

## REFERENCE MATERIAL CERTIFICATE

This certificate is designed in accordance with ISO Guide 31. This reference material (RM) was designed, produced and verified in accordance with a registered quality management system ISO 9001. All measurements were performed according to ISO/IEC 17025 by an A2LA accredited laboratory (3031.01)

### Reference Material

**Product Name**  
Florida Residual Solvent Mixture 1 1250-10500  
µg/mL in Triacetin

**Product Code**  
DRE-GS09000860TN

**Lot Number**  
2-G404867TN

**Format**  
Multicomponent Solution

**Expiry Date**  
17 Mar 2022

**Storage Temp**  
≤ -10 °C

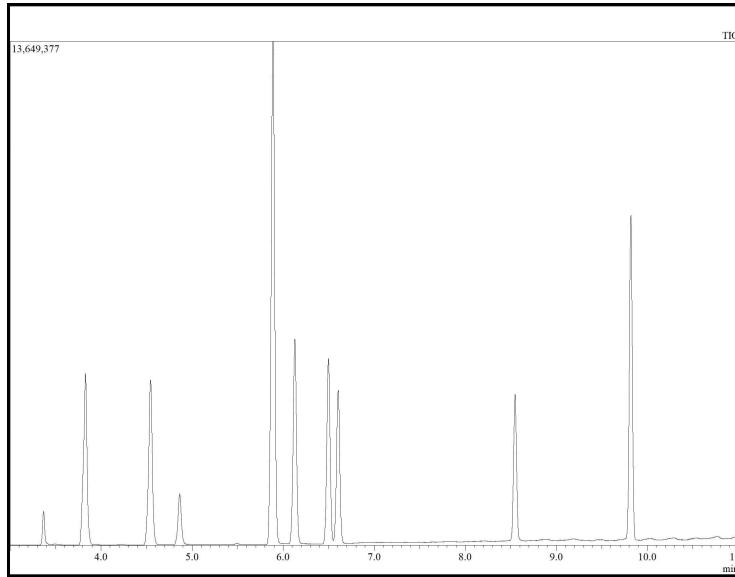
Compound Name	CERTIFIED		CAS	Lot Number	Combined Purity (%)	Amount (mg)	RT (min)
	Concentration (mg/L)	Uncertainty (mg/L)					
N-propane	10490	23	74-98-6	4643.14P	99.7	526.10	3.83
Butane (c4)	4497	45	106-97-8	1009.13P	99	227.10	4.53
Methanol	1245	4	67-56-1	328.24.5P	99.9	62.24	4.86
N-pentane (c5)	3761	13	109-66-0	976.9.4P	99.6	188.04	5.88
Ethanol	4997	18	64-17-5	202.52.1P	99.7	249.83	5.88
Ethyl Ether	2481	9	60-29-7	226.9.1P	99.8	124.05	6.12
Acetone	3773	13	67-64-1	196.271.4P	99.6	188.64	6.49
Isopropyl Alcohol	2519	9	67-63-0	570.24.7P	99.9	125.97	6.60
Ethyl Acetate	2026	21	141-78-6	269.29.2P	99	101.28	8.54
Heptane (c7)	2518	9	142-82-5	546.24.1P	99.7	125.92	9.81

The producer certifies that this reference material meets the specification stated in this certificate until the expiry date, provided it is stored unopened at the recommended temperature herein. Product warranties for this reference material are set out in the terms and conditions of purchase.

CERTIFIED BY	CERTIFIED ON		RM Release
Adrienne Ormand	23 Mar 2020		



CHROMATOGRAM



Instrument  
GC/MS

Detection  
MS

Column  
Phenomenex ZB-624 60m x 0.25  
mm, ID 1.4 um

Method Details  
Rate Temp.(C) Hold time (min)  
35.0 1.0  
10.0 70.0 0.0  
20.0 120.0 0.0  
10.0 200.0 0.0  
20.0 240.0 5.0

Inj.-Vol  
1 µl

Flow  
1 ml/min

### Method of Preparation

The certified value is based on gravimetric and volumetric preparation of this RM. This RM has been confirmed by the appropriate analytical techniques.

### Batch Information

Solvent: Triacetin, Lot no. MKCD8776, 50 mL

### Intended Use

This RM is intended for use in a laboratory as a calibration and quality control standard or in method development for analytical techniques.

### Safety

Proper precautions should be observed while handling. See Safety Data Sheet.

### Uncertainty

The certified value(s) and uncertainty(ies) are determined in accordance with EURACHEM/CITAC Guide for "Quantifying Uncertainty in Analytical Measurements, 3rd Edition", with an 95% confidence level (k=2). Uncertainty is based on the Characterization Uncertainty, which includes uncertainties of preparation and purity of neat materials.

### Traceability

The balances used for gravimetric measurements are calibrated with weights traceable to the national standards (NIST). The calibration of the balances is verified daily internally and annually by an external accredited calibration service. Only Class A glassware is used for volumetric measurements.

### Storage

The RM should be stored in the original sealed bottle at the indicated temperature.

### Instructions for Use

The RM should be used shortly after opening to avoid concentration changes due to evaporation. It is recommended to use 1 µL as the minimum sample size. If storage after opening is necessary, it should be transferred to an amber vial with minimum head space and a Teflon lined silicon septum. After opening, please consult your own quality management system for proper use and storage. Visit the support section of our website [lgcstandards.com](http://lgcstandards.com) for a series of Dr. Ehrenstorfer Tech Tip videos and frequently asked questions.