

# Certificate of Analysis

## Dicyandiamide

### PurCert Standard

(Secondary Reference Standard)

<b>Product Number</b>	PSR42117	<b>CAS No.</b>	461-58-5
<b>Brand</b>	PureSynth	<b>Lot No.</b>	D42117T1023
<b>Molecular Formula</b>	C <sub>2</sub> H <sub>4</sub> N <sub>4</sub>	<b>Date of Mfg.</b>	Oct.2023
<b>Molecular Weight</b>	84.08 g/mol	<b>Date of Exp.</b>	Sep.2027

Test	Specification	Result
Description	White crystal	White crystal
Assay (HPLC)	≥ 99.5 %	99.90 %
Water (By KF)	NMT 0.500 %	0.384 %
Identification by <sup>1</sup> H NMR	Conforms to structure	Conforms
Identification by MS	Conforms to molecular mass	Conforms
Identification by IR	Conforms to structure	Conforms

**\*Traceable to USP Reference Standard 1396310, Lot no: R072Y0**

**Storage Condition:** Store at a temperature of 8 to 25°C and keep the container tightly closed.

**Remark:** The batch complies with the prescribed quality of the above specification.

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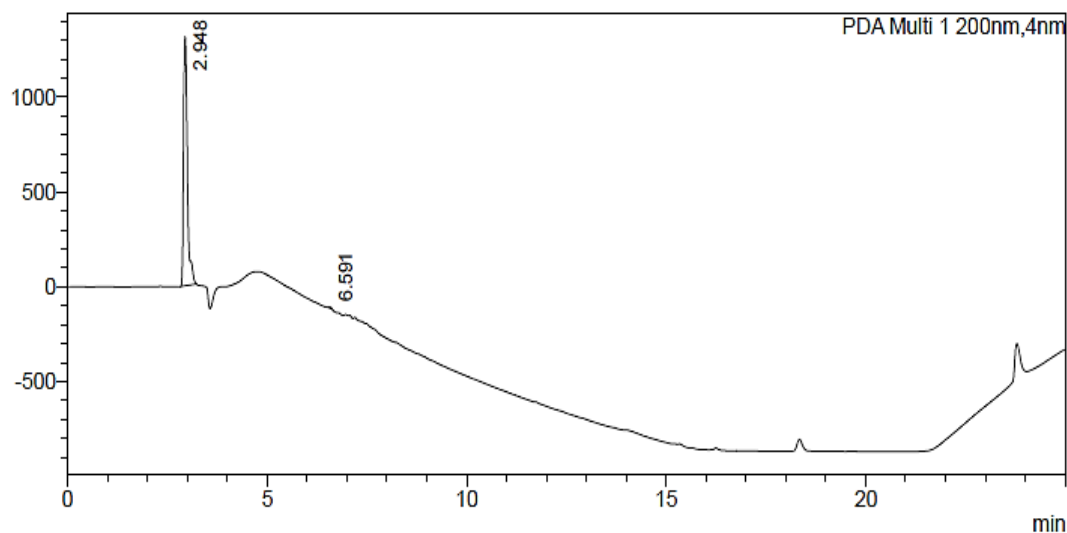
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## Assay by HPLC

Sample Name : DICYANDIAMIDE-D42117T1023  
Tray# : 1  
Vial# : 22  
Injection Volume : 5 uL  
Data Filename : AR23000610-DICYANDIAMIDE-D42117T1023.lcd  
Method Filename : FTBOH\_IM.lcm  
Batch Filename : 08\_12\_2023\_01.lcb  
Date Acquired : 12/8/2023 3:22:59 PM  
Date Processed : 12/9/2023 3:28:40 PM

### <Chromatogram>

mAU



Peak#	Ret. Time	Area	Height	Area%
1	2.948	8845934	1313078	99.902
2	6.591	8694	4103	0.098
Total		8854628	1317181	100.000

**Purity by HPLC: 99.90 %**

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## IDENTIFICATION TESTS

### MS Spectrum:

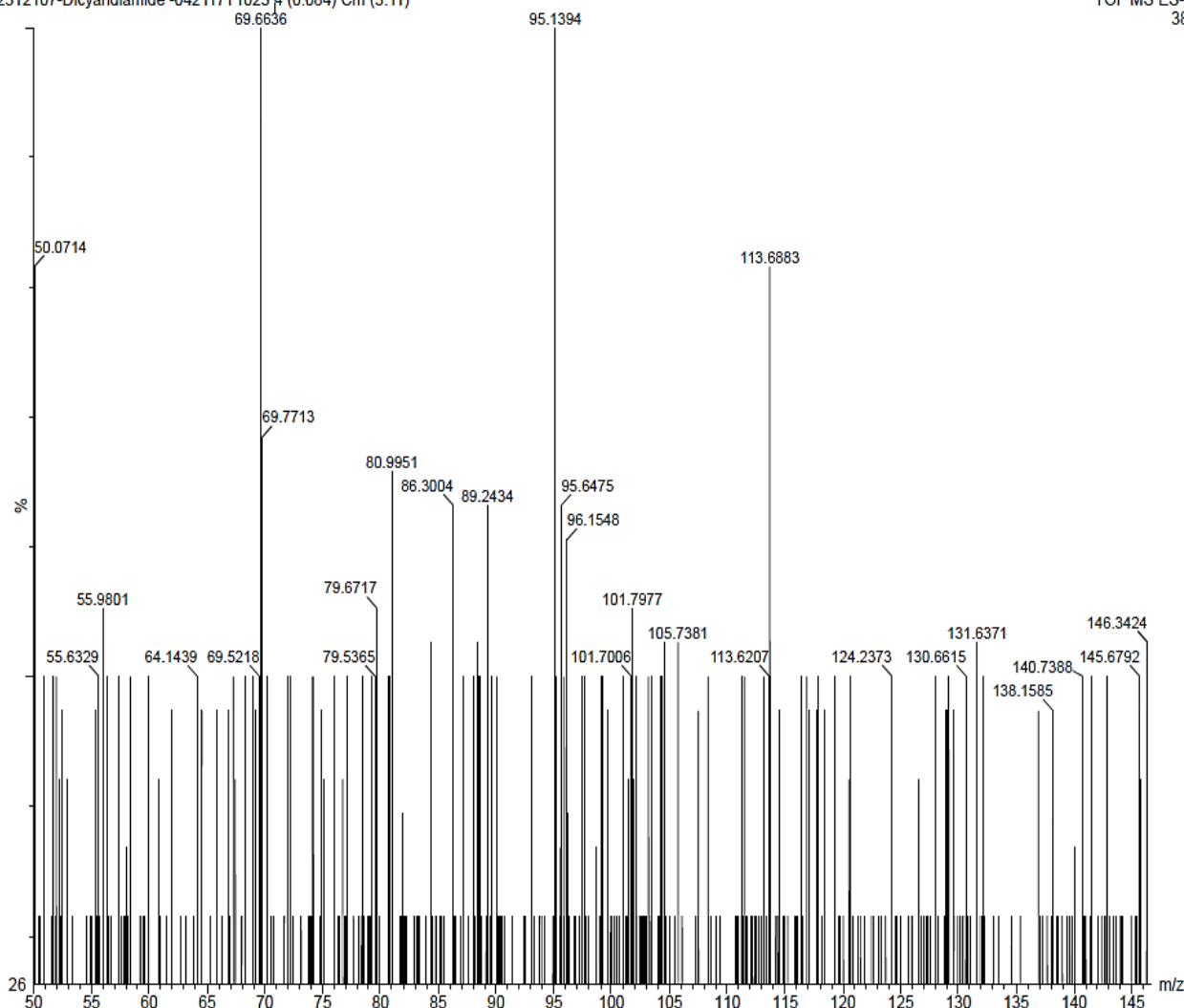
#### Mass by MS:

Product Name: Dicyandiamide

Product Code: PSR42117

2312107-Dicyandiamide -042117T1023 4 (0.084) Cm (3:11)

TOF MS ES-  
38



Identification by MS: Conforms to molecular mass

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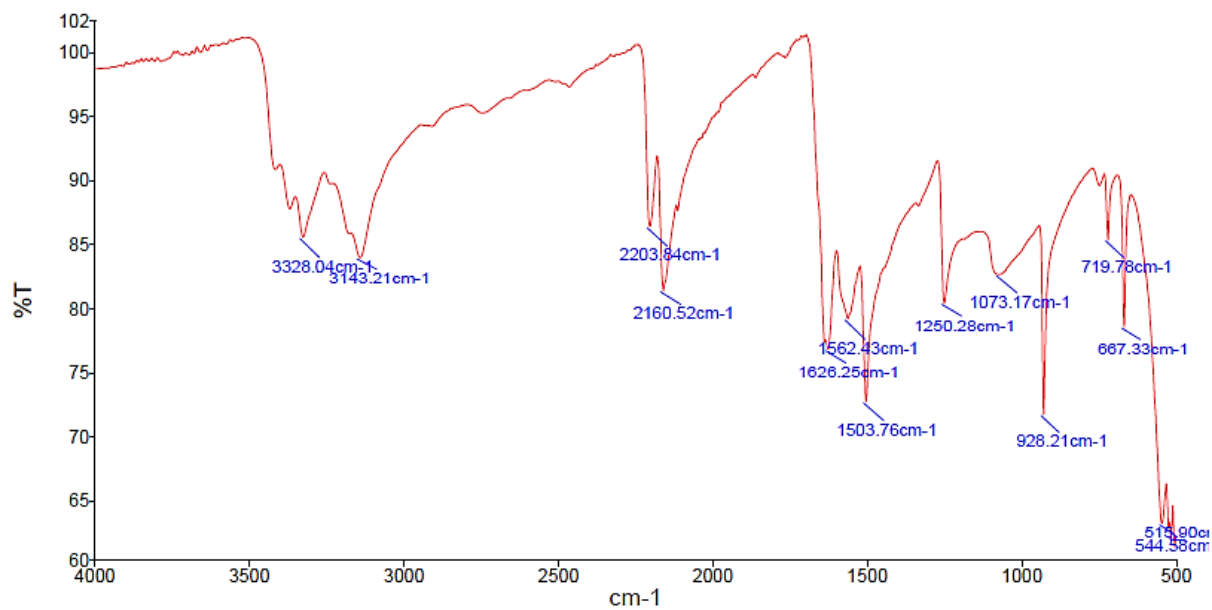
**Infrared spectrum:**

**Product Name: Dicyandiamide**

**Product Code: PSR42117**

Analyst

Date



Source Spectra Results		
Spectrum Name	Number Of Peaks	
AR23000167-Dicyandiamide-D42117T1023_1	14	
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3328.04	85.61
2	3143.21	84.01
3	2203.84	86.44
4	2160.52	81.44
5	1626.25	76.83
6	1562.43	79.23
7	1503.76	72.77
8	1250.28	80.46
9	1073.17	82.68
10	928.21	71.76
11	719.78	85.42
12	667.33	78.58
13	544.58	63.26
14	515.90	61.90

**Identification by IR: Conforms to structure**

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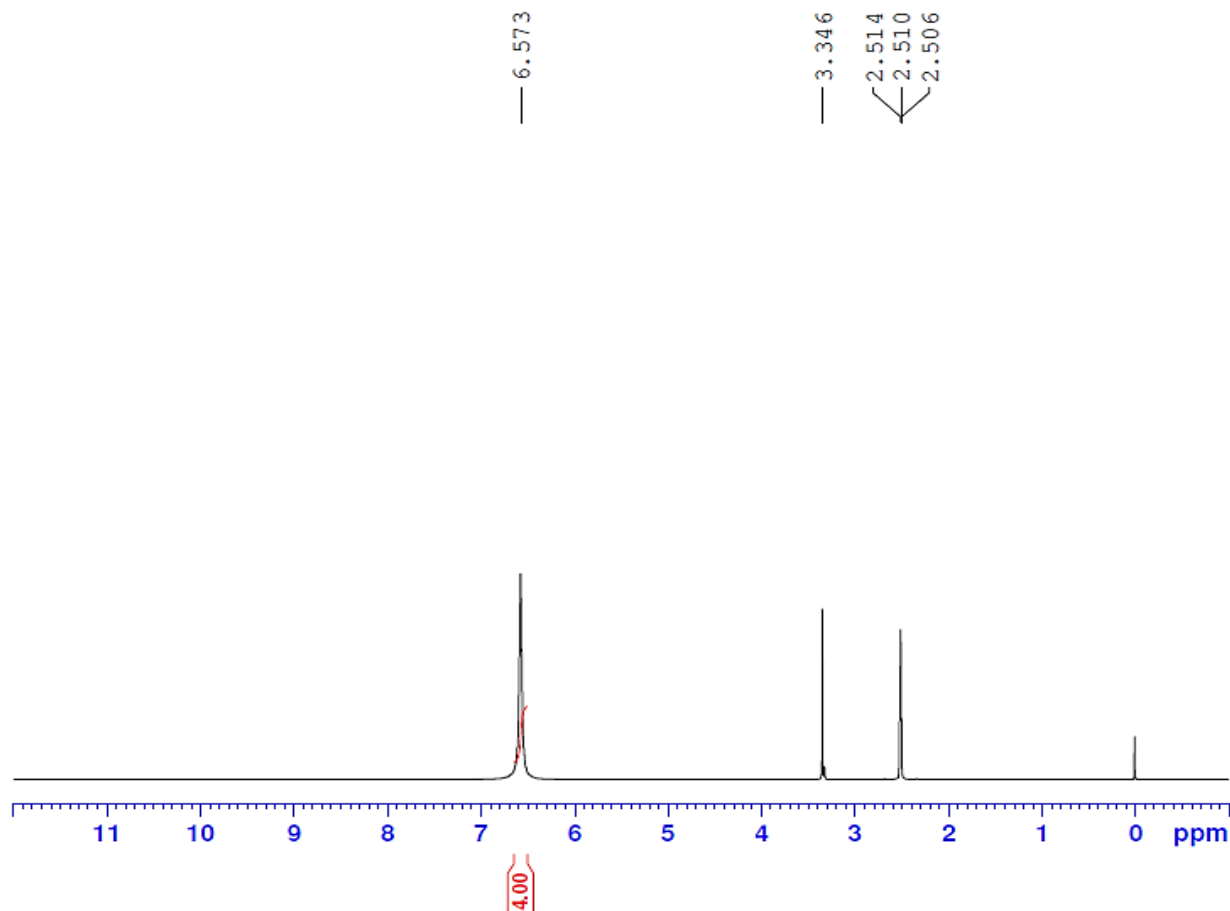
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**<sup>1</sup>H NMR Spectrum:**

**Product Name: Dicyandiamide**

**Product Code: PSR42117**

Dicyandiamide  
B.No-D42117T1023  
1H-NMR in DMSO



Identification by <sup>1</sup>H NMR: Conforms to structure

**Maximum limits of impurities**

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**WATER DETERMINATION**

Method: Karl Fisher titration

Water Content (PSR42117) = **0.3840 %**

Approved By  
Head - Technical

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