



Dr. Ehrenstorfer
276 Abby Road | Manchester, NH 03103 | USA
Tel: +1-603-206-0759 | Fax: 1-603-622-5180
www.lgcstandards.com



Date manufactured: 26 -Aug-2016
Original issue date: 26 -Aug-2016

Date Received: _____
Rev 0

Certificate of Analysis

Catalog No.:	Lot No.:	Storage:	Solvent:	Expiration Date:	Description:
DRE- GS09000138 TN	289144	≤ -10 °C	Triacetin	26-Aug-2017	Cannabis Residual Solvents Mix, 1000 mg/L (RM, ISO GUIDE 34), 5 x 1 ml

Certified Values:

The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by gas chromatography (GC), gas chromatography/mass spectrometry (GC/MS), or High Performance Liquid Chromatography (HPLC) using an internally developed method against an independent source. The uncertainty value is calculated for a 95% confidence interval with a *k* value of 2.

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration, mg/L
2-methylpentane	107-83-5	99.4	384.9.1P	998.4 +/-54
3-methylpentane	96-14-0	99.3	346.7.1P	1001 +/-53
n-hexane (C6)	110-54-3	99.9	620.29.3P	1007 +/-53
cyclohexane	110-82-7	99.9	308.1.4P	1003 +/-54
heptane (C7)	142-82-5	99.6	546.29.2P	998.4 +/-54
n-pentane (C5)	109-66-0	99.5	976.9.2.1P	1005 +/-54
benzene	71-43-2	99.7	146.18.4P	1011 +/-54
1-pentanol	71-41-0	99.5	858.1.1P	990.6 +/-53
1-propanol	71-23-8	99.5	499.18.1P	986.9 +/-53
2-ethoxyethanol	110-80-5	99.9	931.7.1P	994.9 +/-54
isopropyl alcohol	67-63-0	100	570.24.4P	994.8 +/-53
ethylene glycol	107-21-1	99.8	307.1.3.1P	998 +/-54
1,2-dimethoxyethane	110-71-4	99	3198.7.1.1P	1001 +/-53
1,4-dioxane	123-91-1	99.99	223.1.2.1P	1008 +/-53
ethyl ether	60-29-7	99.7	226.1.2P	1006 +/-54
acetone	67-64-1	99.9	196.29.1.1P	1011 +/-54
ethyl acetate	141-78-6	99	269.29.2P	1002 +/-54
isopropyl acetate	108-21-4	99.8	372.1.2P	1011 +/-54
acetonitrile	75-05-8	99.5	204.10.4P	1007 +/-53
dimethyl sulfoxide (DMSO)	67-68-5	99.7	405.9.5P	1011 +/-54
N,N-dimethylformamide	68-12-2	99.9	359.18.1P	1003 +/-54
pyridine	110-86-1	99.9	101.9.2P	1010 +/-53
n-propane	74-98-6	99.9	4643.52.1P	999 +/-51
2,2-dimethylbutane	75-83-2	99	4327.1.1P	999.5 +/-54

Certificate of Analysis

Catalog No.: DRE-

Lot No.: 289144

Expiration Date: 26-Aug-2017

butane (C4)	106-97-8	99	1009.1.1P	1002 +/-51
1-butanol	71-36-3	99.9	224.9.1P	1015 +/-55
2-butanol	78-92-2	99.8	354.29.1P	995 +/-53
2-butanone (MEK)	78-93-3	99.9	197.18.1P	1009 +/-54
N,N-dimethylacetamide	127-19-5	99.9	1928.1.1P	1009 +/-54
2,3-dimethylbutane	79-29-8	99.6	2086.7.1P	1002 +/-54
ethanol	64-17-5	99.5	202.1.13P	1014 +/-54
ethylbenzene	100-41-4	99.9	174.8.2P	1007 +/-54
isobutane	75-28-5	95	1072.7.1P	1003 +/-50
isopropylbenzene	98-82-8	99.8	176.9.2.1P	1008 +/-54
methanol	67-56-1	99.9	328.10.2P	993.4 +/-53
2-methylbutane	78-78-4	99.8	1420.7.2P	1002 +/-54
methylene chloride	75-09-2	99.9	178.24.2P	1012 +/-54
tetrahydrofuran (THF)	109-99-9	99.9	299.271.1P	1001 +/-53
tetramethylene sulfone	126-33-0	99.8	1194.1.1P	1006 +/-53
toluene	108-88-3	99.9	184.9.1P	1011 +/-54
m-xylene	108-38-3	99.7	193.7.1P	1003 +/-53
o-xylene	95-47-6	99.5	192.1.3P	1006 +/-54
p-xylene	106-42-3	99	194.24.1.1P	1001 +/-53

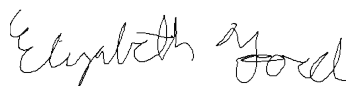
Intended Uses:

This Certified Reference material (CRM) is intended for use as a calibration standard or a quality control standard for Chromatography Equipment such as GC, GC/MS, HPLC, and HPLC/MS. It may also be used for various EN, ISO, EPA, and ASTM methods.

Method of Preparation:

All weights are traceable through N. I. S. T. Test No. 822/264157-00. Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetrically.

Manufactured By:




Elizabeth Ford

Certified By:



HuiChen Stavros, Ph.D.

Released By:



Francis Tran

Certificate of Analysis

Catalog No.: DRE-

Lot No.: 289144

Expiration Date: 26-Aug-2017

Packaging and Storage:

The solution should be stored according to the following storage requirements: $\leq -10^{\circ}\text{C}$

Once the product is opened, it should be transferred to a vial with minimum head space if the product was in a sealed ampoule. Once opened, the expiration is determined by user specifications.

Glassware Calibration:

Only Class A glassware is used in the manufacture and quality control of Standards. All glassware is calibrated using NIST traceable weights.

Weights and Balance Calibration:

Weights used to perform daily checks on balances are calibrated annually within a calibration laboratory recognized by NIST as Echelon I. Balances are checked daily in accordance to in house procedures. Balances are calibrated annually by an ISO/IEC 17025:2005 and ISO Guide 34:2009 accredited metrology service.

Homogeneity:

Random replicate samples of the final packaged CRM have been analyzed to prove homogeneity in accordance with internal procedures. This is consistent with the intended use of this CRM. The homogeneity of this product has been confirmed by procedures consistent with ISO/IEC guide 17025:2005 and ISO guide 34:2009.

Hazardous information:

Refer to MSDS

Calculation of Uncertainty

The following equations are used to calculate the value of the expanded uncertainty: $U = k u_c$; $U = \text{Expanded}$

Uncertainty, $k =$ the coverage factor at the 95% confidence level, $k=2$, $u_c =$ the combined uncertainty $u_c = \sqrt{\sum u_i^2}$ where u_i are the individual uncertainty components for characterization, transportation, homogeneity, and shelf life.

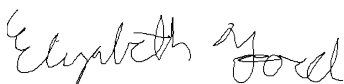
Expiration Information:

The stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. This standard is guaranteed until 26-Aug-2017

Accreditation:

This standard was manufactured by an ISO 17025 Chemical Testing Lab (Certificate number 3031.01) and ISO Guide 34 Reference Material Producer (RMP) Certificate number 3031.02 accredited by The American Association of Laboratory Accreditation (A2LA). Manufacturer's Quality System audited and registered by NSF-ISR to ISO 9001:2008 (Certificate number IZ391-IS4).

Manufactured By:




Elizabeth Ford

Certified By:



HuiChen Stavros, Ph.D.

Released By:



Francis Tran