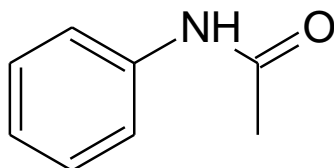


## Reference Material Product Information Sheet

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



<b>Name</b>	N-phenylacetamide
<b>BP Name</b>	Paracetamol Impurity D
<b>Synonym(s)</b>	methylenecarboxanilide; N-acetylaniline; acetylaniline; acetoanilide; N-Ac-aniline
<b>Epichem Item #</b>	EPL-AA113 Batch 1
<b>CAS #</b>	103-84-4
<b>Molecular Formula</b>	C <sub>8</sub> H <sub>9</sub> NO
<b>Molecular Weight</b>	135.17 g/mol
<b>Appearance</b>	White powder
<b>Melting Point</b>	113.4-115.6°C
<b>Combustion Analysis</b>	Required (%): C:71.1; H:6.7; N:10.4. Found (%): C:71.1; H:6.9; N:10.4.
<b>Purity</b>	100.0%
<b>Date of Manufacture</b>	17 May 2012
<b>Storage Requirements</b>	Protect from heat, light, moisture and air.
<b>Special Precautions</b>	<b>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.</b>
<b>Date of Shipment</b>	TBA
	This certificate is valid for one year from the date of shipment provided the substance is stored under the recommended conditions.
<b>Retest Date</b>	TBA (Proper Storage and Handling Required)

EPL-AA113 Batch 1

Epichem Pty Ltd, Suite 5, 3 Brodie-Hall Drive, Bentley WA 6102, Australia

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ABN 80 106 769 902

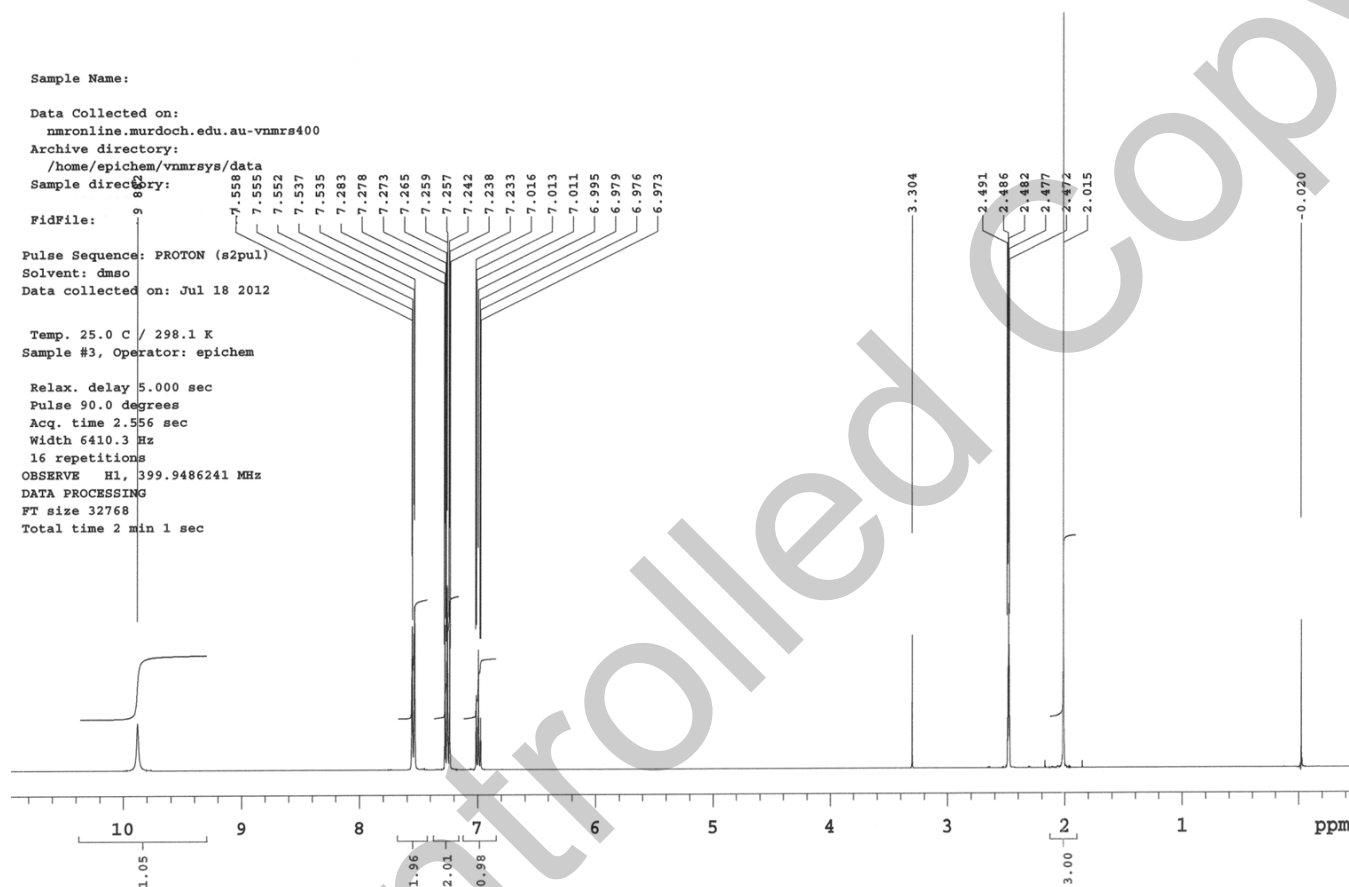
## I. Identity

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

### Ia. <sup>1</sup>HNMR Spectrum

Conditions: 400 MHz, DMSO-d<sub>6</sub>

<sup>1</sup>HNMR spectrum consistent with chemical structure.



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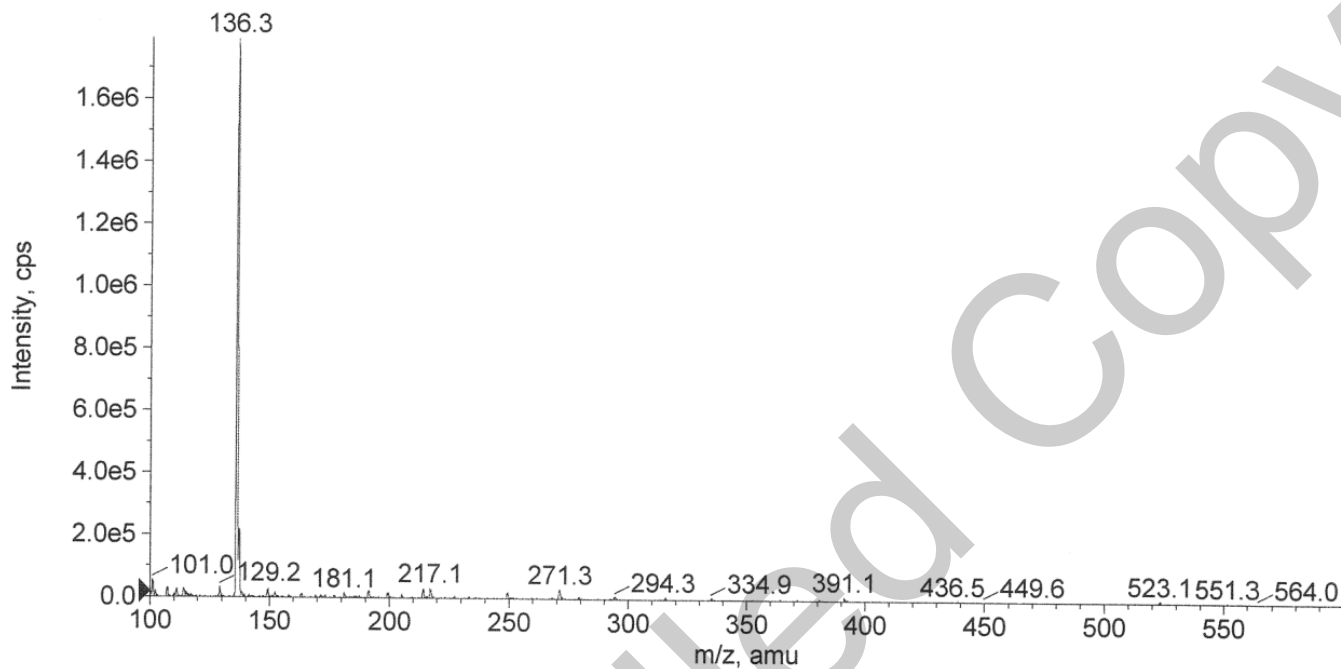
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## Ib. Mass Spectrum

Method: 0% to 100% ACN in water gradient (+0.05% trifluoroacetic acid)

Monitor C18, 50 × 4.6mm, 5µm

+Q1: 4.384 to 4.760 min from Sample 1



Theoretical value: 136.3 [M+H]<sup>+</sup>.

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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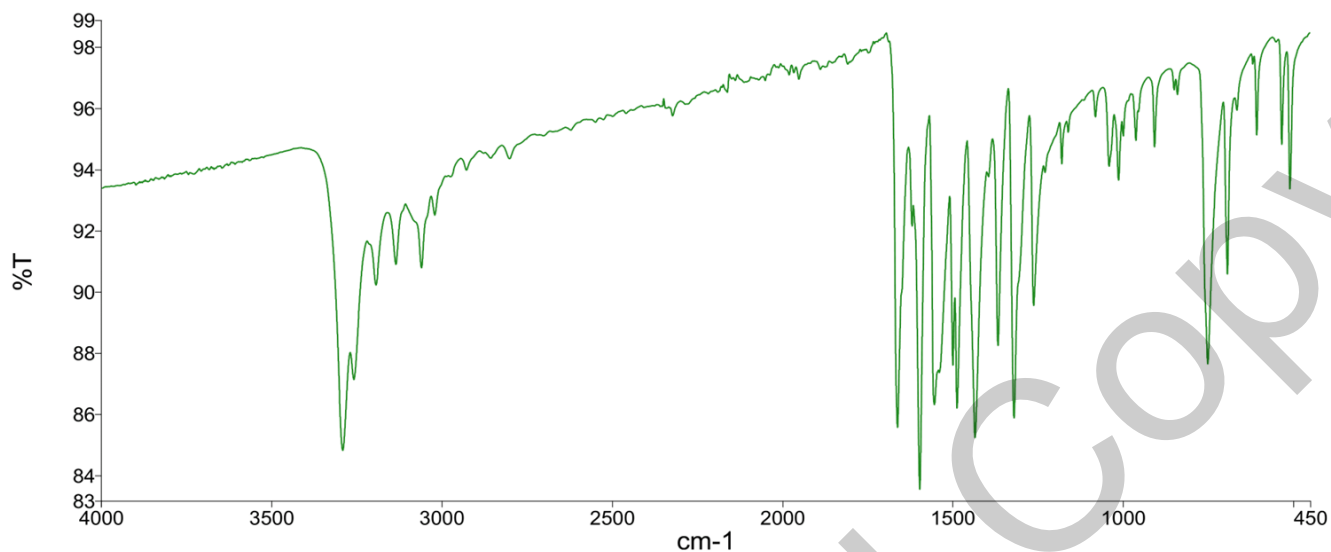
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## Ic. IR Spectrum

Method: Fourier Transform Infrared (FTIR) Spectroscopy



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

EPL-AA113 Batch 1

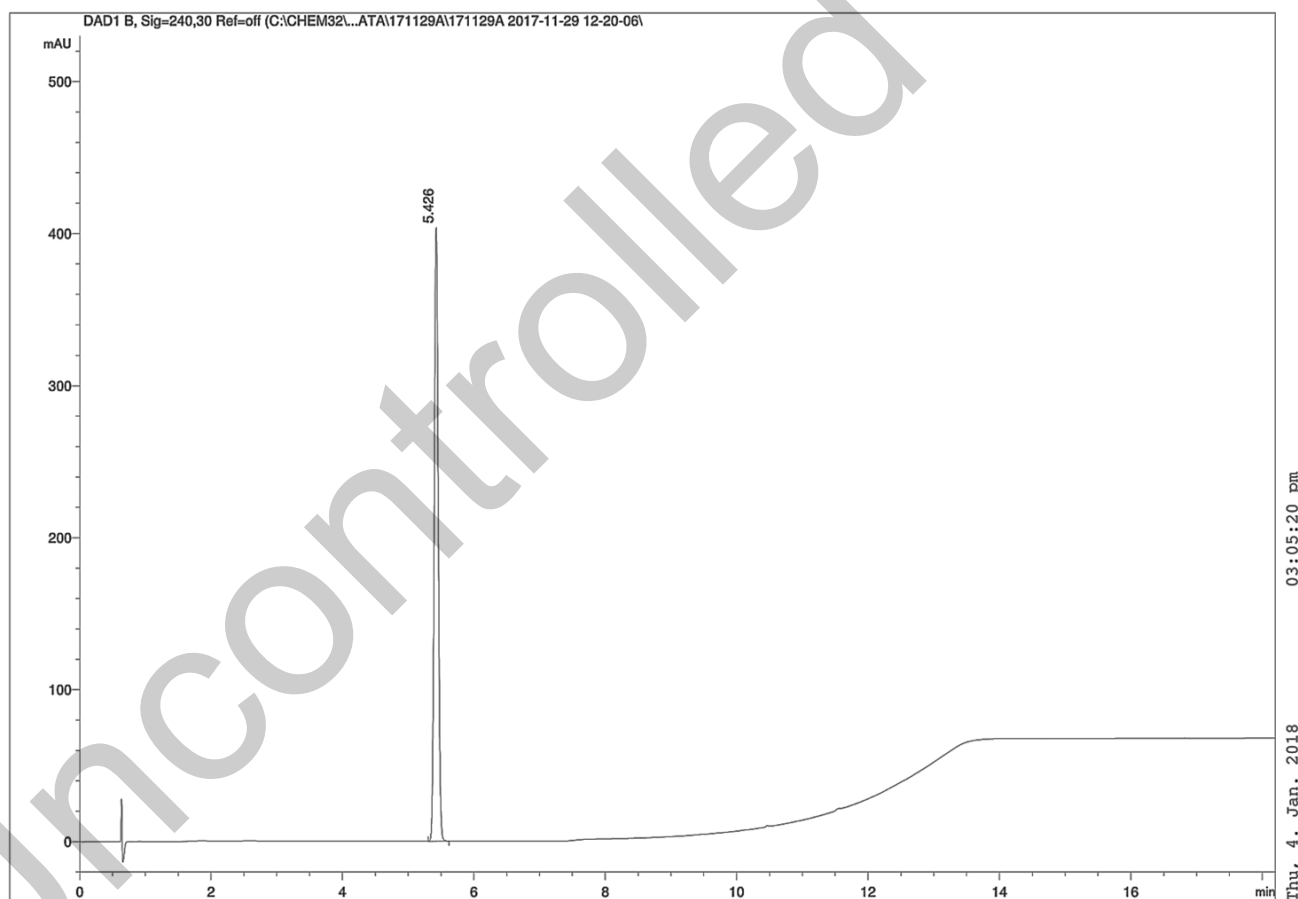
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## II. Purity

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 240nm	Auto 1.0 µL 0.40 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	95	5	1.0		
	6.00	80	20	1.0		
	12.00	5	95	1.0		
	17.00	5	95	1.0		
	18.00	95	5	1.0		
	21.00	95	5	1.0		



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### Area Percent Report – Sorted by Signal

Peak Number	Retention Time (rounded)	Area	Area % (rounded)
1	5.43	1688.47	100.00
Totals		1688.47	100 (rounded)

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 100.0% (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: BP2012 Ash

**Result:**

Contains <0.1% ash.

### V. Residual Solvents

Method: <sup>1</sup>HNMR

**Result:**

No significant impurities detected by <sup>1</sup>H NMR analysis.

### VI. Final Result

Chromatographic purity (HPLC)	100.0%
Water content	<0.1%
Ash content	<0.1%
Residual solvents	<0.1%
Purity*	100.0%

This purity is assessed to be 100.0%.

Product Reviewed By:

Product Released By:

John Moursounidis, PhD  
Head Fine Chemicals and Technical Services

Boon Tan  
Quality Manager

Release Date: 24 January 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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