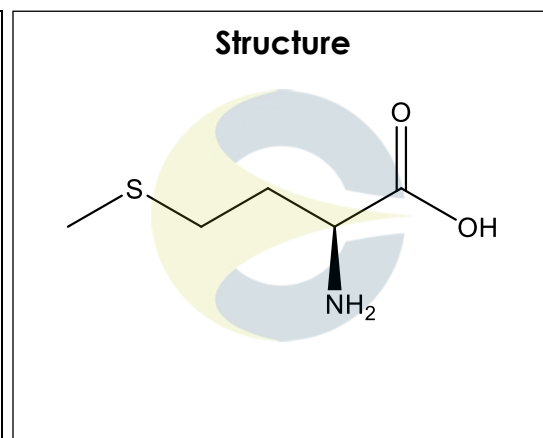


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PRODUCT NAME	L-Methionine
PART NUMBER	00013255
STANDARD TYPE	Primary (P)
LOT NUMBER	00013255-00349
REPORT NUMBER	CDXA-RSS-7995-00
SAMPLE NUMBER	CDXP-18-00349
DATE OF SAMPLE	04/13/2018
DATE OF REPORT	05/16/2018



CHEMICAL NAMES	(S)-2-Amino-4-(methylthio)butanoic acid; Cymethion; S-Methionine; L- α -Amino- γ -methylthiobutyric acid; S-Methyl-L-homocysteine
CHEMICAL FORMULA	C ₅ H ₁₁ NO ₂ S
MOLECULAR WEIGHT (MW)	149.21
CHEMICAL FAMILY	Amino acids
CAS NUMBER	[63-68-3]
EC#(EINECS)	200-562-9
RTECS	PD0457000

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	NA	99.4%
HPLC	CDXA-CPM-375-00	NA	99.5%
NMR	99.1-04-2.0-000122	Conforms to structure	Conforms to structure
Mass Spectrum	99.1-04-2.0-000126	Conforms	Conforms
Residual Solvent	99.1-CDXA-3.0-000621	NA	ND
Water	99.1-04-9.0-000094	NA	0.1%
Appearance	NA	NA	White Powder

ADJUSTED PURITY: 99.4% IS BASED ON (100 - 0.1 WATER - 0.0 SOLVENTS) X 99.5% HPLC

STORAGE CONDITIONS

STORAGE	Room Temperature in a dry place.
EXPIRATION DATE	04/2023 under the above conditions.

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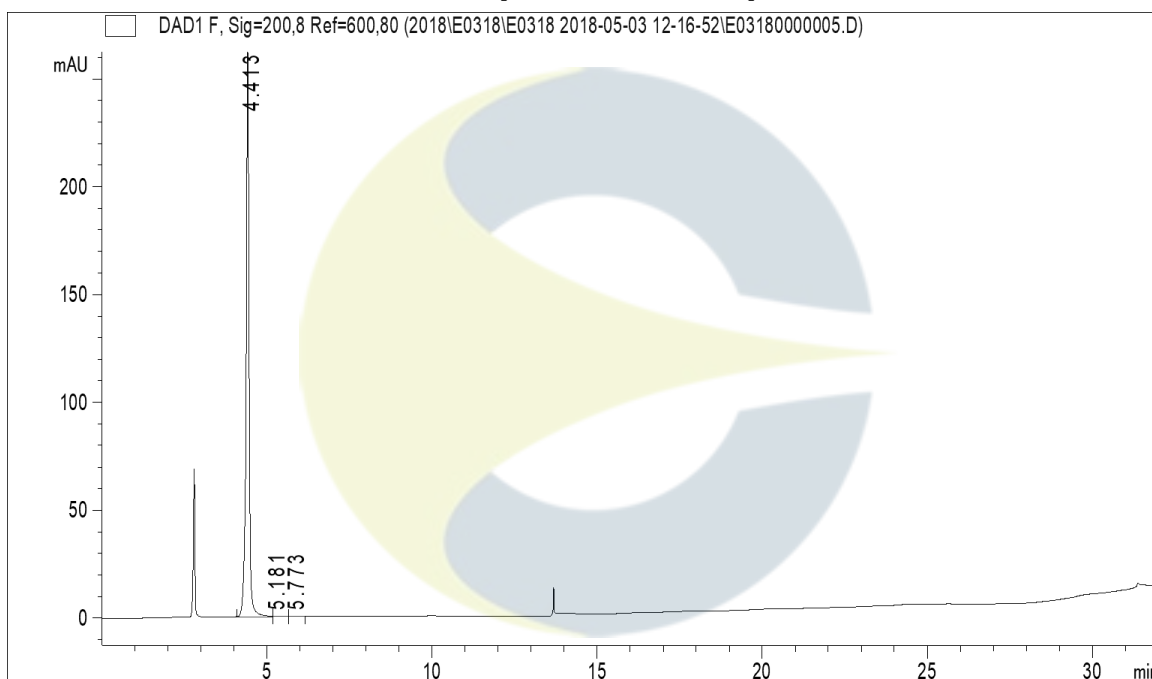
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ANALYTICAL CONDITIONS

INSTRUMENT	AGILENT 1260 HPLC UV-VIS (DAD); AB-SCIEX 6600 TRIPLE TOF
COLUMN	Phenomenex Synergi Hydro-RP 250 x 4.6 mm, 4 µm particle size
MOBILE PHASE	A – 10 mM Potassium phosphate in Ultrapure water, pH 2.9; B - Acetonitrile Isocratic 0% B for 8 minutes, increasing to 20% B over 16 minutes, increasing to 40% B over 4 minutes and holding for 2 minutes. Decrease to 0% B over 2 minutes.
COLUMN TEMP.	30 °C
FLOW RATE	1.0 mL/minute
INJECTION VOL.	2.0 µL
INJECTION CONC.	1.0 mg/mL in 0.05M HCl
DETECTION	200 ± 4 nm

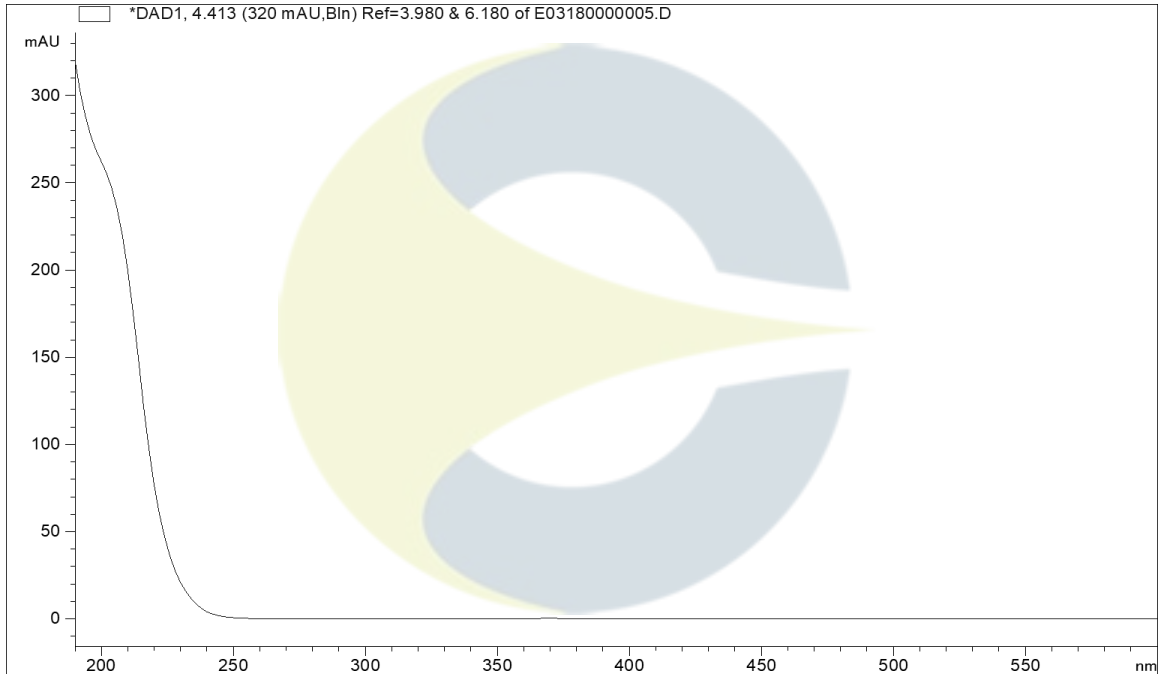
HPLC CHROMATOGRAM OF L-METHIONINE (CDXP-18-00349)



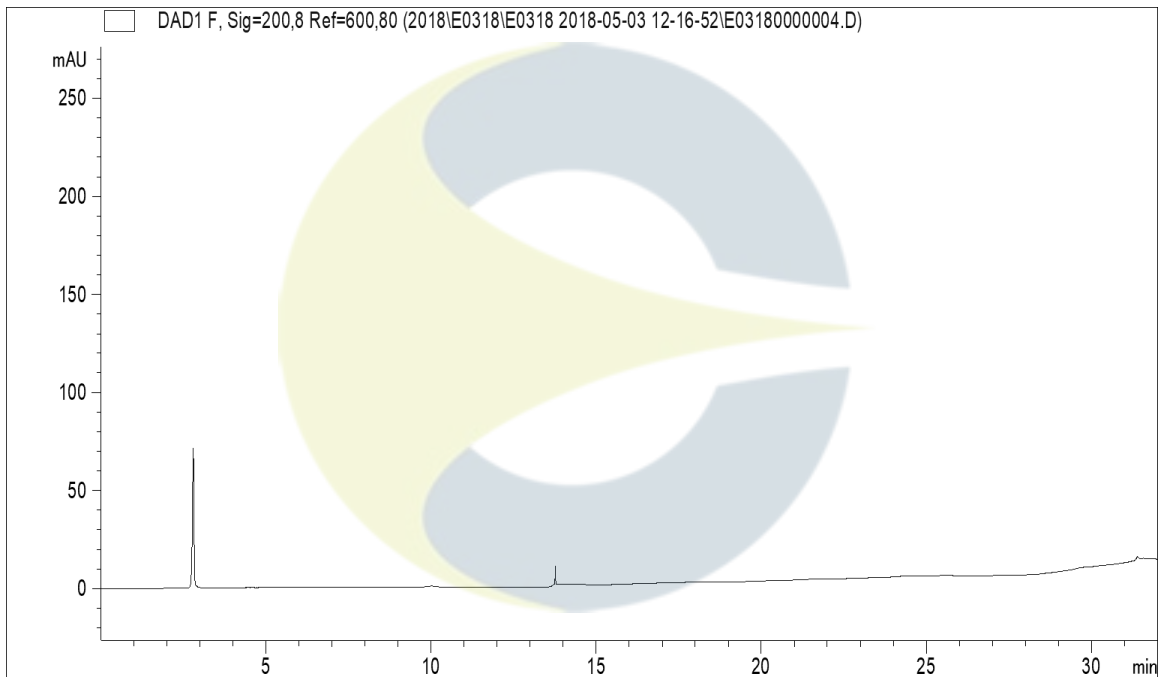
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UV SPECTRUM AT RT = 4.4 MINUTES

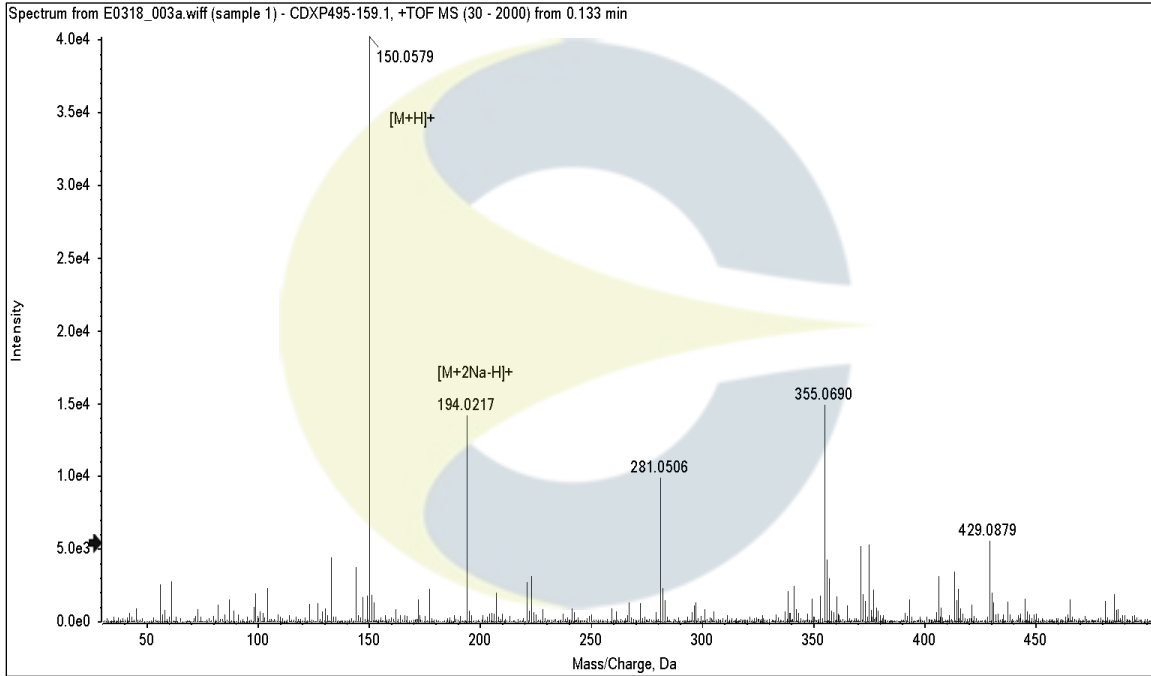


HPLC CHROMATOGRAM OF DILUENT BLANK

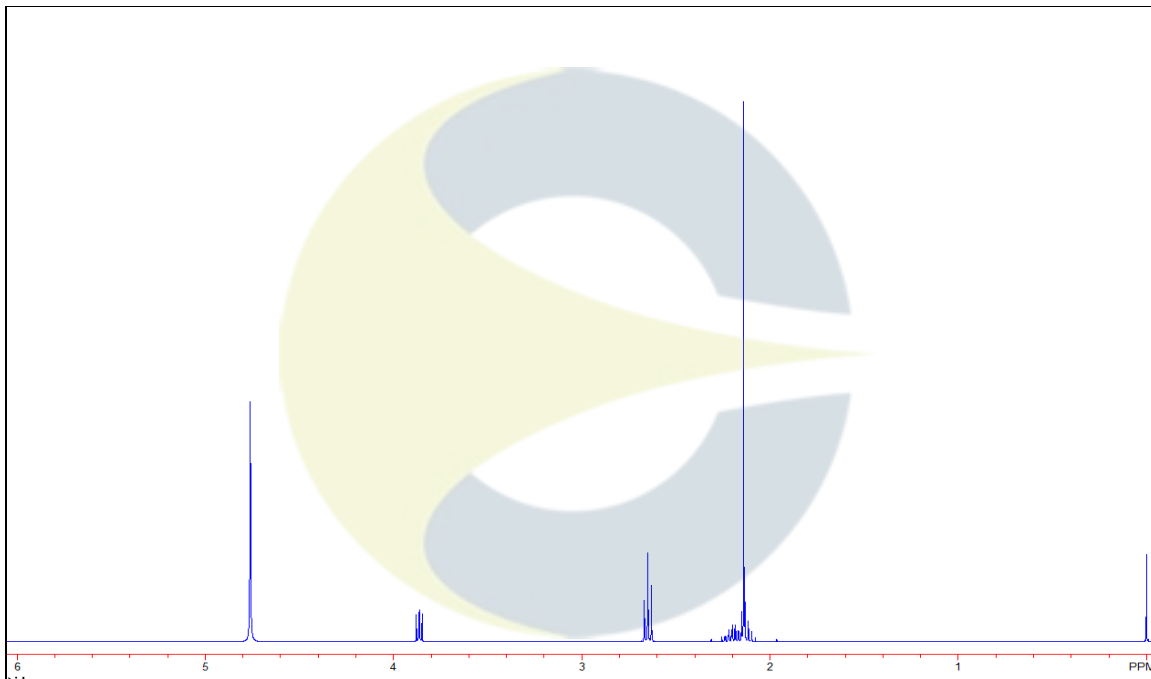


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MASS SPECTRUM OF L-METHIONINE (CDXP-18-00349)

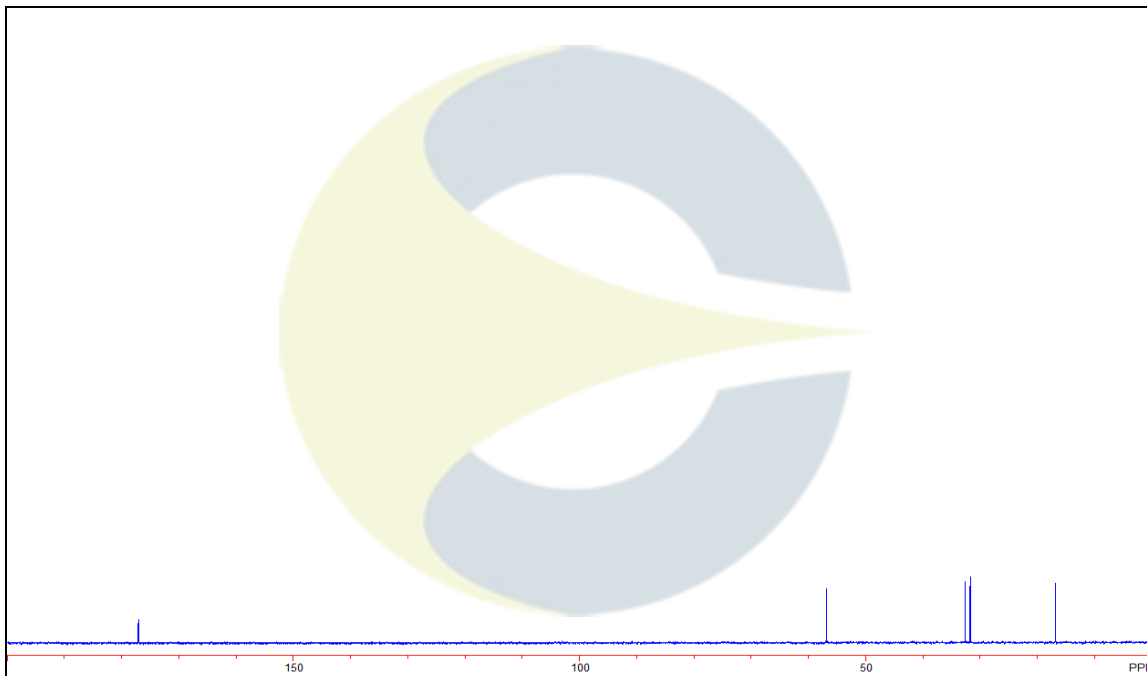


¹H-NMR SPECTRUM OF L-METHIONINE (CDXP-18-00349) IN D₂O



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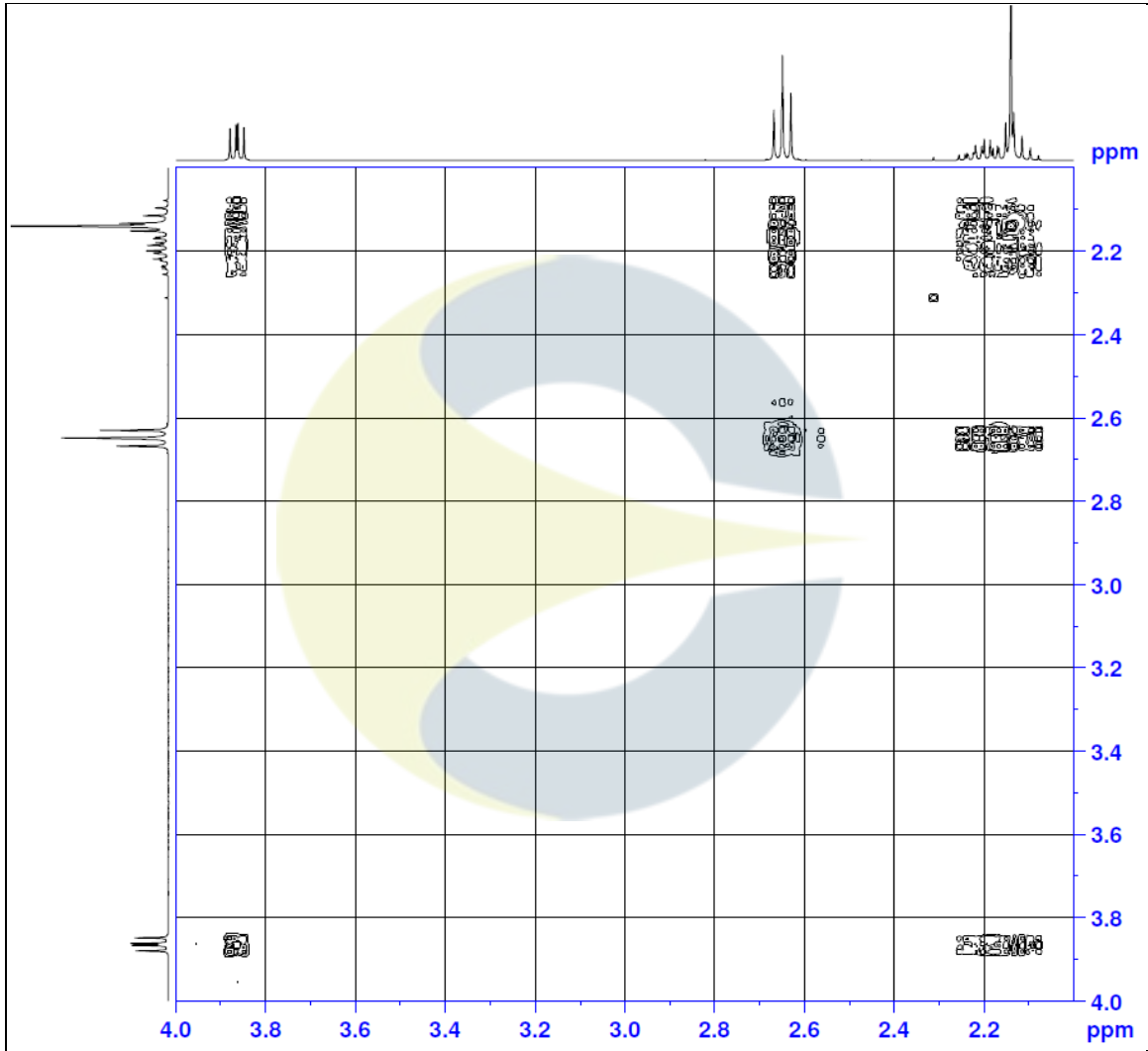
¹³C-NMR SPECTRUM L-METHIONINE (CDXP-18-00349) IN D₂O



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COSY-NMR SPECTRUM OF L-METHIONINE (CDXP-18-00349) IN D₂O



REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	05/16/2018	New report

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