

# Certificate of Analysis

Reference Material JF-011097

Jet Fuel A1

Reference Material JF-011097 consists of a 260 ml bottle, containing approximately 250 ml of regular aviation kerosene (type Jet Fuel A1). This RM is intended primarily as a quality control material for use in the determination of Freezing Point, Density, MSEP, Naphthalenes, Smoke Point, Sulphur and some distillation properties.

## Certified Property Values

The certified values are given in table 1. The certified values in table 1 have been derived from the results obtained from 2 independent international interlaboratory studies in which respectively 15 and 63 laboratories participated. The results of these interlaboratory studies are presented and discussed in the I.I.S. report IIS97J02-RM.

**Table 1. Certified values<sup>b</sup> for JF-011097.**

<u>Parameter</u>	<u>Certified value<sup>a</sup></u>
Aromatics, % V/V	23.6 ± 0.3
Density @ 15°C, kg/L	0.80455 ± 0.00005
Freezing Point, °C	- 49.3 ± 0.3
Kinematic viscosity @ -20°C, mm <sup>2</sup> /s	3.554 ± 0.014
MSEP, %	98.1 ± 0.4
Naphthalenes, % V/V	2.99 ± 0.04
Smoke Point, °C	21.2 ± 0.5
Sulphur, % W/W	0.0157 ± 0.0010
i.b.p., °C	147.8 ± 1.0
50% recovered, °C	191.9 ± 0.4
f.b.p., °C	262.5 ± 0.8

- a) The estimated uncertainty is given as 95% confidence limits  
b) The following values were also determined for this RM. These values are not certified, but for indication only:  
Distillation: 10% recovered, °C 165.8 ± 0.5 and 90% recovered, °C 239.9 ± 0.6;  
Mercaptans Sulphur, % W/W 0.00015 ± 0.0005; Specific Energy, MJ/kg 43.113 ± 0.005;  
Total Acidity, mg KOH/g 0.0019 ± 0.005

## **NOTICE AND WARNINGS TO USERS**

Shelf life: The preparation of this RM was finished February 27, 1998. When stored properly and unopened, the expiring date of this RM is **March 2012**. I.I.S. regularly checks the validity of the RM's in stock. If there is any doubt about the validity of the RM you are advised to contact I.I.S.

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:

Before opening a bottle and taking a sample for analysis, the contents must be mixed to ensure homogeneity. 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: Kerosine is inflammable. The flash point of the material of this RM is 41 °C; therefore, care should be exercised during handling and use. Use proper methods for disposal of waste.

