



Institute for
Interlaboratory Studies

Certificate of Analysis

Reference Material MEG-160927

Mono Ethylene Glycol

Reference Material MEG-160927 consists of a 250 mL bottle with approximately 240 mL of Mono Ethylene Glycol (MEG). This RM is intended primarily as a quality control material for use in the determination of Acidity ASTM D1613, Aldehydes, Color Pt/Co, Density at 20°C, ASTM D1078 Distillation, Iron, Specific Gravity 20/20°C and Water.

Certified Property Values

The certified values are given in table 1 and have been derived from the results obtained from an international interlaboratory study in which 64 laboratories in 28 different countries participated. The results of this interlaboratory study are presented and discussed in the PT report iis16C09. A separate certification report about the RM evaluation can be ordered, see www.iisnl.com.

Table 1. Certified values^b for MEG-160927.

| <u>Parameter</u> | <u>Certified value^a</u> |
|----------------------------------|------------------------------------|
| Acidity (ASTM D1613), mg/kg | 6.00 ± 0.40 |
| Aldehydes as Acetaldehyde, mg/kg | 11.81 ± 0.79 |
| Color Pt/Co (ASTM D1209) | 1.93 ± 0.28 |
| Color Pt/Co (ASTM D5386) | 1.88 ± 0.31 |
| Density at 20°C, kg/L | 1.11333 ± 0.00002 |
| IBP, °C | 196.7 ± 0.1 |
| 50% rec., °C | 197.6 ± 0.1 |
| Dry Point, °C | 198.0 ± 0.1 |
| Iron as Fe, mg/kg | 0.0263 ± 0.0031 |
| Specific Gravity 20/20°C | 1.11534 ± 0.00003 |
| Water, mg/kg | 549.1 ± 8.3 |

a) The estimated uncertainty is given as 95% confidence limits, see the certification report.

b) The following values were also determined for this RM. These values are not certified, but for indication only:

| | |
|-----------------------------------|-----------------|
| Acidity (ASTM E2679), mg/kg | 1.60 ± 0.54 |
| Ash, %M/M | 0.0003 ± 0.0001 |
| Chloride (inorganic) as Cl, mg/kg | 0.106 ± 0.024 |
| Diethylene glycol, mg/kg | 15.0 ± 2.0 |
| Purity, %M/M | 99.919 ± 0.009 |

NOTICE AND WARNINGS TO USERS


Shelf life: The preparation of this RM was finished at September 27, 2016. When stored properly and unopened, the expiry date of this RM is **December 2023**. The validity of the RM bottles in stock is regularly verified by analytical testing by an ISO/IEC17025 accredited laboratory. If there is any doubt about the validity of the RM you are advised to contact [iis \(nl.iis@sgs.com\)](mailto:nl.iis@sgs.com).

Storage: Bottles should be stored in a dark and cool place, preferably at a temperature between 0°C and + 10°C.

Suggested procedure for use of the RM as quality control sample: The contents must be mixed to ensure homogeneity before opening a bottle and taking a sample for analysis. Once the bottle has been opened, the material is susceptible to contamination (e.g. laboratory dust or vapors) or losses. Certified values are not applicable to bottles stored after opening, even if resealed.

Safety handling instructions: Mono Ethylene Glycol is harmful if swallowed; therefore, care should be exercised during handling and use. Use proper methods for disposal of waste.

Spijkenisse, The Netherlands
Reapproved: July 2021 (Revision 5)


Mrs. Anja Noordman-de Neef, BSc
Institute for Interlaboratory Studies