



## ***Instructions for Handling Test Materials and Recording Results***

### **General Instructions**

#### **Receipt and Storage**

On receipt of the test material, record the date and at room temperature  $20(\pm 5)^{\circ}\text{C}$  in the dark from the time of arrival at your laboratory until testing is commenced.

If a preservative is routinely added to the type of sample provided as part of your laboratory procedures, a suitable aliquot should be preserved as soon as possible in the normal way. Any dilutions that result from addition of preservatives should be corrected for before submission of results.

#### **Sample Preparation**

All samples should be equilibrated at room temperature  $20(\pm 5)^{\circ}\text{C}$  before any dilutions or measurements are performed. Each sample should be prepared in accordance with the specific instructions for the measurands to be tested. Any sample preparation required should be conducted in such a way as to ensure that any errors introduced by this dilution are much smaller than the overall analytical error involved in your method.

The test material should be analysed in accordance with the deadlines shown on the website:

<https://www.lgcpt.com/portal>

#### **Sample Analysis**

The test materials provided are sourced in such a way as to be as close as possible to 'real' samples routinely analysed by participant laboratories. Samples should be analysed by the methods 'routinely' used for those measurands in your laboratory and all normal quality control procedures should be adopted.

### ***Sample 2 (Diesel Fuel)***

#### **Materials Supplied**

- 1 x 1 USgal (~3750ml) metal can containing diesel fuel

<b>Determinand</b>	<b>Instruction</b>
Boiling point (BP) distribution	Participants to report only the 90% value
Distillation	Participants to report only the 90% value
Copper Corrosion	Participants should test for three (3) hours at $50^{\circ}\text{C}$ and report Z = the 'classification category (1, 2, 3, or 4)' and p = the 'classification description for the corresponding Z (a – e), in the format Zp.
Density	Participants are to carry out the test at the temperature of $15^{\circ}\text{C}$



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#### Sample 4 (Crude Oil)

##### Materials Supplied

- 2 x 1000ml metal can containing Crude Oil

Determinand	Instruction
Density	Participants are to carry out the test at the temperature of 15°C
API Gravity	Participants are to carry out the test at the temperature of 15°C

#### Sample 5 (Engine Oil Lubricant)

##### Materials Supplied

- 1 x ¾ USgal (~2800ml) metal can containing Engine Oil Lubricant

Determinand	Instruction
Shear stability	Participants to report the percentage viscosity loss.
Evaporation loss	Participants shall carry out the measurement according to 'Procedure A' using Noack evaporative tester equipment.
Viscosity, Low temperature	Participants using ASTM method D4684 may report results measured using either Procedure A or Procedure B. Participants using ASTM method D5293 may report results measured using either 'manual option' or 'Contact cooled Instrument'.
Viscosity, Low temperature	Participants are requested to report the temperature for each viscosity reading, 5000, 10000, 20000, 30000, 40000 mPa*s (cP), the Gelation Index and the temperature at which it occurs, a total of seven (7) results.
Density	Participants are to carry out the test at the temperature of 15°C
Demulsibility test	Participants using D 1401 should specify the bath temperature at 54°C. Participants using D 2711 should specify the bath temperature at 82°C.

#### Sample 6 (Simulated In Service Engine Oil)

##### Materials Supplied

- 1 x 250ml glass bottle containing In Service Engine Oil
- 1 x 50ml glass bottle containing New Oil for FTIR by reference subtraction

Determinand	Instruction
Water content	Participants, who use D6304 and D1744 methods, should carry out the test by using oven or water vaporizer.
Particle count	1. Vigorously shake (either by hand or commercial/laboratory paint shaker) the closed bottle for at least 1 minute. 2. Disperse the contents of the bottle by sonicating in an ultrasonic bath (minimum intensity 5 W/cm <sup>2</sup> ) for at least 1 minute.



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	<p>3. Mechanically shake the closed bottle by commercial or laboratory paint shaker for at least 3 minutes.</p> <p>4. Degas the bottle either by: placing in an ultrasonic bath for ~30 seconds or placing in a vacuum chamber until the air bubbles rise to the surface.</p> <p>5. Remove bottle from degassing equipment above and gently turn the sample bottle over at least five (5) times taking care not to introduce air bubbles.</p> <p>6. Immediately, without delay, proceed to analytical testing.</p> <p>If dilution is required please follow steps 1 - 3 above take subsample add diluent per procedure/method and repeat steps 1 - 6.</p> <p><b>Report results as the raw counts of number of particles per mL. Do not report scale numbers.</b></p>
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#### Recording Results

- All results should be submitted using PORTAL
- Please go to <https://www.lgcpt.com/portal>
- Login using your Lab ID, username and password.
  
- A PORTAL user guide can be downloaded from the help section.

If you need any help at all please do not hesitate to contact our support team using the details below or your local LGC representative.

Tel: +44(0)161 762 2500

Email: [support@lgcgroup.com](mailto:support@lgcgroup.com)