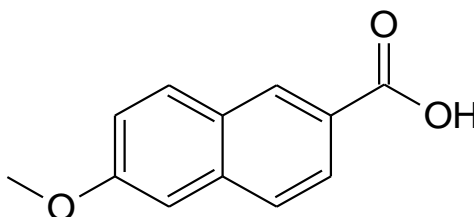


Reference Material Product Information Sheet

Epichem's Quality System conforms to ISO9001:2015 as certified by ECAAS Pty Ltd - Certification number 616061.



Name	6-methoxynaphthalene-2-carboxylic acid
BP Name	Naproxen Impurity O
Synonym(s)	6-methoxy-2-napthoic acid
Epichem Item #	EPL-AA188 Batch 1
CAS #	2471-70-7
Molecular Formula	C ₁₂ H ₁₀ O ₃
Molecular Weight	202.21 g/mol
Appearance	White needles
Melting Point	201.0-216.2°C
Combustion Analysis	Required (%): C:71.3; H:5.0; N:0.0. Found (%): C:71.2; H:5.0; N:0.0
Purity	99.4%
Date of Manufacture	7 January 2016
Storage Requirements	Protect from heat, light and moisture.
Special Precautions	This compound is for laboratory use only. Its toxicological properties may not have been fully established. It should be handled only by suitably qualified personnel.
Date of Shipment	TBA This certificate is valid for one year from the date of shipment provided the substance is stored under the recommended conditions.
Retest Date	TBA (Proper Storage and Handling Required)

EPL-AA188 Batch 1

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ABN 80 106 769 902

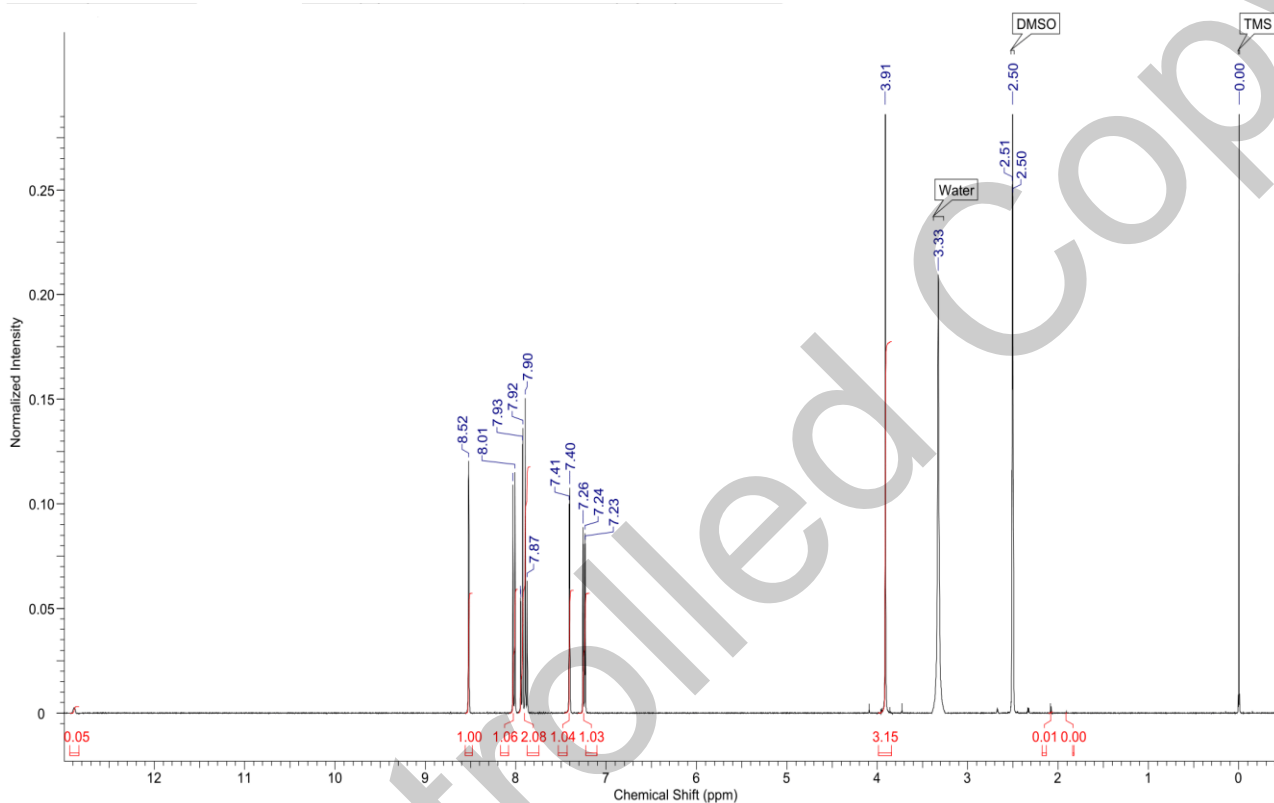
I. Identity

The identity of this product was established using the following analyses:

Ia. ¹HNMR Spectrum

Conditions: 400 MHz, DMSO-d₆

¹HNMR spectrum consistent with chemical structure.



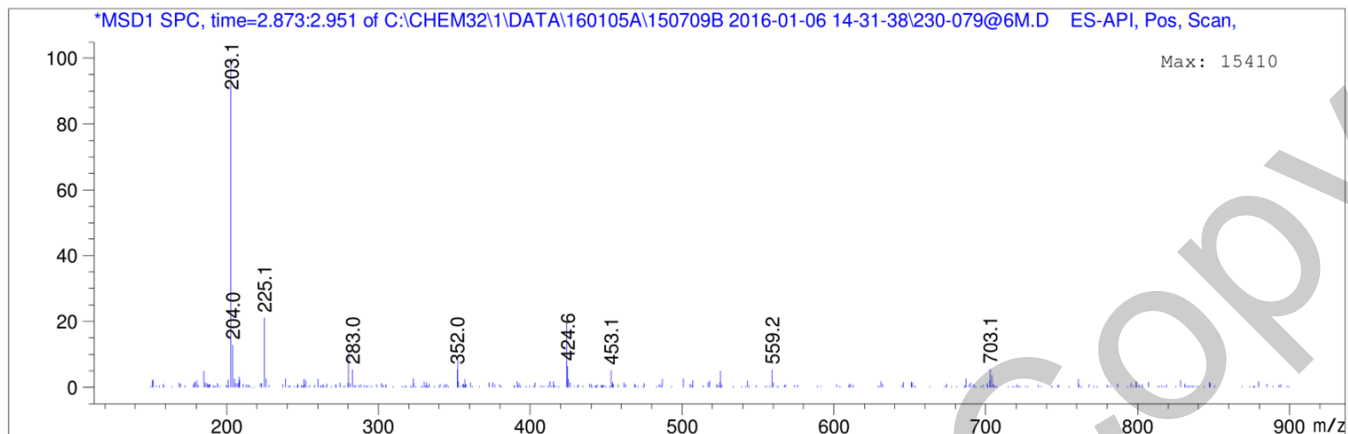
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Ib. Mass Spectrum

Method: 5% to 100% ACN in water gradient (+0.1% formic acid)

Poroshell 120 EC-C18, 4.6 x 50mm, 2.7 micron



Theoretical value: 203.1 [M+H]⁺.

The signal of the Mass Spectrum is consistent with the theoretical value and its interpretation is consistent with the structural formula.

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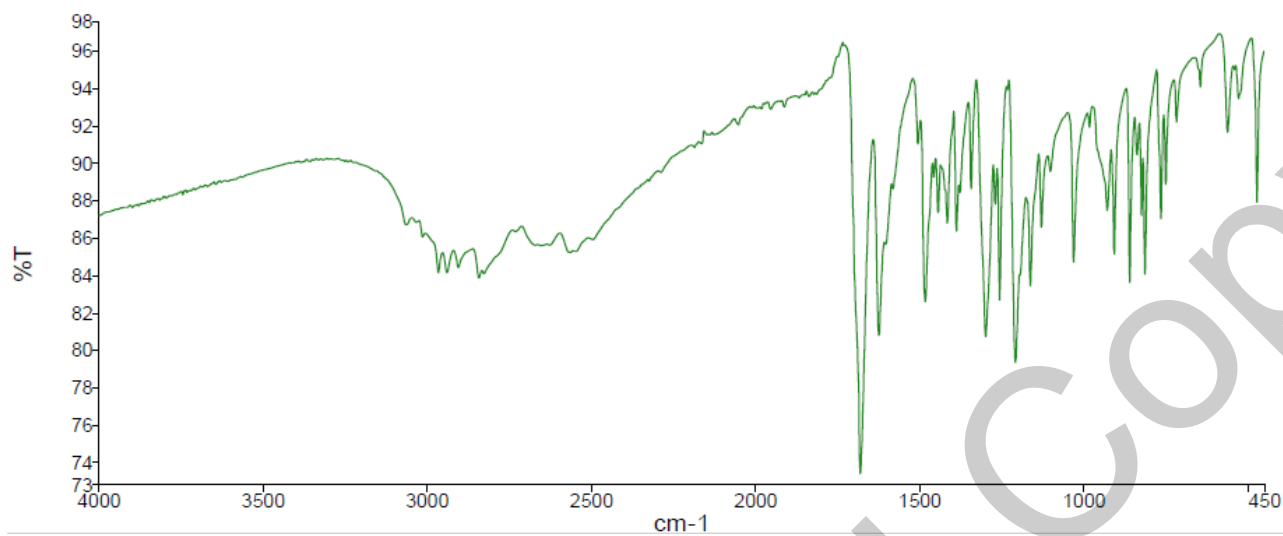
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Ic. IR Spectrum

Method: Fourier Transform Infrared (FTIR) Spectroscopy



The signals of the IR spectrum and their interpretation are consistent with the structural formula.

EPL-AA188 Batch 1

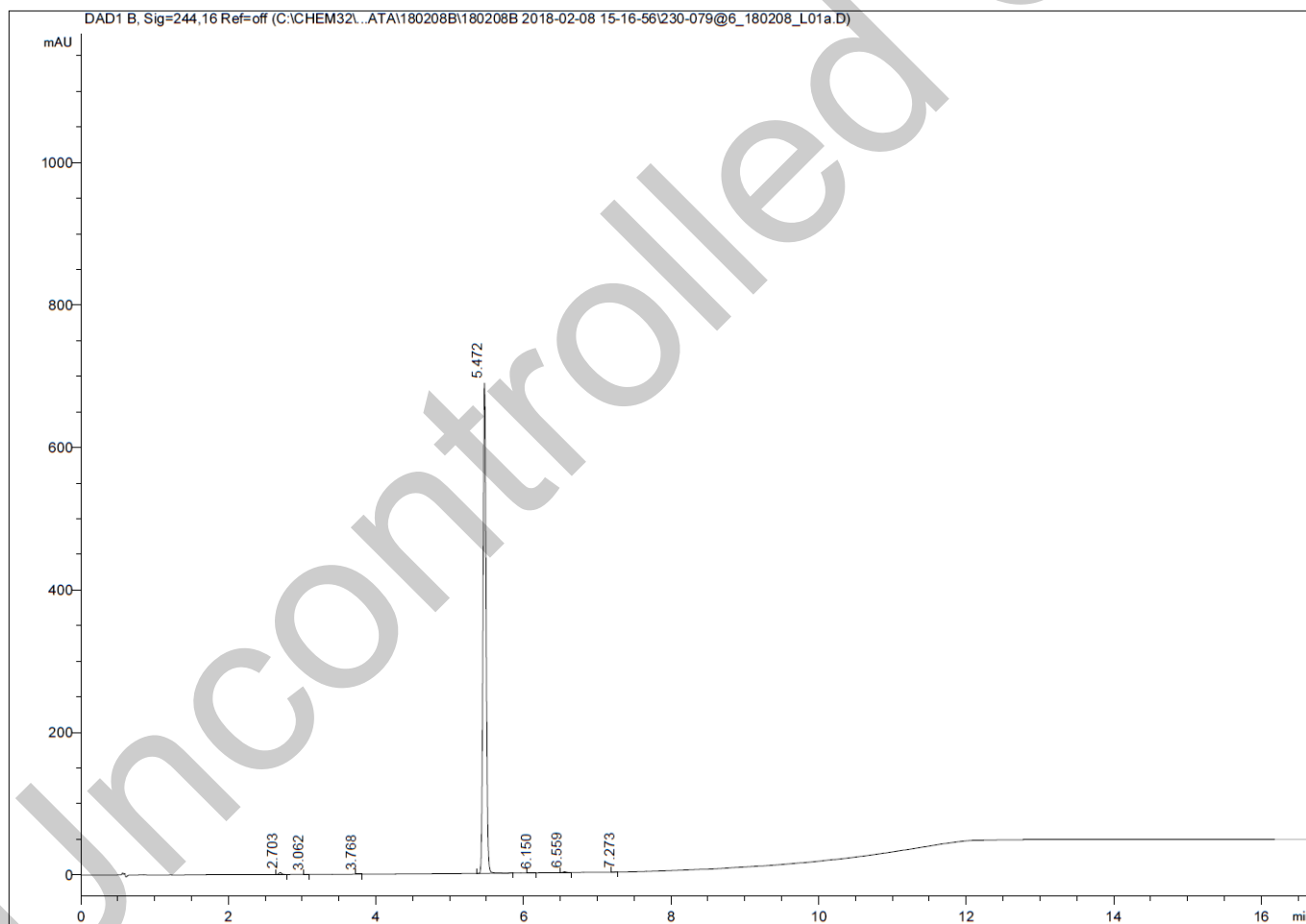
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II. Purity

The purity of this material was analysed by high performance liquid chromatography (HPLC) using in-house EM005.WI07.

HPLC Conditions:

Column	Conditions				Detector	Injector
Agilent Poroshell 120 EC-C18 4.6 x 50mm 2.7 micron	25°C				DAD 244nm	Auto 1.0 µL 0.2 mg/mL in 100% acetonitrile
	Time (min)	% Line A (Water + 0.1% (v/v) TFA)	% Line B (Acetonitrile + 0.1% (v/v) TFA)	Flow rate (mL/min)		
	0.00	80	20	1.0		
	6.00	50	50	1.0		
	10.50	5	95	1.0		
	15.50	5	95	1.0		
	16.50	80	20	1.0		
	19.50	80	20	1.0		



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Area Percent Report – Sorted by Signal

Peak Number	Retention Time (rounded)	Area	Area % (rounded)
1	2.70	6.70	0.33
2	3.06	0.12	0.01
3	3.77	0.16	0.01
4	5.47	1990.95	99.44
5	6.15	0.12	0.01
6	6.56	4.08	0.20
7	7.27	0.08	0.00
Totals		2002.21	100.00

For the calculation the system peaks were ignored. The content of the analyte was determined as a ratio of the peak area of the analyte and the cumulative areas of the purities, added up to 100%.

Results:

Average 99.5% (average of 10 duplicate runs)

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III. Water Content

Method: Karl-Fischer titration using in-house EM005.WI04.

Results:

Average 0.1%

IV. Ash Content

Method: BP2016 Ash (Appendix XI-J) WS001/27424

Result:

Contains <0.1% ash.

V. Residual Solvents

Method: ¹H NMR

Result:

Contains <0.1% acetonitrile by ¹H NMR analysis.

VI. Final Result

Chromatographic purity (HPLC)	99.5%
Water content	0.1%
Ash content	<0.1%
Residual solvents	<0.1%
Purity*	99.4%

This purity is assessed to be 99.4%.

Product Reviewed By:

Product Released By:

John Moursounidis, PhD
Head Fine Chemicals and Technical Services

Boon Tan
Quality Manager
Release Date: 1 March 2018

*The calculation of the purity follows the formula:

$$\text{Purity(\%)} = \frac{((\text{Chromatographicpurity[HPLC]}) \times (100 - (\text{watercontent} + \text{ashcontent} + \text{volatilecontents})))}{100}$$

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