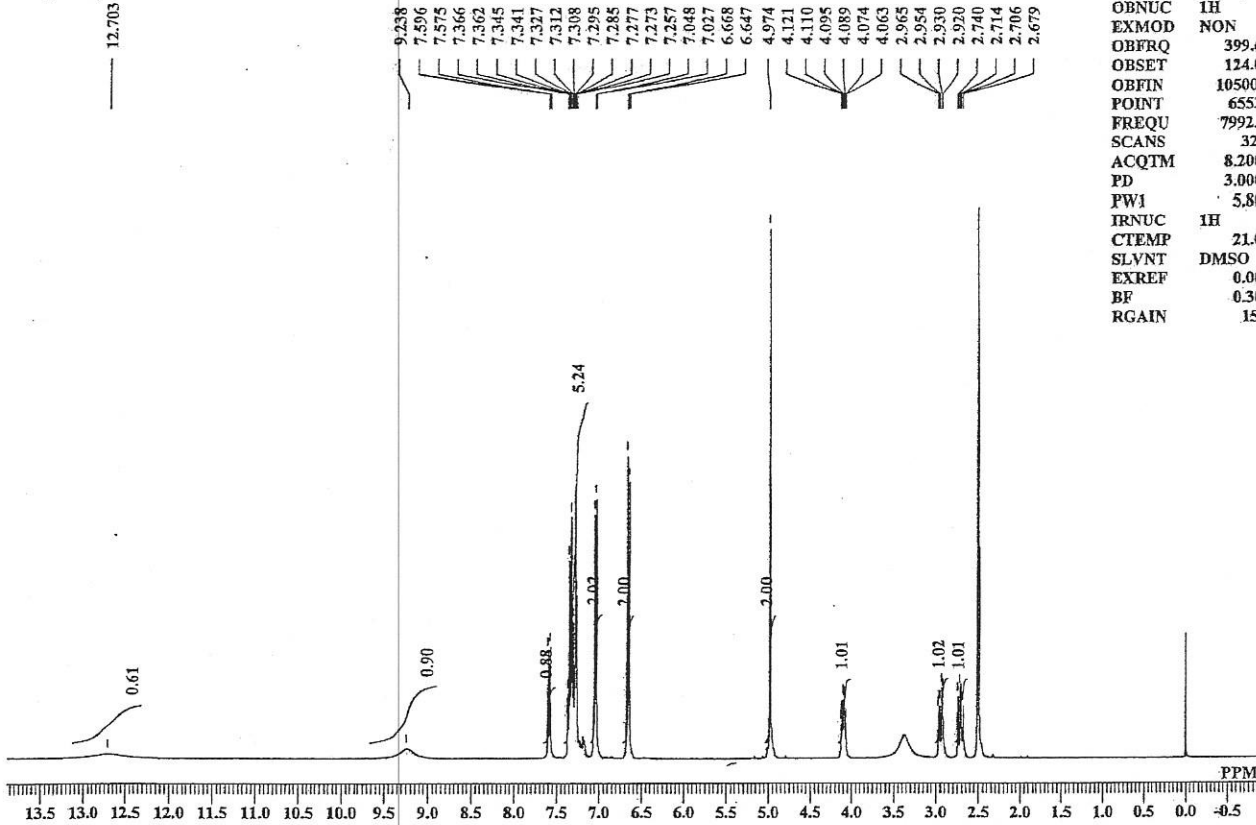
e-mail: chemical@indofinechemical.com

Catalog No.: 04-2615
Product Name: Z-Tyrosine
Lot No.: 1410515



Z-TYR-OH 1H NMR DMSO-d6

Analysed By: MAK



DFILE Z-TYR-OH 1H.als
 COMNT Z-TYR-OH 1H NMR DMSO-d
 DATIM Sat Apr 26 22:06:07 2014
 OBNUC 1H
 EXMOD NON
 OBFREQ 399.65 MHz
 OBSET 124.00 KHz
 OBFIN 10500.00 Hz
 POINT 65536
 FREQU 7992.01 Hz
 SCANS 32
 ACQTM 8.2002 sec
 PD 3.0000 sec
 PW1 5.80 usec
 IRNUC 1H
 CTEMP 21.0 c
 SLVNT DMSO
 EXREF 0.00 ppm
 BF 0.30 Hz
 RGAIN 15



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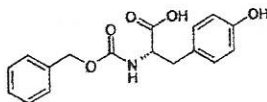
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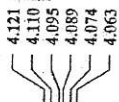
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Catalog No.: 04-2615
Product Name: Z-Tyrosine
Lot No.: 1410515

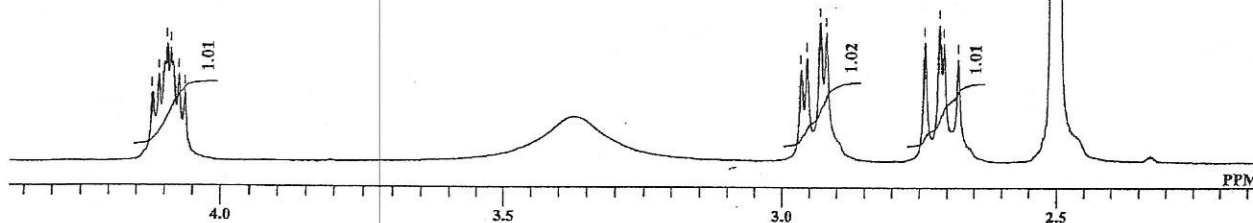


Z-TYR-OH 1H NMR DMSO-d₆

Analysed By: MAK



DFILE	Z-TYR-OH 1H.als
COMNT	Z-TYR-OH 1H NMR DMSO-d
DATIM	Sat Apr 26 22:06:07 2014
OBNUC	1H
EXMOD	NON
OBFRQ	399.65 MHz
OBSET	124.00 KHz
OBFIN	10500.00 Hz
POINT	65536
FREQU	7992.01 Hz
SCANS	32
ACQTM	8.2002 sec
PD	3.0000 sec
PWI	5.80 usec
IRNUC	1H
CTEMP	21.0 c
SLVNT	DMSO
EXREF	0.00 ppm
BF	0.30 Hz
RGAIN	15





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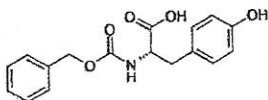
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Lot No.: 1410515



Z-TYR-OH 1H NMR DMSO-d6

Analysed By: MAK

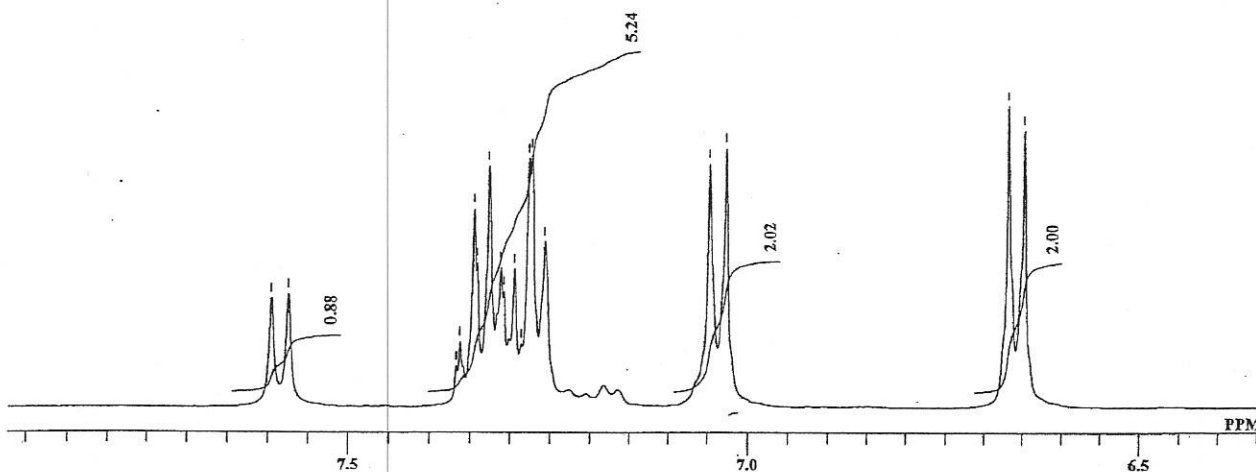
7.596
7.575

7.366
7.362
7.345
7.341
7.327
7.312
7.308
7.295
7.285
7.277
7.273
7.257

7.048
7.027

6.668
6.647

DFILE	Z-TYR-OH 1Hals
COMNT	Z-TYR-OH 1H NMR DMSO-d
DATIM	Sat Apr 26 22:06:07 2014
OBNUC	1H
EXMOD	NON
OBFRQ	399.65 MHz
OBSET	124.00 KHz
OBFTN	10500.00 Hz
POINT	65536
FREQU	7992.01 Hz
SCANS	32
ACQTM	8.2002 sec
PD	3.0000 sec
PW1	5.80 usec
IRNUC	1H
CTEMP	21.0 c
SLVNT	DMSO
EXREF	0.00 ppm
BF	0.30 Hz
RGAIN	15





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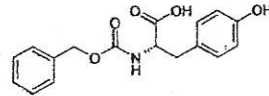
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Product Name: Z-Tyrosine
Lot No.: 1410515



Sample Information
Sample Name : Z-TYR-OH
Batch No : -
Data File : Z-TYR-OH.lcd
Method File : Test1(ESI).lcm
Acquired by : KKiran
Date Acquired : 4/26/2014 17:39:22

MS Spectrum Graph

