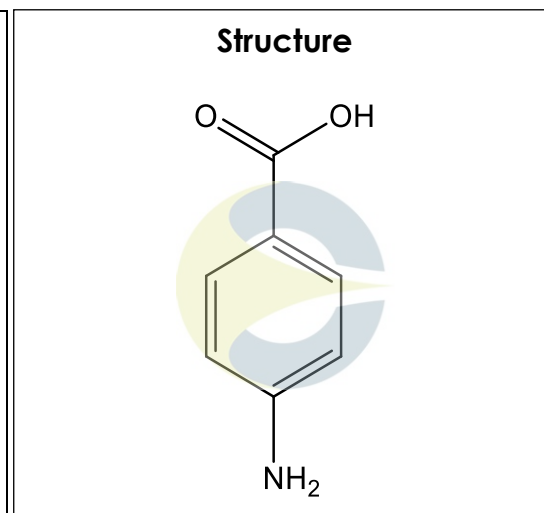


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PRODUCT NAME	Vitamin H1
PART NUMBER	00022811
STANDARD TYPE	Primary (P)
LOT NUMBER	00022811-001
REPORT NUMBER	CDXA-RSS-725-03
SAMPLE NUMBER	CDXA-06-0198
DATE OF SAMPLE	02/16/2006
DATE OF RE-EVALUATION	02/05/2010 (1 st); 09/08/2014 (2 nd); 02/06/2019 (3 rd)
DATE OF REPORT	03/01/2019



CHEMICAL NAMES	4-Aminobenzoic acid; p-Aminobenzoic acid; 4-Carboxyaniline; 4-Carboxyphenylamine; Actipol; Amben; Hachemina; PABA; Pabacyd; Pabamine;
CHEMICAL FORMULA	C ₇ H ₇ NO ₂
MOLECULAR WEIGHT (MW)	137.14
CHEMICAL FAMILY	Vitamins
CAS NUMBER	[150-13-0]
EC#(EINECS)	205-753-0
RTECS	DG1400000

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	NA	99.6%
HPLC	99.1-04-1.0-000761	NA	99.9%
NMR	NA	Conforms to structure	Conforms to structure
Mass Spectrum	Direct Infusion, ESI (-)	Conforms	Conforms
Residual Solvent	CDXA-AM-001-00	NA	MeOH – 0.2%; IPA – 0.1%
Water	99.1-04-10.0-000094	NA	ND
Appearance	NA	NA	White powder

ADJUSTED PURITY: 99.6% IS BASED ON (100 - 0.3 SOLVENTS - 0.0 WATER) X 99.9% HPLC

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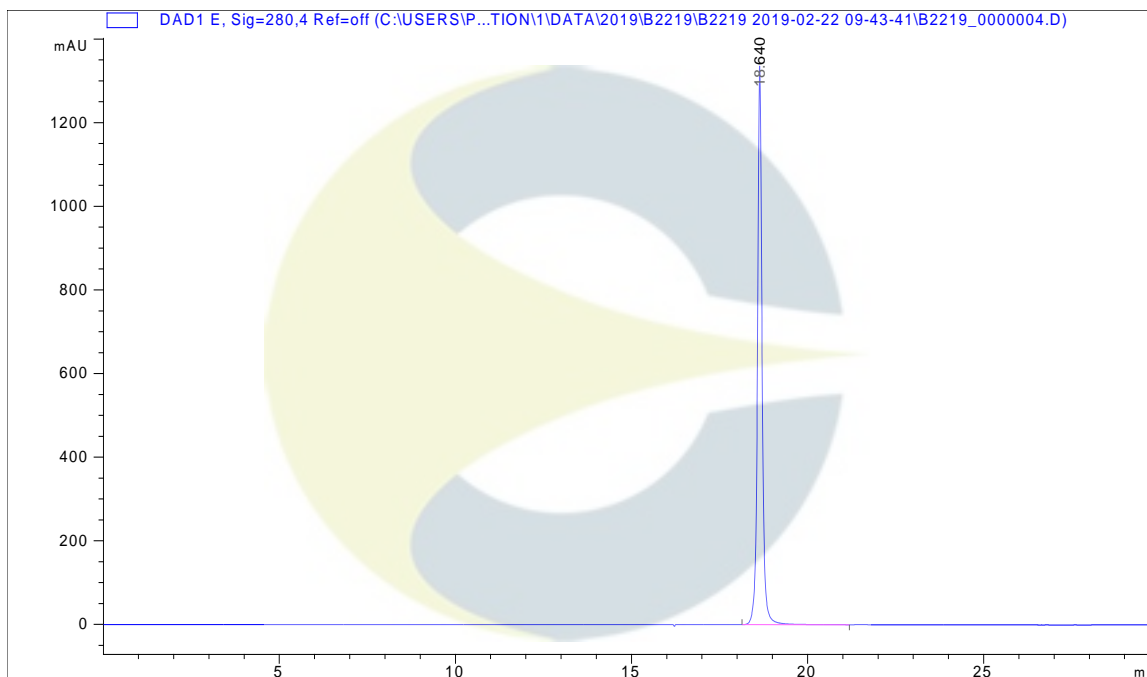
STORAGE CONDITIONS

STORAGE	Room Temperature in a dry place.
EXPIRATION DATE	02/2024 under the above conditions.

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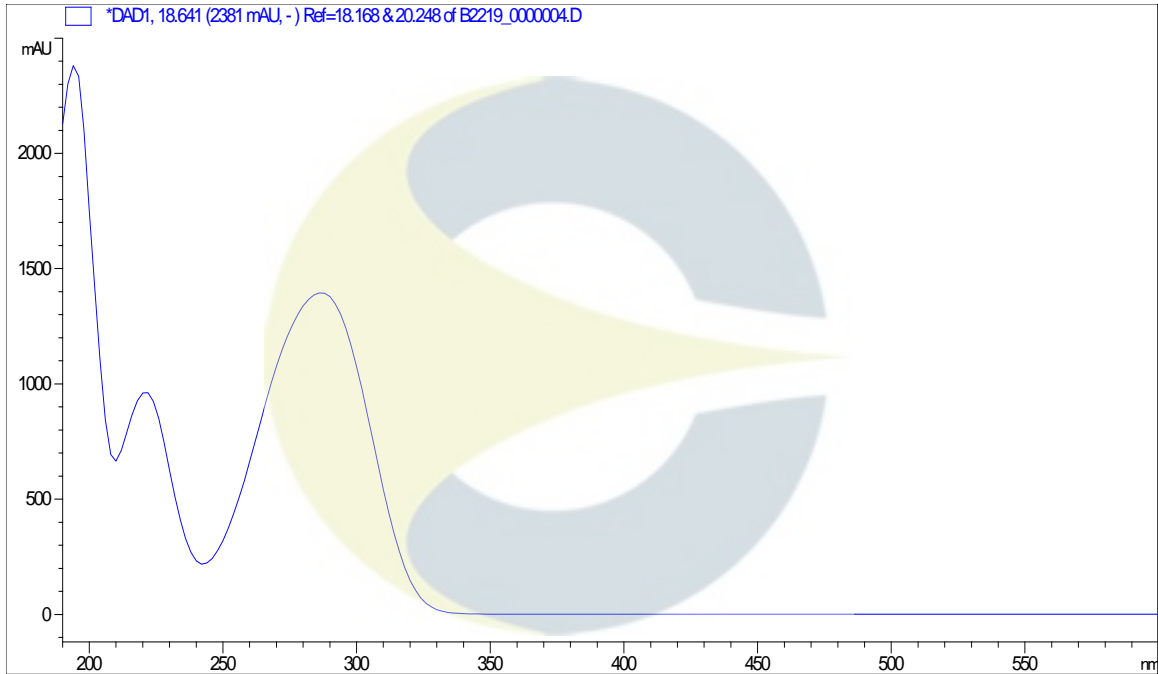
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ANALYTICAL CONDITIONS

INSTRUMENT	AGILENT 1260 HPLC UV-VIS (DAD); FINNIGAN LCQ-DECA
COLUMN	Phenomenex Synergi Hydro-RP, 4µm particle size, 250 x 4.6 mm
MOBILE PHASE	A – 10 mM potassium phosphate monobasic, pH 2.9 (aq), B - Acetonitrile; Isocratic 0% B for 10 minutes, then increasing to 20% B over 10 minutes, hold at 20% B for 4 minutes, then decrease to 0% B over 5 minute to re-equilibrate.
COLUMN TEMP.	22 °C
FLOW RATE	1.0 mL/minute
INJECTION VOL.	2.0 µL
INJECTION CONC.	1.2 mg/mL in high-purity water
DETECTION	280 ± 2 nm

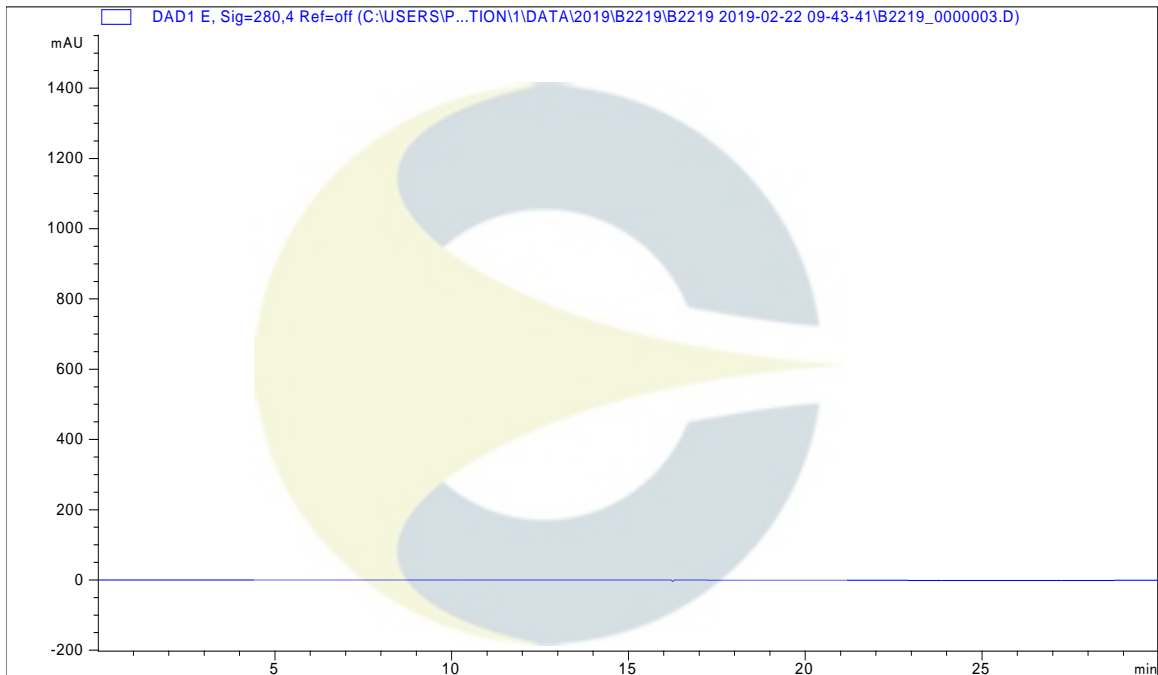
HPLC CHROMATOGRAM OF VITAMIN H1 (CDXA-06-0198)


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UV SPECTRUM AT RT = 18.6 MINUTES

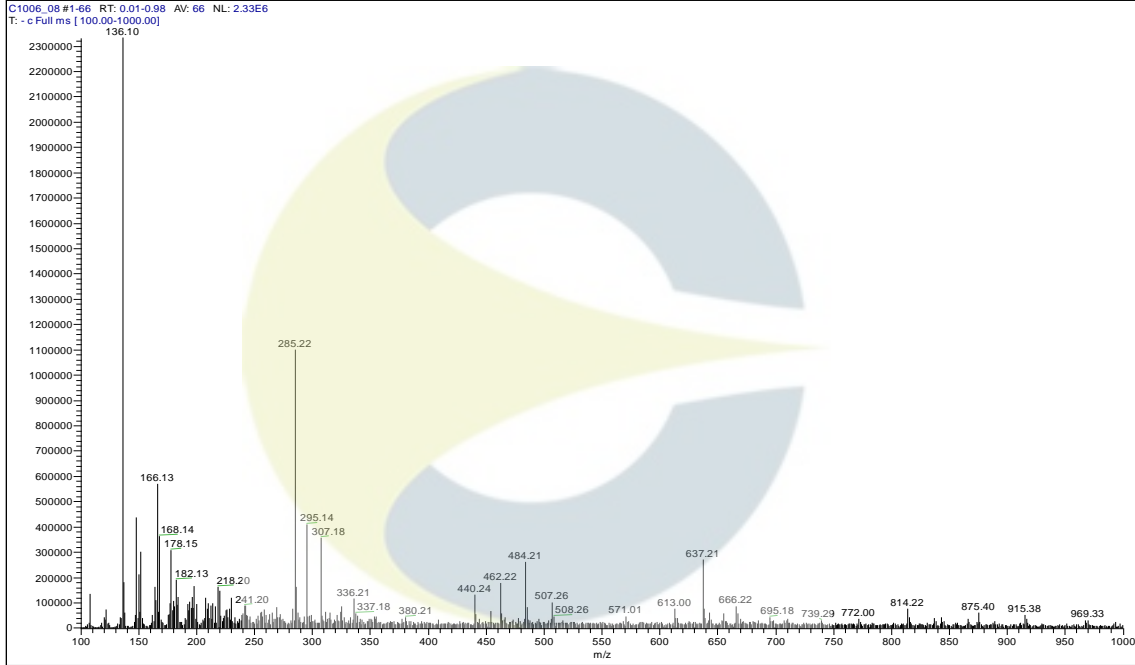


HPLC CHROMATOGRAM OF DILUENT BLANK

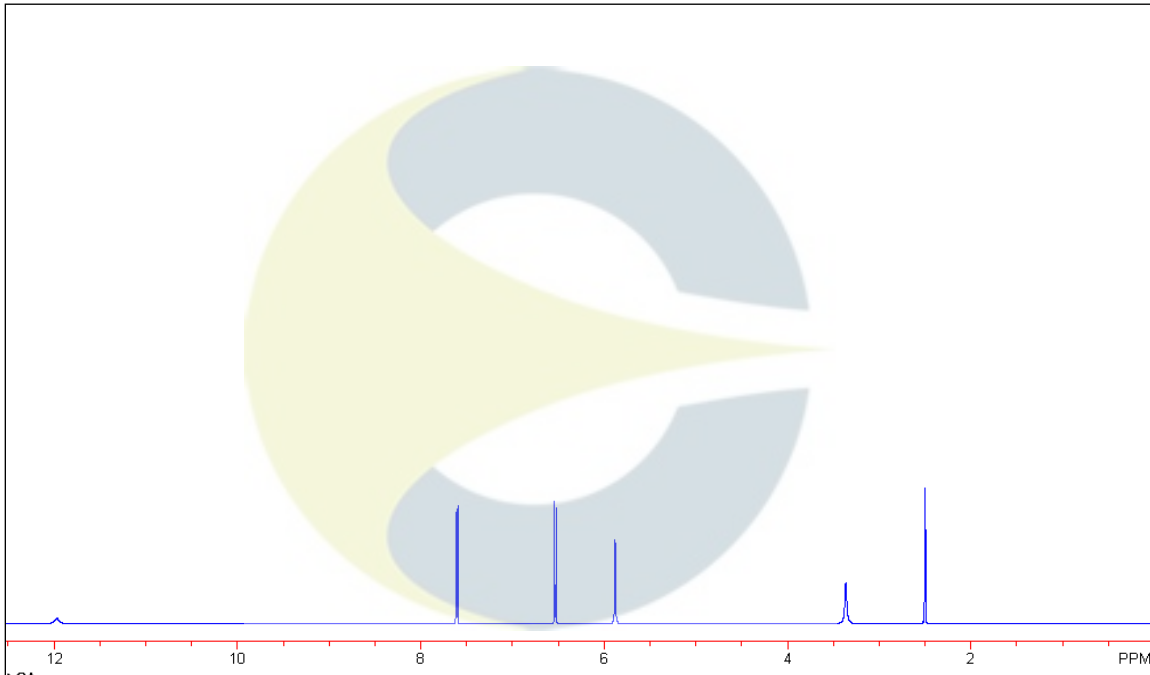


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MASS SPECTRUM OF VITAMIN H1 (CDXA-06-0198)



¹H-NMR SPECTRUM OF VITAMIN H1 (CDXA-06-0198) IN DMSO-d₆



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REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	05/17/2006	New report
01	02/05/2010	Passed 1 st re-evaluation; Updated expiration date; Revision not issued.
02	10/31/2014	Passed 2 nd re-evaluation by HPLC; Updated Melting point; Updated expiration date; Updated chemical names.
03	03/01/2019	Passed 3 rd re-evaluation by HPLC and moisture content. Removed melting point. Updated analytical conditions, results, chromatograms, and expiration date.

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