



Certificate of Analysis

ISO 9001

Reference Material

Product name

3-(10H-Phenothiazin-10-yl)-N,N-dimethylpropan-1-amine
S-Oxide (Promazine Sulphoxide)

Product code

MM0290.01

CAS number

146-21-4

Molecular weight

300.42

Molecular formula

C₁₇H₂₀N₂OS

Lot number

1010646

Appearance

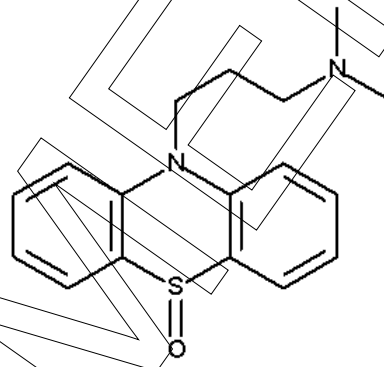
yellow solid

Melting point (DSC)

117 °C

Long-term storage

2 to 8 °C, dark



Assay "as is"
98.5 %

Date of shipment:

02 Sep 2019

Producer confirms that this reference material (RM) meets the specification detailed on this Certificate of Analysis for **two years** from the date of shipment, provided the substance is stored under the recommended conditions unopened in the original container.

Release by:	Date of Release:		Product Release
Dr. Sabine Schröder	Luckenwalde, 15 Jul 2019		



Mikromol™

Product information

For laboratory use only. Not suitable for human or animal consumption.

Before usage of the RM, it should be allowed to warm to room temperature. No drying required, as the certified value is already corrected for the content of water and other volatile materials.

The product quality is controlled by regularly performed quality control tests (retests).

Further content

Identity

Assay

Final result

Revision table

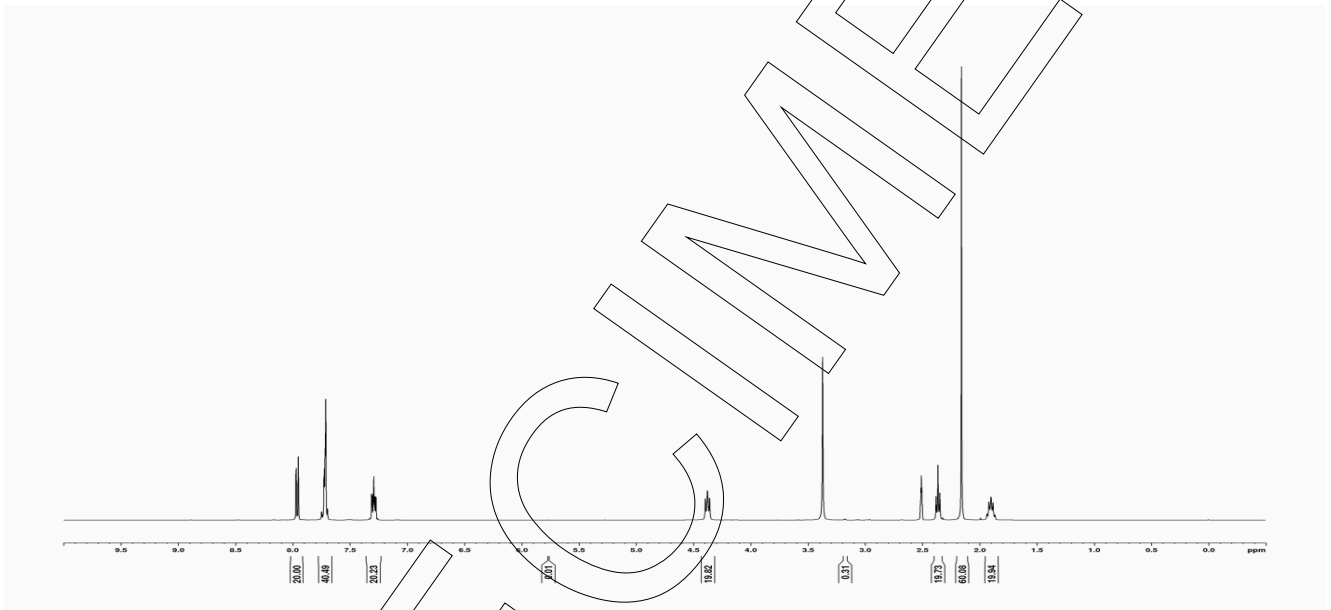
SPECIMEN



Identity

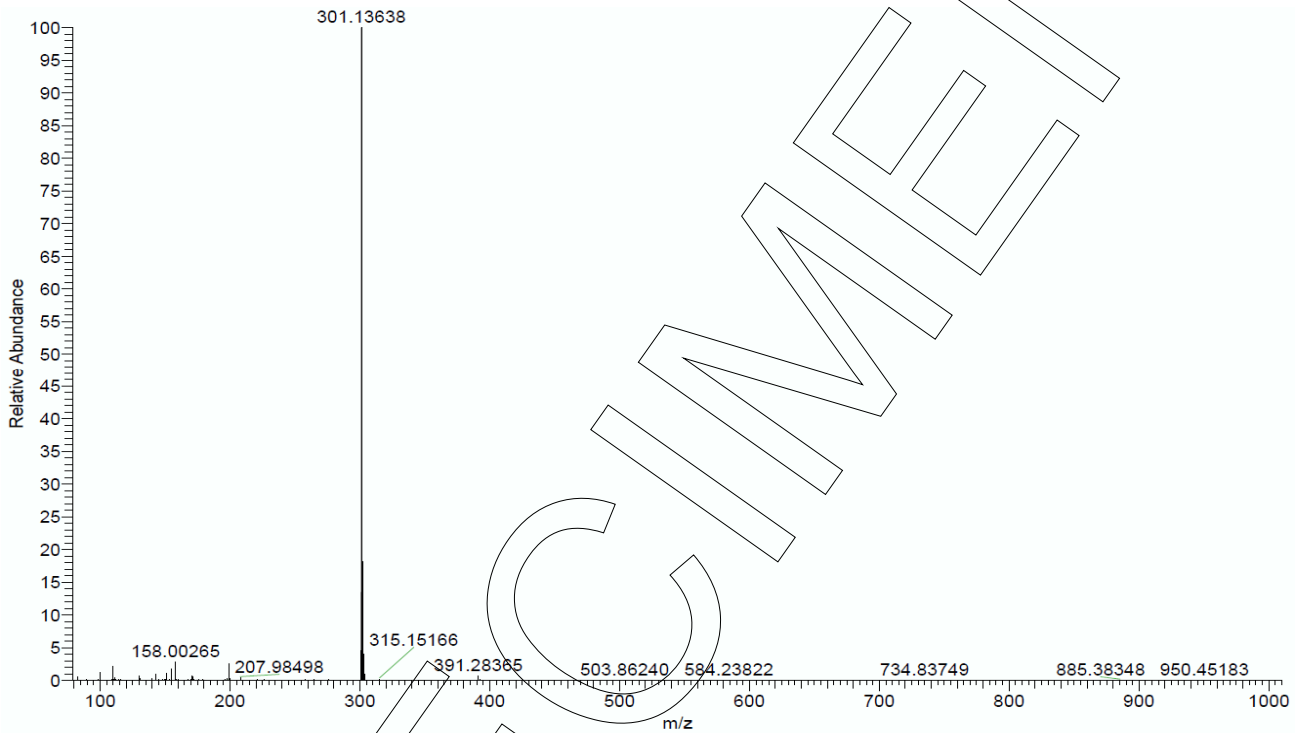
The identity of the reference material was established by following analyses.

Method	Conditions	Result
¹ H-NMR	400 MHz, DMSO-d ₆	Structure confirmed





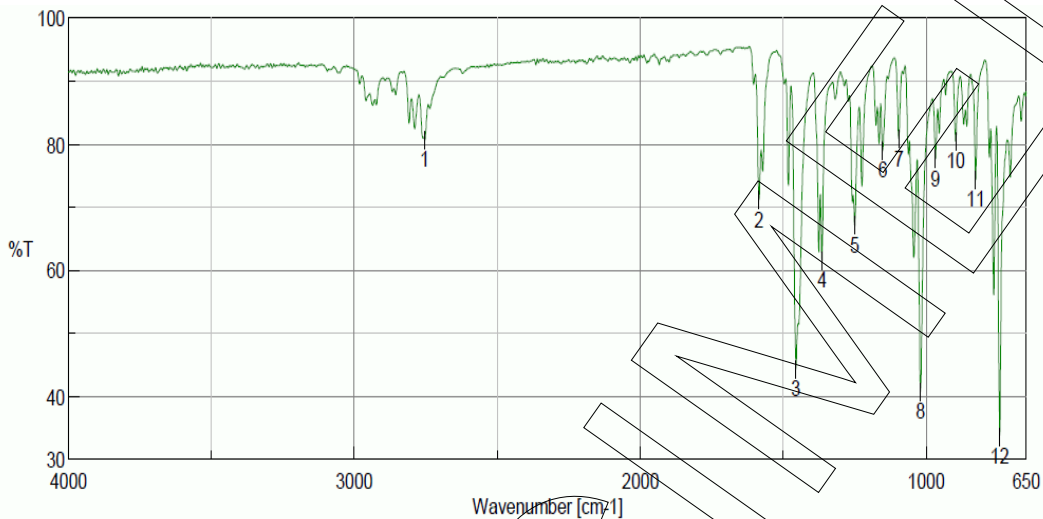
Method	Conditions	Result
MS	3.5 kV ESI+; capillary temperature: 269 °C Theoretical value: 301.13691	Structure confirmed



SPECIMEN



Method	Conditions	Result
IR	Attenuated Total Reflection Fourier Transform Infrared (ATR-FTIR) Spectroscopy	Structure confirmed



No.	Position	Intensity
1	2754.82	80.6026
2	1585.2	71.0707
3	1455.99	44.2682
4	1364.39	61.4737
5	1250.61	67.065
6	1152.26	78.9194
7	1096.33	80.8106
8	1020.16	40.7252
9	968.09	77.6334
10	896.737	80.4418
11	827.312	74.3504
12	743.424	33.5133

Assay

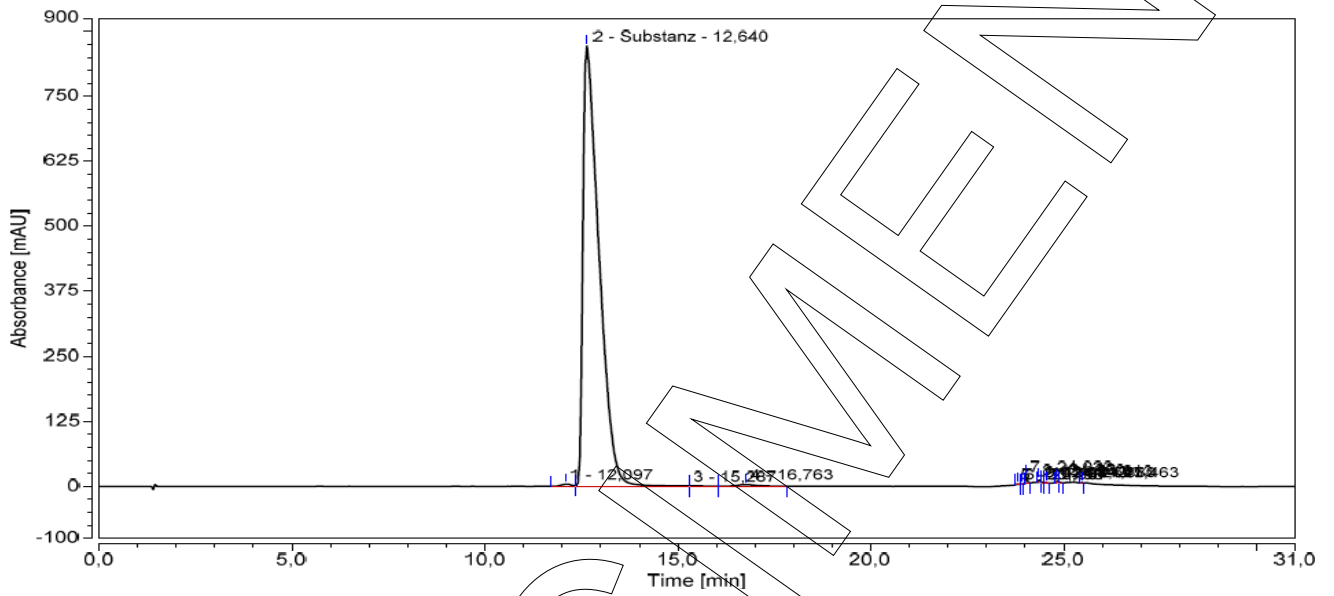
The assay of the reference material was assessed by following analyses.

Purity by High Performance Liquid Chromatography (HPLC)

HPLC Conditions:	
Column	BetaBasic 8; 5 µm, 100 x 4.6 mm
Column temperature	40 °C
Detector	DAD, 235 nm
Injector	Auto 2 µl; 0.464 mg/ml in Acetonitrile/Water 50/50 (v/v)
Flow rate	1.0 ml/min
Phase A	Water, 0.1 % H ₃ PO ₄
Phase B	Acetonitrile, 0.1 % H ₃ PO ₄
Gradient program	0-20 min A/B 90/10 20-23 min A/B to 50/50 23-26 min A/B to 90/10 26-31 min A/B 90/10 (v/v)



HPLC chromatogram and peak table





Area percent report - sorted by signal

Pk #	Retention time	Area	Area %
1	12.097	1.233	0.30
2	12.640	406.288	98.82
3	15.287	0.208	0.05
4	16.763	1.764	0.43
5	23.790	0.124	0.03
6	23.907	0.038	0.01
7	24.023	0.719	0.17
8	24.350	0.297	0.07
9	24.413	0.103	0.03
10	24.547	0.047	0.01
11	24.813	0.213	0.05
12	24.880	0.072	0.02
13	25.463	0.036	0.01
Totals		411.142	100.00

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

Result (n = 3)

98.82 %; SD = 0.01 %



Volatile content

Water content

Method	Karl Fischer titration
Result (n = 3)	0.18 %; SD = 0.01 %

Residual solvents

Method	¹ H-NMR
Result (n = 1)	Sum: 0.12 % 0.11 % Methanol; 0.01 % Dichloromethane

Final result

Assay "as is": 98.52 %

The assay "as is" is assessed by 100% method (mass balance) and is equivalent to the assay based on the not anhydrous and not dried substance respectively.

The calculation of the 100% method follows the formula:

$$\text{Assay (\%)} = (100 \% - \text{volatile contents (\%)}) * \frac{\text{Purity (\%)}}{100 \%}$$

Volatile contents are considered as absolute contributions and purity is considered as relative contribution. Inorganic residues are excluded by additional tests.

Revision table

Revision	Date	Reason for revision
00	15 Jul 2019	Release of the Certificate of Analysis - initial version

Product warranties for the RM are set out in the terms and conditions of purchase.