

Certificate of Analysis

ISO 9001

Reference Material

Product name

2,6-Bis(1-methylethyl)benzene-1,4-dione

Product code

MM0461.13-0025

CAS number

1988-11-0

Molecular weight

192.25

Molecular formula

C₁₂H₁₆O₂

Lot number

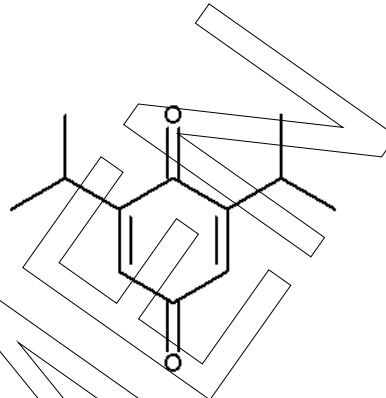
1013090

Appearance

yellow oil

Long-term storage

2 to 8 °C, dark



Assay "as is"
97.6 %

Date of shipment:

05 Feb 2020

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, 30 Aug 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

Purity

Final result

Revision table

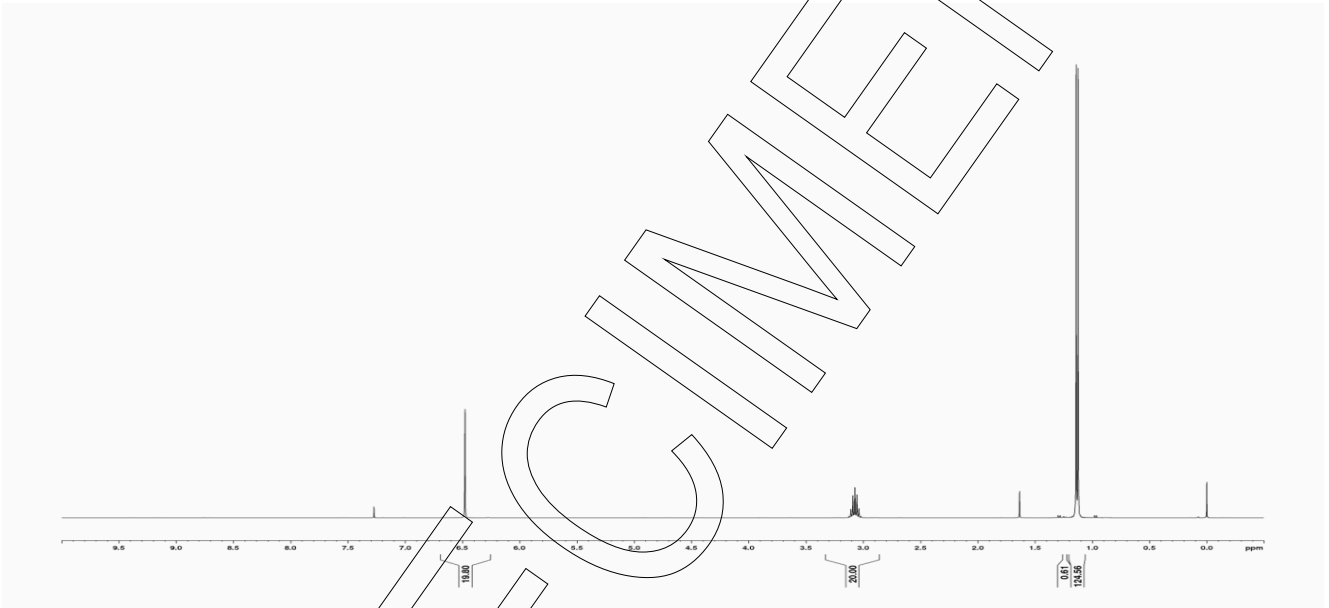
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Identity

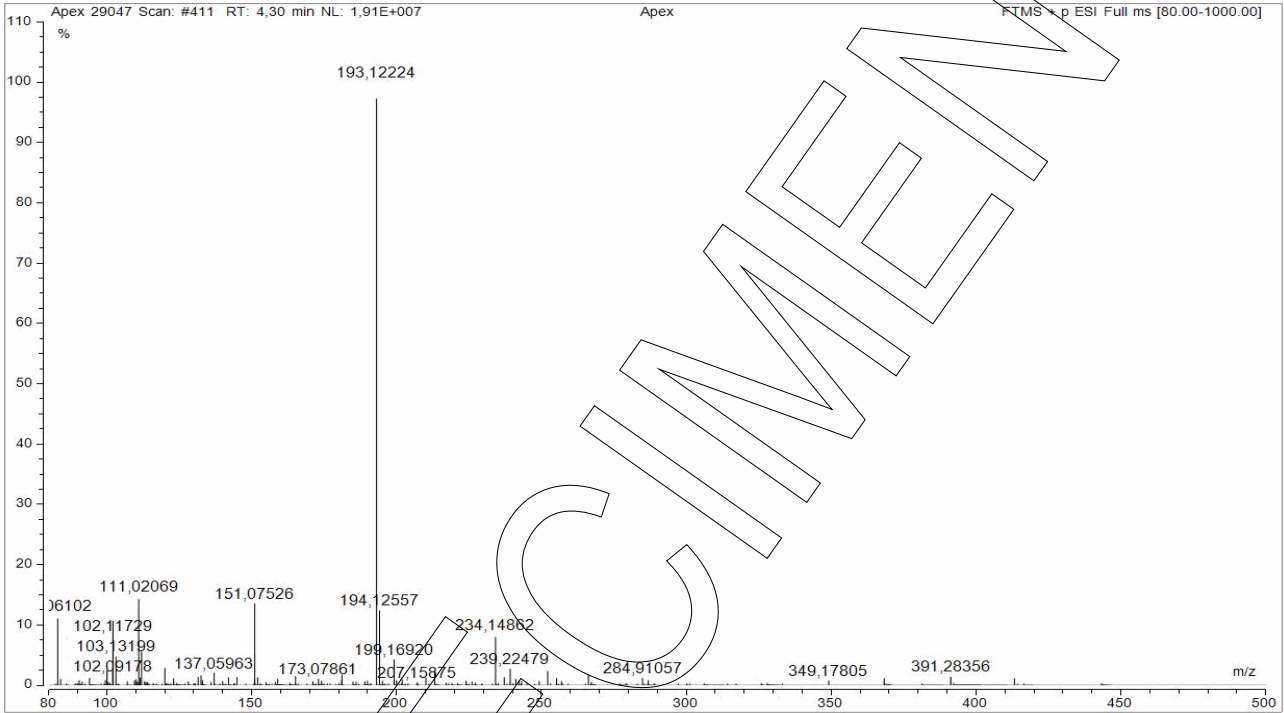
The identity of the reference material was established by following analyses.

Method	Conditions	Result
¹ H-NMR	400 MHz, CDCl ₃	Structure confirmed





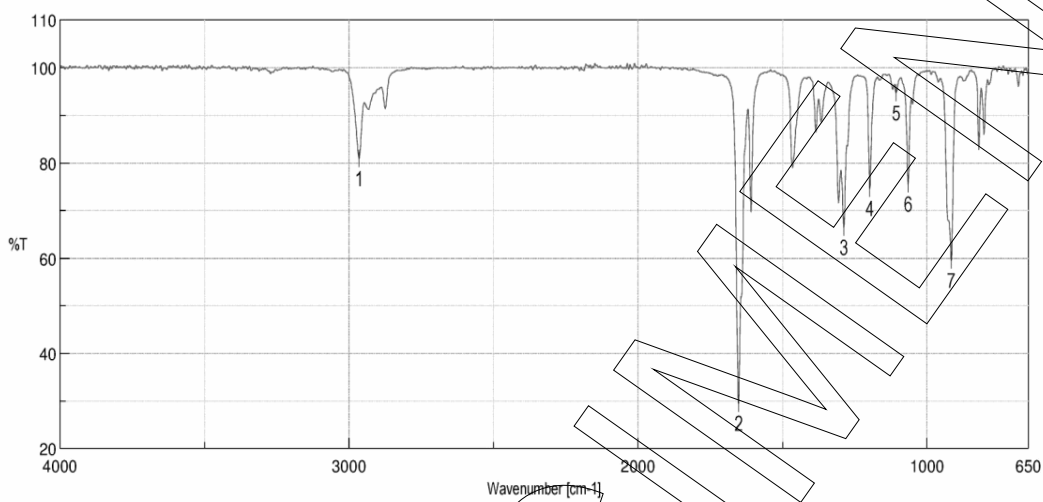
Method	Conditions	Result
MS	3.5 kV ESI+; capillary temperature: 269 °C Theoretical value: 193.12231	Structure confirmed



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



No.	Position	Intensity
1	2965.02	80.8704
2	1652.7	29.4301
3	1288.22	66.4796
4	1198.54	74.6019
5	1106.94	94.7128
6	1066.44	75.5783
7	916.986	59.5664

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Purity

Volatile content

Water content

Method	Karl Fischer titration
Result (n = 3)	0.16 %; SD = 0.01 %

Residual solvents

Method	¹ H-NMR
Result (n = 1)	Sum: 0.48 % 0.48 % Ethanol

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Final result

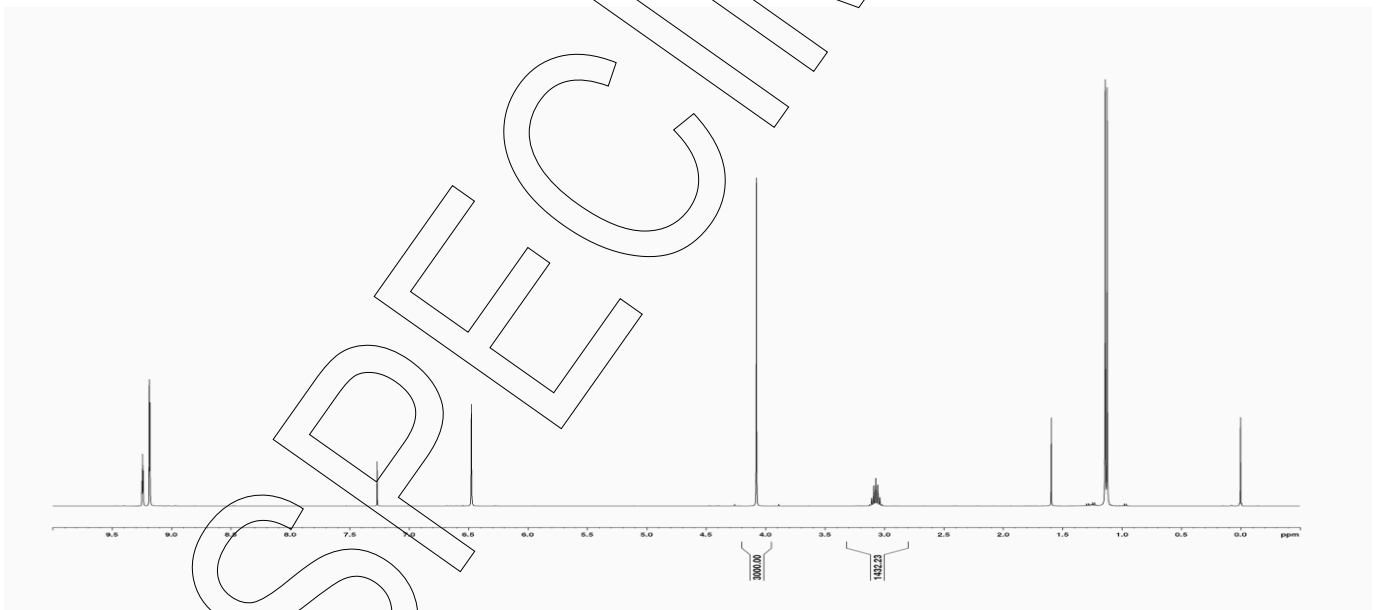
Assay "as is": **97.63 %**

The assay "as is" is assessed by quantitative NMR spectroscopy and is equivalent to the assay based on the not anhydrous and not dried substance respectively.

Method: Value assigning technique - quantitative NMR spectroscopy

Conditions	400 MHz, CDCl ₃
Internal standard	Methyl 3,5-dinitrobenzoate (certified reference material), signal 4.0 - 4.2 ppm, 3 H
Result (mass fraction, n = 6)	97.63 %, SD = 0.19 %

Quantitative NMR spectrum





Revision table

Revision	Date	Reason for revision
00	30 Aug 2019	Release of the Certificate of Analysis - initial version

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

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