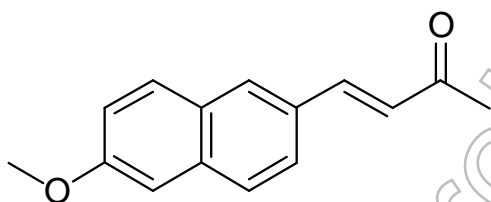




# Certificate of Analysis

## Reference Standard

(E)-4-(6-Methoxynaphthalen-2-yl)but-3-en-2-one



Molecular Formula: C<sub>15</sub>H<sub>14</sub>O<sub>2</sub>  
Molecular Weight: 226.27  
CAS Number: [ 127053-22-9 ]

Catalogue Number: MM0153.05  
Lot Number: 153.05.08.02  
Long Term Storage: 2 to 8 °C, dark  
Appearance: yellow solid  
Melting Point: 122 °C  
Assay 'as is': 98.6 %

Date of shipment: **2015-07-04**

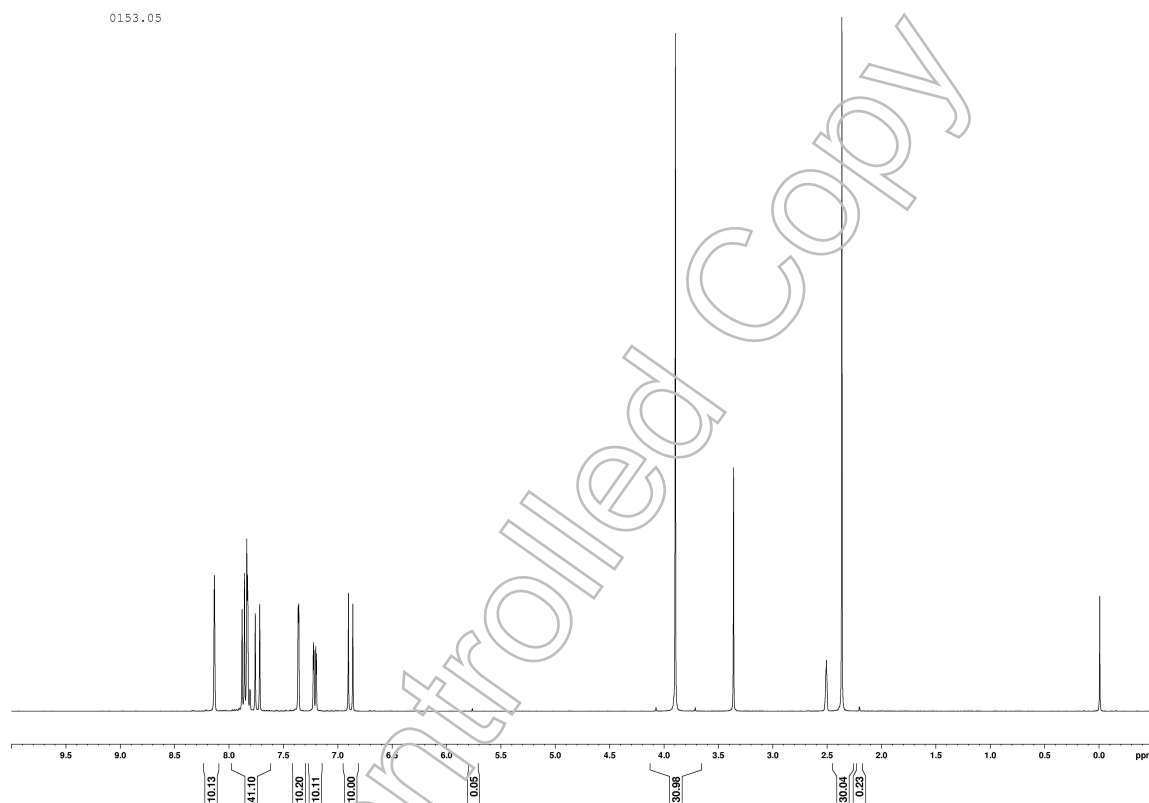
This certificate is valid for two years from the date of shipment provided the substance is stored under the recommended conditions.



## I. Identity

The identity of the reference substance was established by  $^1\text{H-NMR}$  spectroscopy. The structure is confirmed with the signals of the spectrum and their interpretation.

Conditions: 400 MHz,  $\text{DMSO-d}_6$

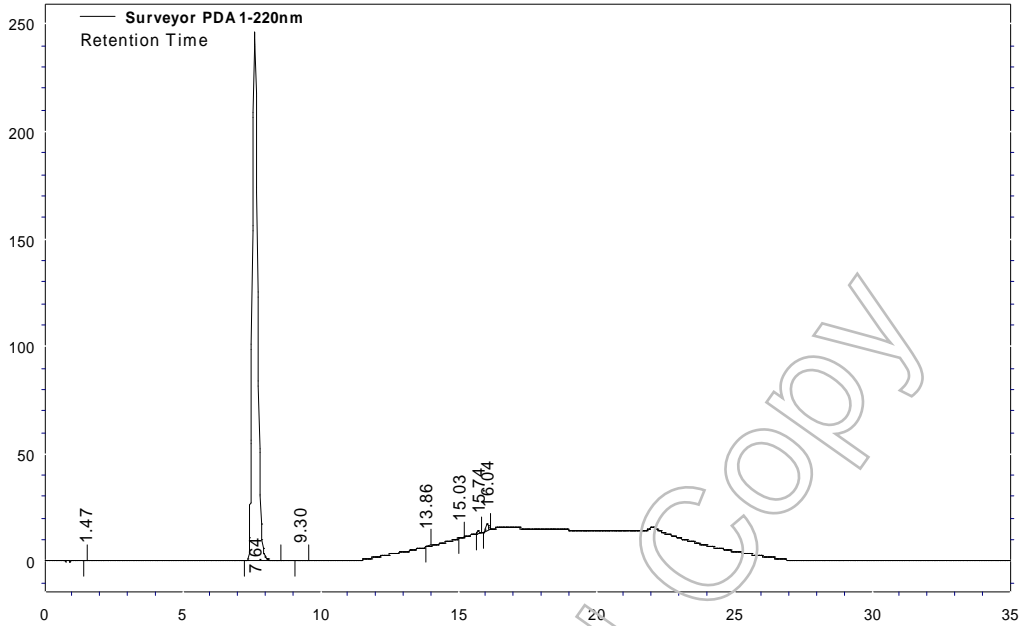


## II. Purity

The purity of the reference substance was analysed by high performance liquid chromatography (HPLC).

### HPLC Conditions:

Column:	Conditions:	Detector:	Injector:
RP 60 Select B	1.0 ml/min, 40 °C	DAD	Auto
5 $\mu\text{m}$ , 125 x 4 mm	0-9 min Water/Acetonitrile 55/45	220 nm	2 $\mu\text{l}$ ; 0.05504 mg/ml in
	9-14 min Water/Acetonitrile to 20/80		Water/Acetonitrile 50/50 (v/v)
	14-20 min Water/Acetonitrile 20/80		
	20-25 min Water/Acetonitrile to 55/45		
	25-35 min Water/Acetonitrile 55/45 (v/v);		
	0.1 % $\text{H}_3\text{PO}_4$		



**Area Percent Report - Sorted by Signal**

Pk #	Retention Time	Area	Area %
1	1.47	409	0.01
2	7.64	3180623	98.79
3	9.30	6343	0.20
4	13.86	1040	0.03
5	15.03	1141	0.04
6	15.74	6284	0.20
7	16.04	23753	0.74
Totals		3219593	100.00

For the calculation the system peaks were ignored. 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 %.

**Results:**

**Average** 98.81 %  
**Number of results** n=6  
**Standard deviation** 0.02 %



### III. Water Content

Method: Karl Fischer titration

**Results:**

**Average** 0.06 %  
**Number of results** n=2

### IV. Residual Solvents

Method: headspace gas chromatography (GC)

Result: 0.17 % Dichloromethane

### V. Final Result

**Total impurities (HPLC)** 1.19 %  
**Water content** 0.06 %  
**Residual solvents** 0.17 %  
**Assay (100 % method)** 98.58 %

The assay is assessed to be 98.6 % 'as is'

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

Release Date: 2008-02-12

LGC GmbH

Dr. Sabine Schröder  
Product Release