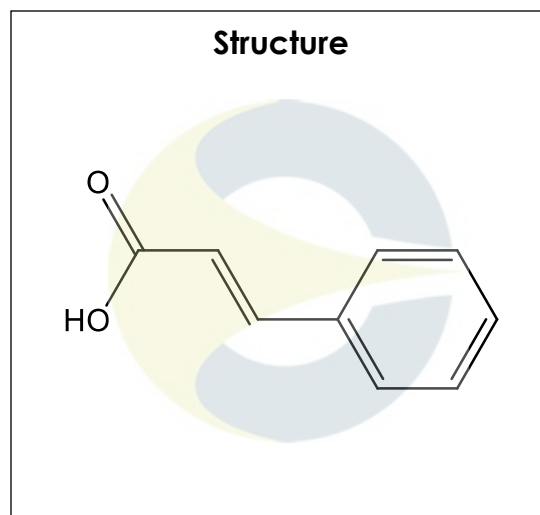


**Certificate of Analysis**
*For Laboratory Use Only*

<b>PRODUCT NAME</b>	trans-Cinnamic acid
<b>PART NUMBER</b>	00003655
<b>STANDARD TYPE</b>	Analytical Standard (AS)
<b>LOT NUMBER</b>	00003655-772
<b>REPORT NUMBER</b>	CDXA-RSS-4360-02
<b>SAMPLE NUMBER</b>	CDXA-11-0786
<b>DATE OF SAMPLE</b>	02/04/2011
<b>DATE OF RE-EVALUATION</b>	06/04/2015 (1 <sup>st</sup> ); 02/20/2020 (2 <sup>nd</sup> )
<b>DATE OF REPORT</b>	03/13/2020



<b>CHEMICAL NAMES</b>	(E)-3-Phenyl-2-propenoic acid; (E)-Cinnamic acid; trans-3-Phenyl-2-propenoic acid; trans-3-Phenylacrylic acid; trans-β-Carboxystyrene
<b>CHEMICAL FORMULA</b>	C <sub>9</sub> H <sub>8</sub> O <sub>2</sub>
<b>MOLECULAR WEIGHT (MW)</b>	148.16
<b>CHEMICAL FAMILY</b>	Phenolic acids
<b>CAS NUMBER</b>	[140-10-3]
<b>EC#(EINECS)</b>	205-398-1
<b>RTECS</b>	GD7850000

**ANALYTICAL RESULTS**

TEST	METHOD	SPECIFICATION	RESULT
GC	0.700.10.2.METH140	NA	99.7%
Mass Spectrum	0.700.10.2.METH140	Conforms	Conforms
Appearance	NA	NA	White powder

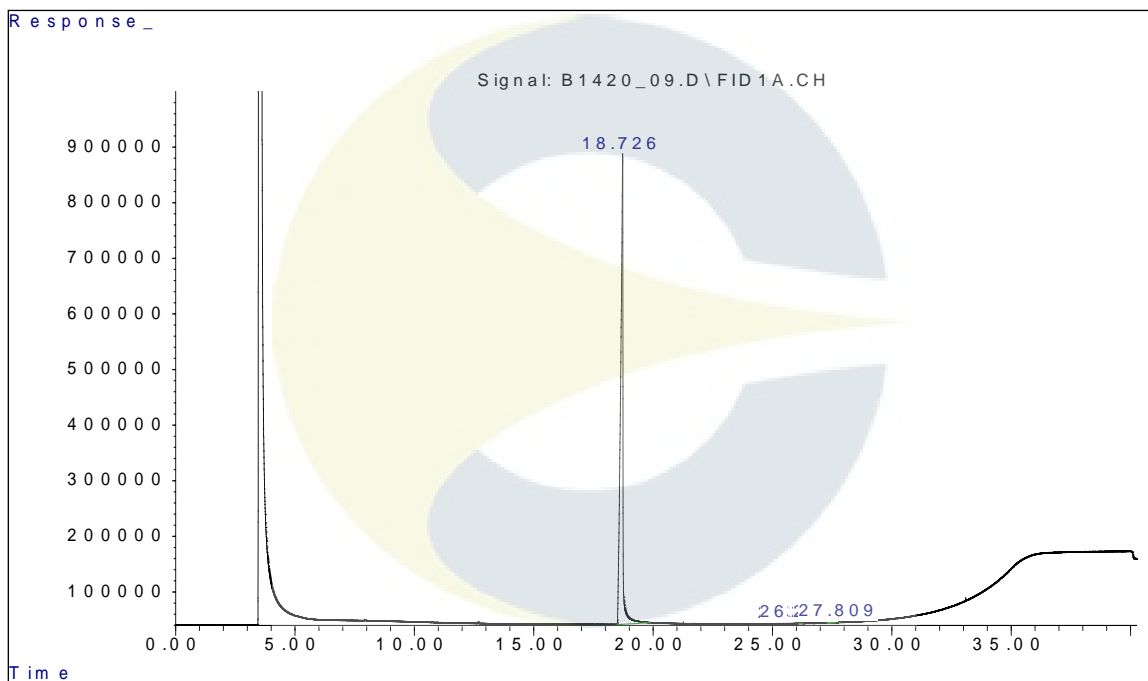
**STORAGE CONDITIONS**

<b>STORAGE</b>	Room Temperature °C in a dry place.
<b>EXPIRATION DATE</b>	02/2025 under the above conditions.

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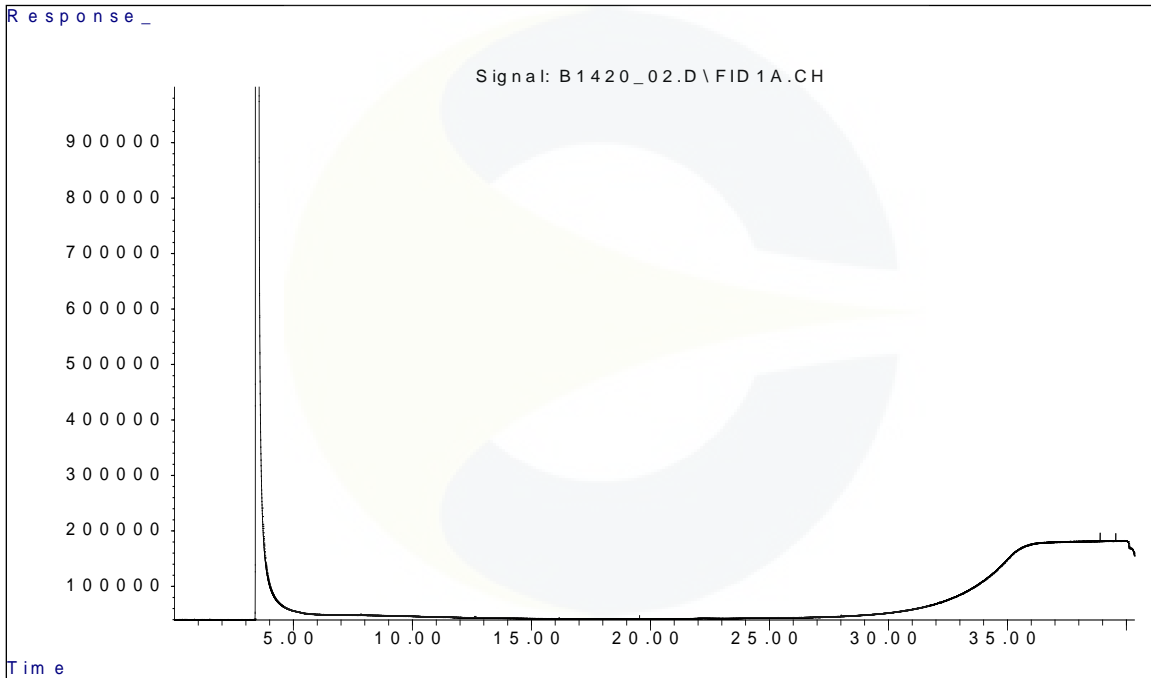
**ANALYTICAL CONDITIONS**

<b>INSTRUMENT</b>	AGILENT 6890N WITH FLAME IONIZATION DETECTOR (FID) AND AGILENT 5973N MASS SELECTIVE DETECTOR (MSD)
<b>COLUMN</b>	Phenomenex Zebron ZB-5HT Inferno, 30 m x 0.32 mm x 0.25 µm; connected to an MXT Y-union, connected to a Restek Siltek deactivated guard column: 10 m x 0.25 mm to FID; and a 5 m x 100 µm transfer line to MSD.
<b>CARRIER GAS</b>	Helium
<b>COLUMN TEMP.</b>	Isothermic 40 °C for 5.0 minutes, then increasing at 10.0 °C/minute to 340 °C. Hold at 340 °C for 5.0 minutes.
<b>FLOW RATE</b>	2.0 mL/minute
<b>INJECTOR TEMP.</b>	300 °C
<b>INJECTOR SPLIT RATIO</b>	20:1
<b>INJECTION VOL.</b>	1.0 µL
<b>INJECTION SOLVENT</b>	Methanol
<b>DETECTION</b>	FID (350 °C) & MSD (Transfer line 300 °C, Source 250 °C, Quad 200 °C)

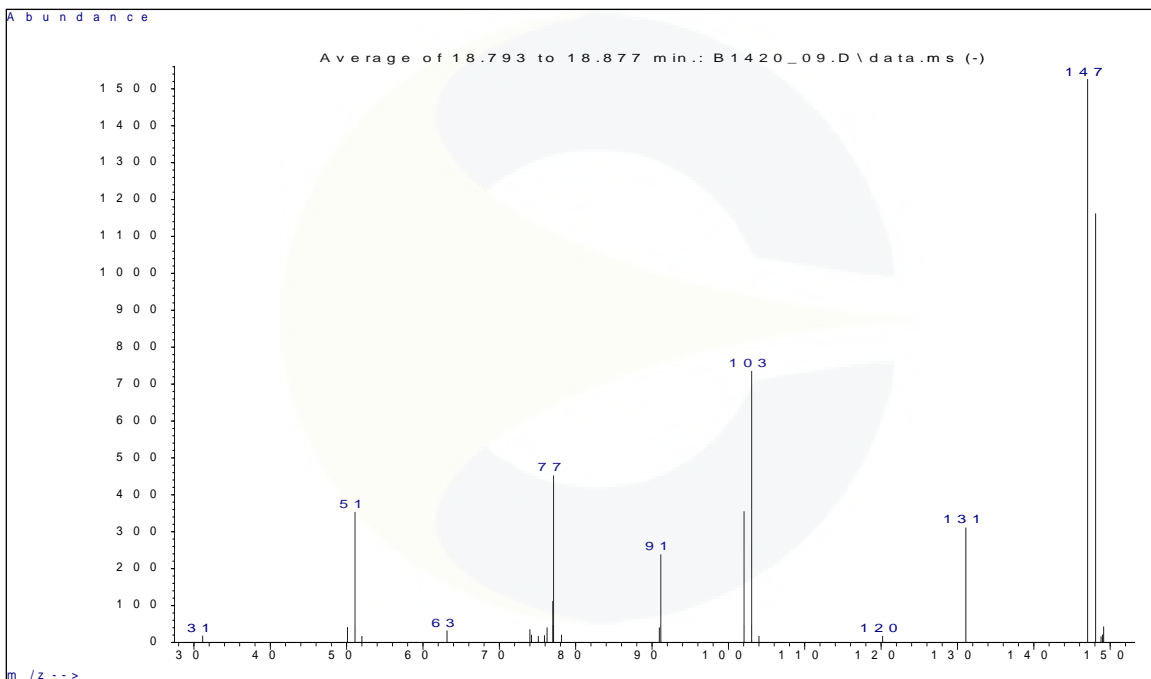
**GC CHROMATOGRAM OF TRANS-CINNAMIC ACID (CDXA-11-0786)**


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**GC CHROMATOGRAM OF DILUENT BLANK**



**MASS SPECTRUM OF TRANS-CINNAMIC ACID (CDXA-11-0786)**



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**REVISION HISTORY**

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	05/09/2011	New report
01	06/24/2015	Passed re-evaluation by GC/FID. Updated expiration date, standard type and melting point.
02	03/13/2020	Passed second re-evaluation by GCMS. Updated expiration date, Analytical Results, Analytical Conditions, and chromatograms. Removed melting point.

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