

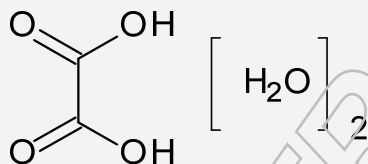
Certificate of Analysis

Reference Substance

Oxalic Acid Dihydrate

Catalogue Number: LGCFOR0928.00
Lot Number: 41535
Molecular Formula: $C_2H_2O_4 \cdot 2H_2O$
Molecular Weight: 126.07
CAS Number: [6153-56-6]

Long-term Storage: 2 to 8 °C, dark
Appearance: white solid
Melting Point: 101 °C
Assay 'as is': 99.5 %



Date of shipment: **2016-May-20**

This certificate is valid for two years from the date of shipment provided the substance is stored under the recommended conditions.

Release Date: 2014-01-30

LGC GmbH

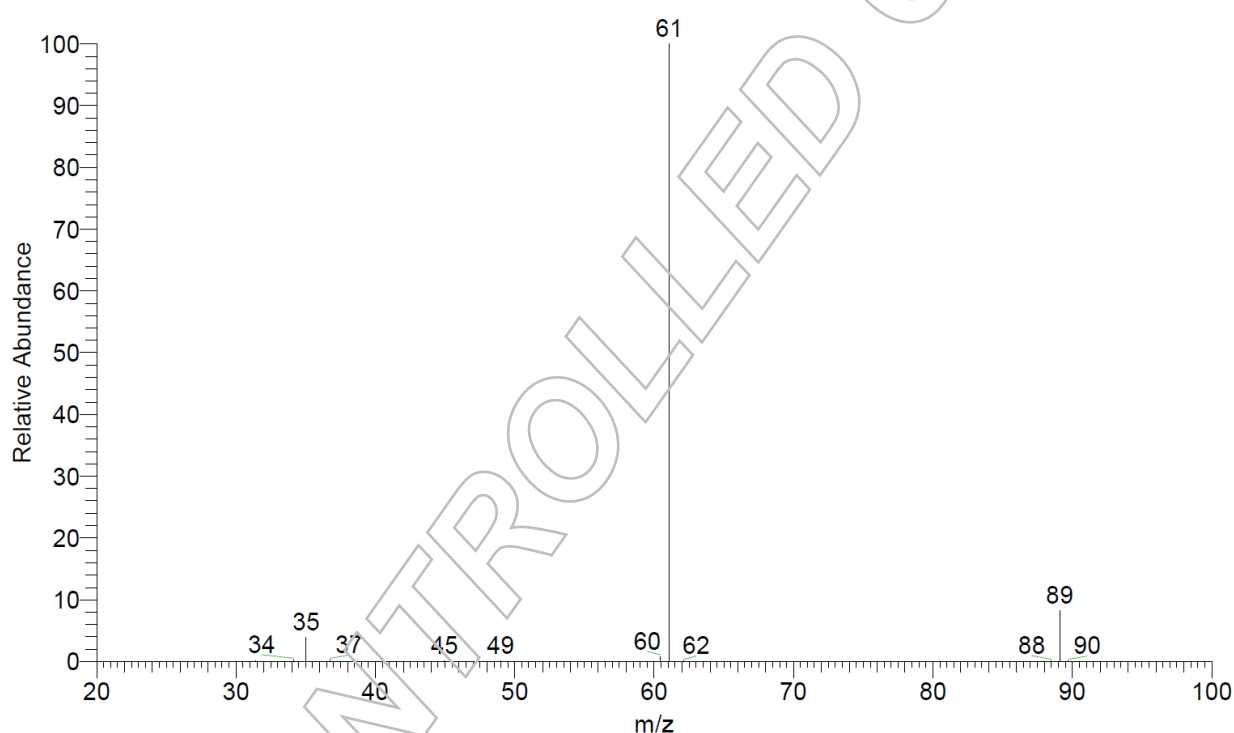
Dr. Sabine Schröder
Product Release

I. Identity

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

Ia. Mass Spectrum

Method: 4.5 kV ESI; vaporization temperature: 200 °C, direct inlet

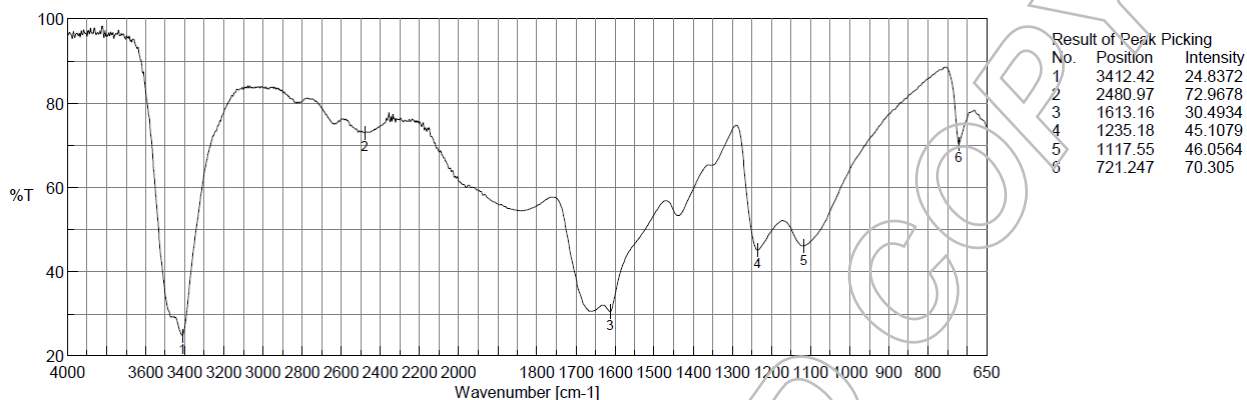


m/z	Fragments (M = anhydrous base)
89	[M – H]

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

Ib. IR Spectrum

Method: Attenuated Total Reflection Fourier Transform Infrared (ATR-FTIR) Spectroscopy



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

II. Assay

The assay of the reference substance was established by titration.

Conditions:

Titration Mettler DL 77
Titration 0.1 M NaOH
Sensor DG 111-SC

Results:

Average 99.48 %
Number results n=6
Standard deviation 0.05 %

III. Final Result

The assay is assessed to be 99.5 % 'as is'

The assay 'as is' is equivalent to the assay based on the not anhydrous and not dried substance respectively.