



Institute for
Interlaboratory Studies

Certificate of Analysis

Reference Material EtOH-180599

Ethanol

Reference Material EtOH-180599 consists of a 100 mL bottle with approximately 100 mL of Ethanol. This RM is intended primarily as a quality control material for use in the determinations of Purity, Strength, Apparent Density 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 19 laboratories in 15 different countries participated. The results of this interlaboratory study are presented and discussed in the PT report iis99C01. A separate certification report about the RM evaluation can be ordered, see www.iisnl.com.

Table 1. Certified values^b for EtOH-180599.

| <u>Parameter</u> | <u>Certified value^a</u> |
|--------------------------------|------------------------------------|
| Purity, %M/M | 96.191 ± 0.079 |
| Purity on dry basis, %M/M | 99.991 ± 0.001 |
| Strength, %V/V | 97.558 ± 0.030 |
| Apparent Density at 20°C, kg/L | 0.79974 ± 0.00011 |
| Water, %M/M | 3.802 ± 0.060 |

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.

Strength, %M/M: 96.155 ± 0.056, Methanol, mg/kg: 27.4 ± 6.5; Acetone, mg/kg: 11.7 ± 2.5

NOTICE AND WARNINGS TO USERS

Shelf life: The preparation of this RM was finished at May 18, 1999. When stored properly and unopened, the expire 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).

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 the 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: Ethanol is flammable; therefore, care should be exercised during handling and use. Use proper methods for disposal of waste.

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