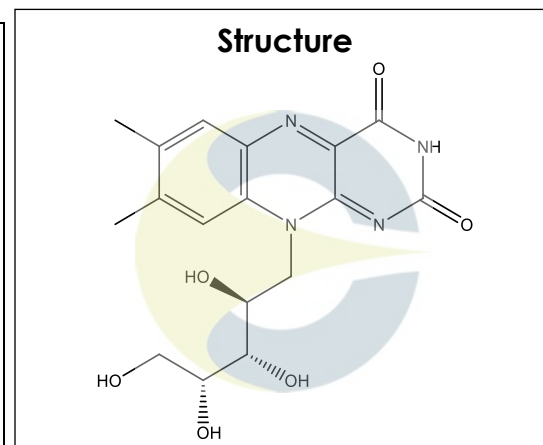


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PRODUCT NAME	Vitamin B2
PART NUMBER	00022720
STANDARD TYPE	Primary (P)
LOT NUMBER	00022720-TPH
REPORT NUMBER	CDXA-RSS-8709-00
SAMPLE NUMBER	CDXP-19-00645
DATE OF SAMPLE	10/23/2019
DATE OF REPORT	11/22/2019



CHEMICAL NAMES	1-Deoxy-1-(3,4-dihydro-7,8-dimethyl-2,4-dioxobenzo[g]pteridin-10(2H)-yl)-D-ribose; Riboflavine; Beflavin; Flavaxin; Lactoflavine; Riboflavin
CHEMICAL FORMULA	C ₁₇ H ₂₀ N ₄ O ₆
MOLECULAR WEIGHT (MW)	376.36
CHEMICAL FAMILY	Vitamins
CAS NUMBER	[83-88-5]
EC#(EINECS)	201-507-1
RTECS	VJ1400000

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	NA	97.9%
HPLC	CDXA-CPM-057-00	NA	97.9%
NMR	0.700.12.4	Conforms to structure	Conforms to structure
Mass Spectrum	0.700.12.27	Conforms	Conforms
Residual Solvent*	TM6740 V1	NA	ND
Water	0.700.12.37	NA	ND
Appearance	NA	NA	Yellow/Orange powder

*Testing performed at an ISO 17025 accredited subcontracted laboratory.

ADJUSTED PURITY: 97.9% IS BASED ON (100 - 0.0 SOLVENTS - 0.0 WATER) X 97.9% HPLC

STORAGE CONDITIONS

STORAGE	Room Temperature in a dry place.
EXPIRATION DATE	10/2024 under the above conditions.

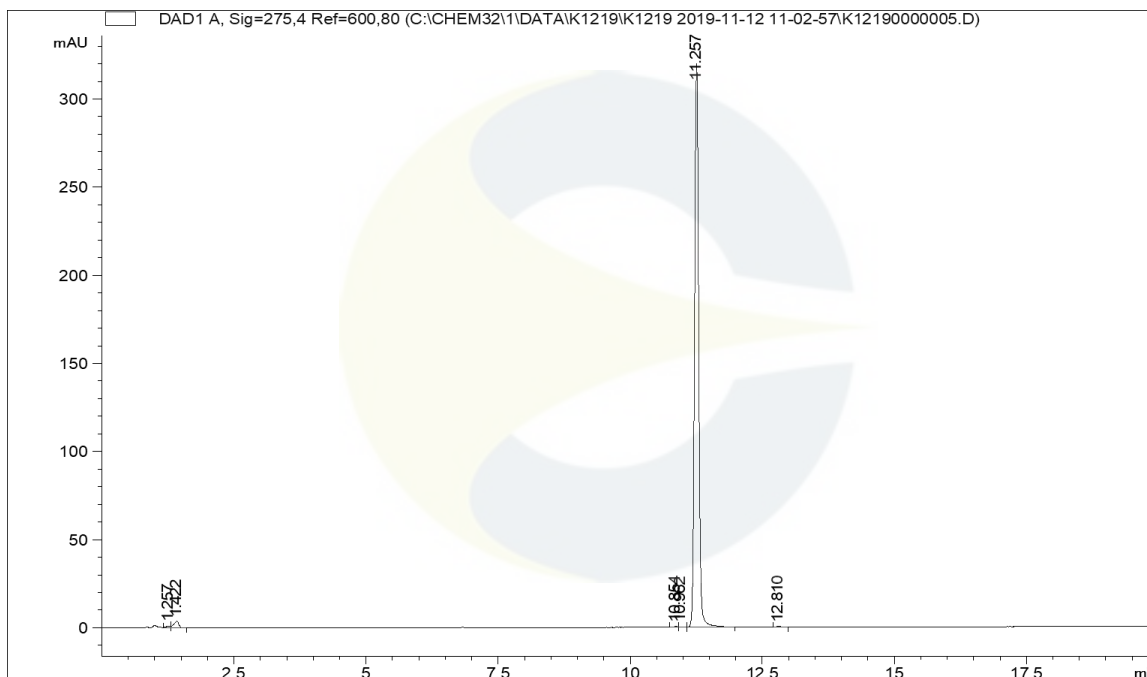
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ANALYTICAL CONDITIONS

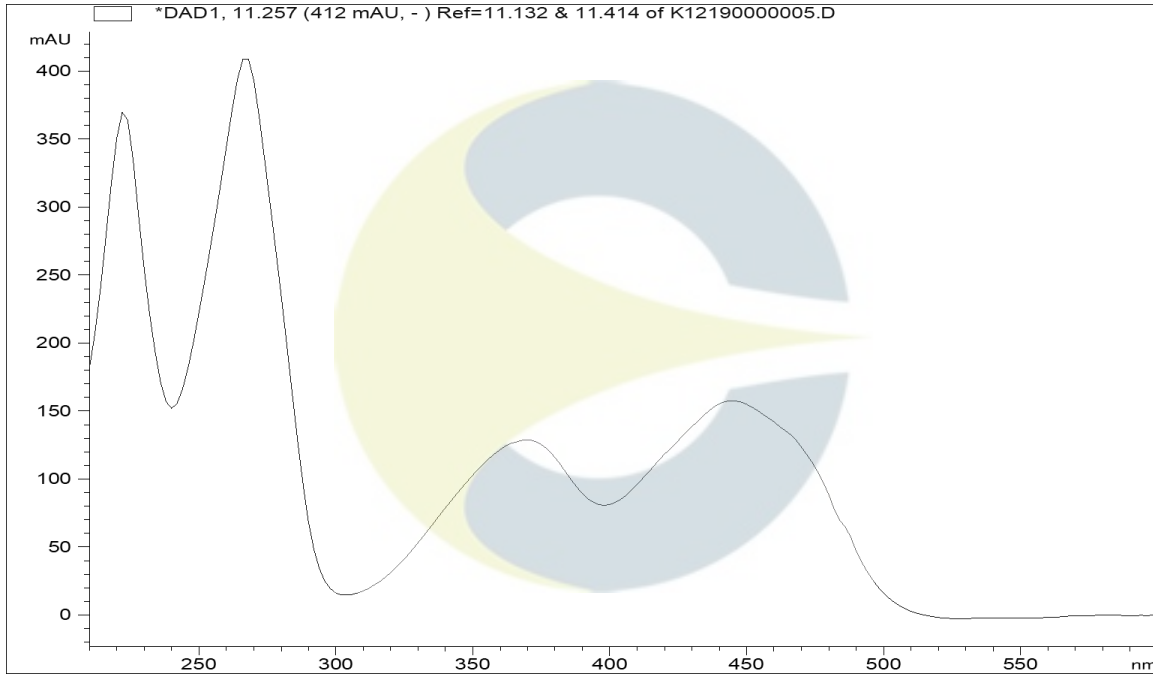
INSTRUMENT	AGILENT 1260 HPLC UV-VIS (DAD); AB-SCIEX 6600 TRIPLE TOF
COLUMN	Phenomenex Synergi Hydro RP – 150 x 3.0 mm, 4µm particle size
MOBILE PHASE	A: High-purity water; B: Acetonitrile 1% B for 2 minutes, increasing to 60% over the next 15 minutes, hold for 2.9 minutes, then decrease to 1% over 0.1 minutes.
COLUMN TEMP.	30 °C
FLOW RATE	0.4 mL/minute
INJECTION VOL.	0.2 µL
INJECTION CONC.	1.1 mg/mL in 1 M NaOH (aq)
DETECTION	275 ± 2 nm

HPLC CHROMATOGRAM OF VITAMIN B2 (CDXP-19-00645)


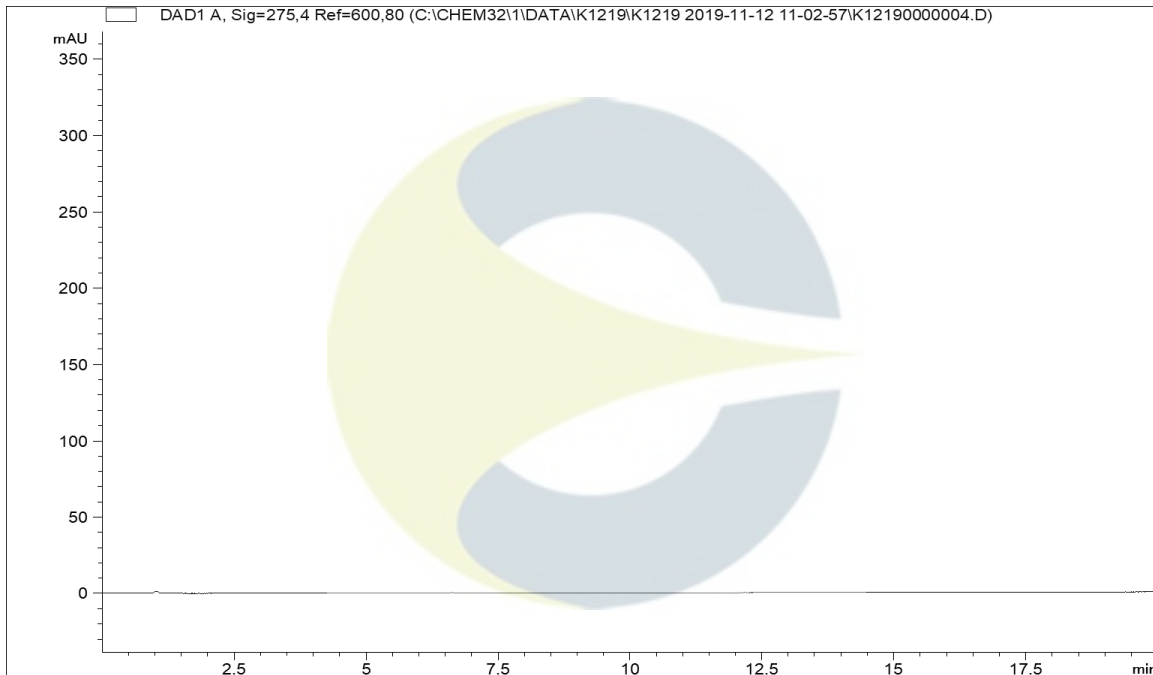
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UV SPECTRUM AT RT = 11.3 MINUTES

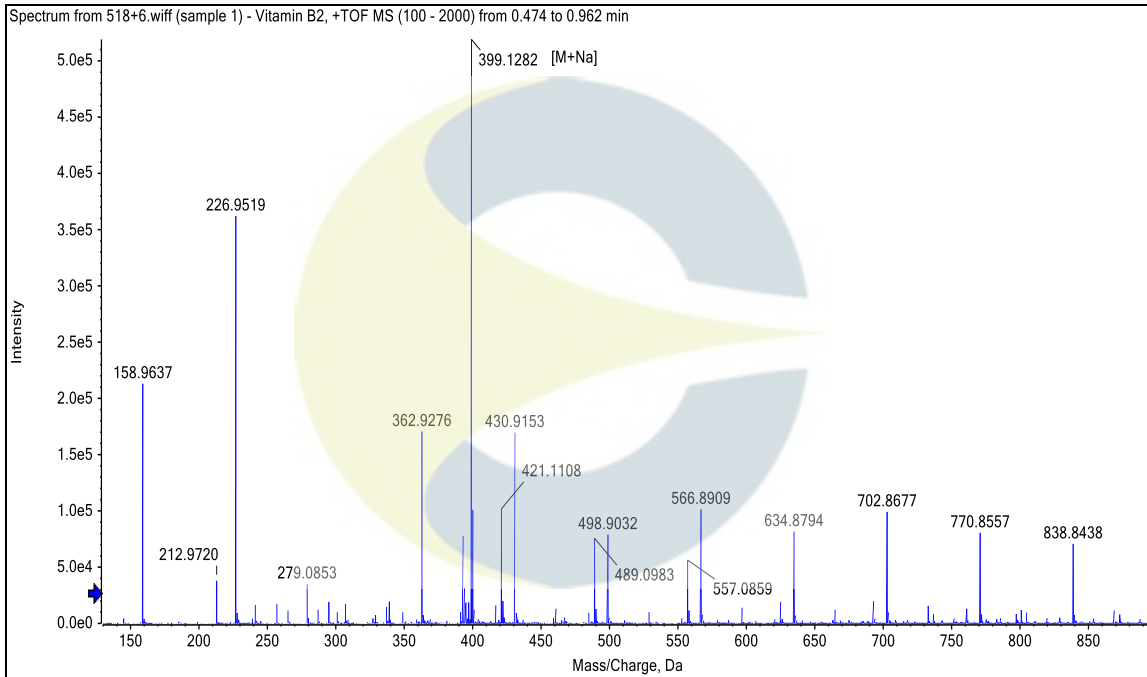


HPLC CHROMATOGRAM OF DILUENT BLANK

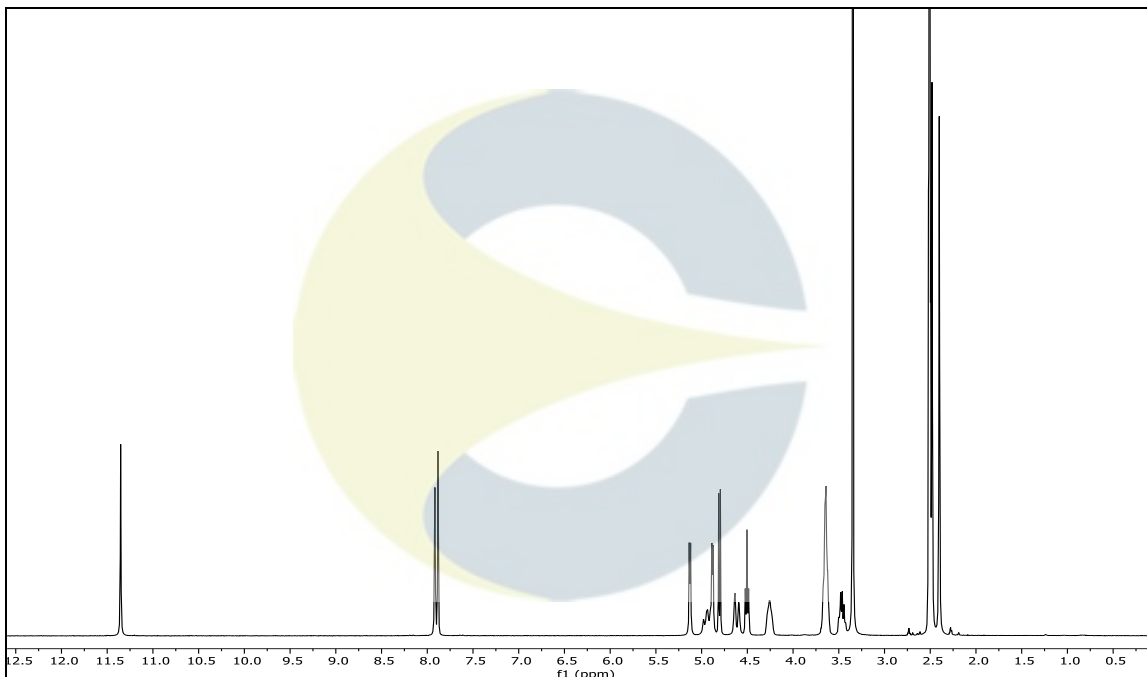


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MASS SPECTRUM OF VITAMIN B2 (CDXP-19-00645)

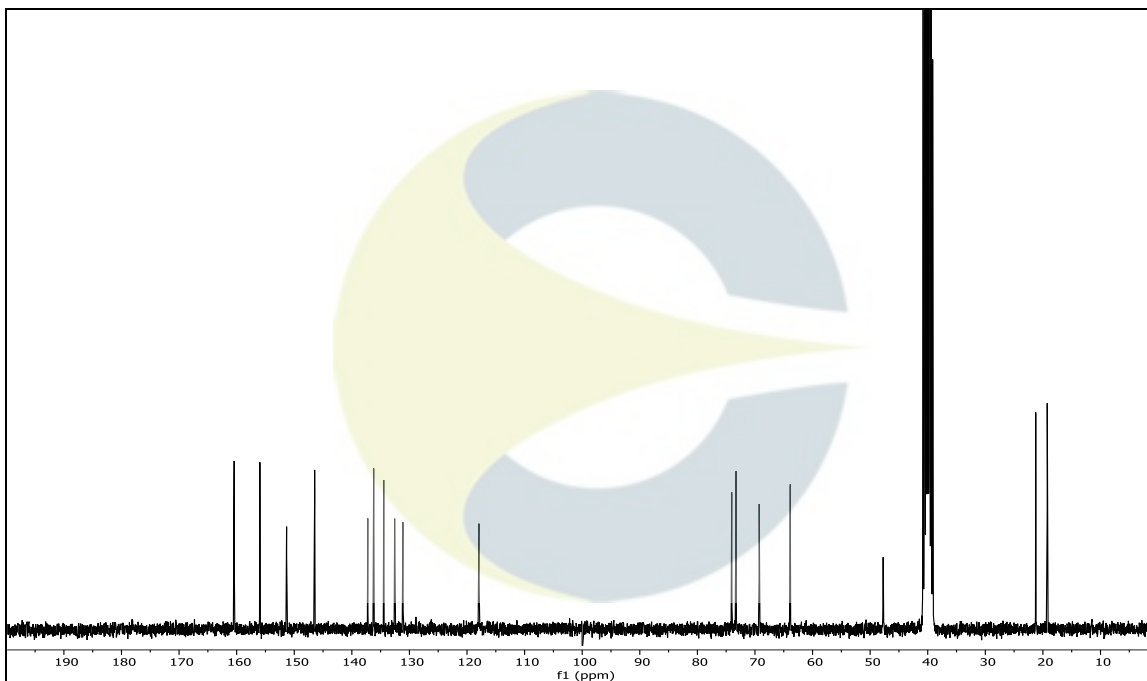


¹H-NMR SPECTRUM OF VITAMIN B2 (CDXP-19-00645) IN DMSO-d₆



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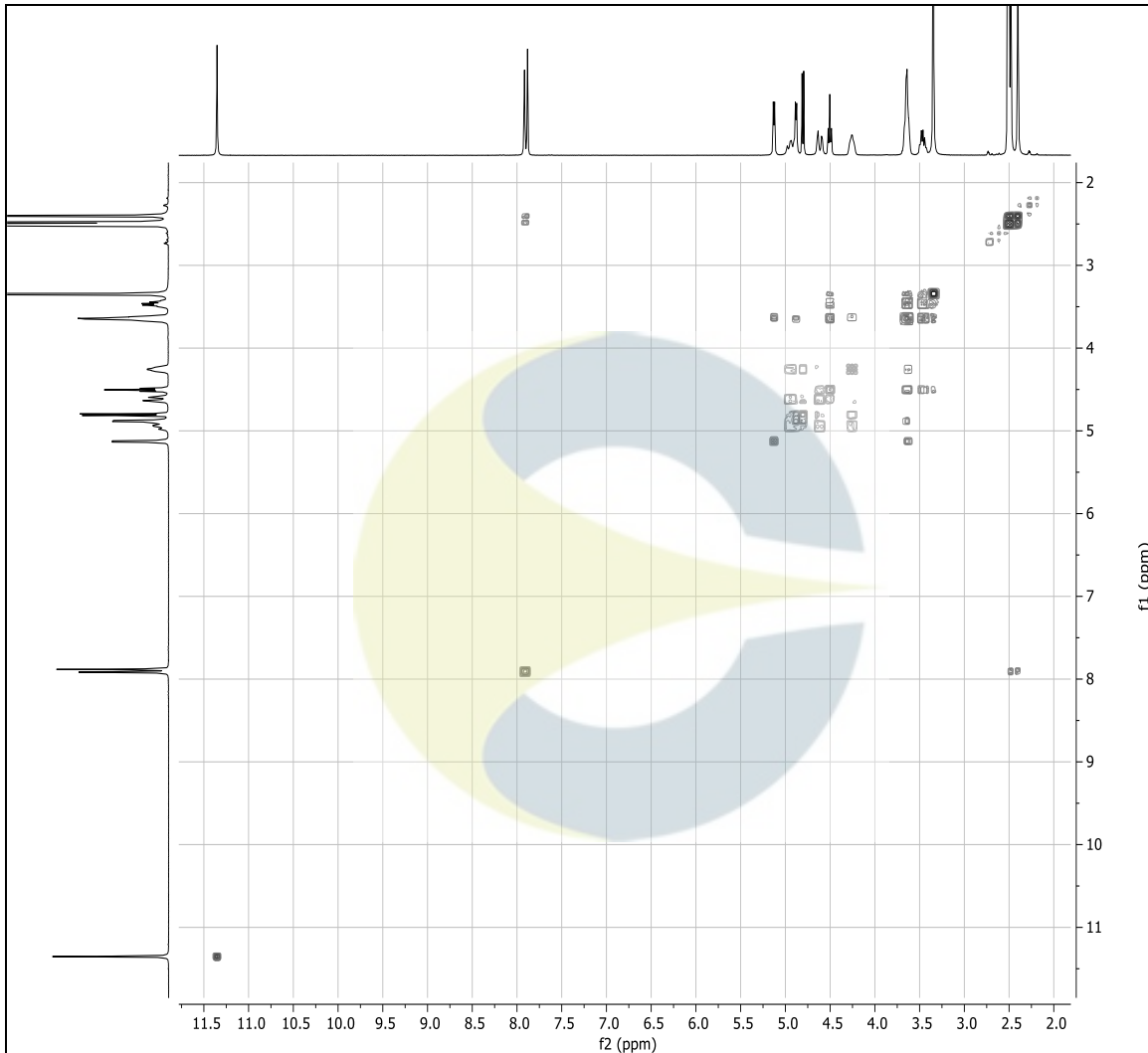
¹³C-NMR SPECTRUM VITAMIN B2 (CDXP-19-00645) IN DMSO-d₆



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COSY-NMR SPECTRUM OF VITAMIN B2 (CDXP-19-00645) IN DMSO-d₆



REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	11/22/2019	New report

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