LINETRONIC TECHNOLOGIES

OilLab 580

Noack

ASTM D5800
IP 421

Subject

Determination of the evaporation loss of lubricating oils (particularly engine oils). Procedure A uses the Noack evaporative tester equipment;
Procedure B uses the automated non-Woods metal Noack evaporative apparatus.

Measuring Noack Principle

A quantity of 65 grams of sample is heated to a specific temperature and maintained for 1 hour while it is enclosed in a crucible, the crucible's cover is shaped to allow a constant vacuum of -2 mbar to remove from the crucible the evaporating portion of the sample.
At the end of the test, the sample is cooled and then reweighted: the difference, reported in percentage, represent the sample's Evaporation Loss by the Noack Method.
Method A: bath is controlled at 250°C;
Method B: the sample is controlled at 245.2°C.

Measuring Temperature Probe

- Platinum resistance PT100 class A

Measuring Parameters

- Temperatures: in °C
- Measuring range: +225°C to +275°C
- Measuring span: 0°C … +320°C
- Resolution: 0.06 °C
- Accuracy: ± 0.1 °C
- Repeatability / Reproducibility: as per standards methods or better

Crucible, Crucible Cover and Heating Block

- Same dimensions and volume as ASTM D5800

Heating unit

- Electrical resistance, 420 W

Vacuum Pump

- Equipped with high resistant Kalrez valve, inlet filter to remove product residuals
- Automatic electronic control system able to maintain the -2mB during the analysis
- Low voltage power supply

Fine tuning

- By means of an external potentiometer a finest adjustment can be made in order to calibrate the integrated vacuum sensor

Integrated panel PC

- TFT/LCD 8"
- Resolution 1024 × 768, 16.2 M colours
- 2 USB ports for connection to an external printer and/or external PC
- Storage capacity for more than 60'000 analysis

Software Features

- All analytical parameters recorded
- Customizable analysis parameters and methods
- Customizable results report
- Printable graphs and results

The software includes:

Analysis Menu
- Standard method as per ASTM / IP / ISO / EN / DIN… norms of reference
- Unknow sample
- Audible alarm and displayed messages (at the end of the analysis and in case of errors and/or malfunctions)

Diagnostic Menu
- Direct access to all analog, digital, inputs and outputs
- Selectable value displaying: °C / Volt

Calibration Menu
- Automatic calibration of temperature probe
- Last calibration date referred to each single probe displayed and relative data printable
- Display of calibration diagram
- Insertion of offset values

Data Utilities
- Fields for introduction of operator and product name
- Archive viewer for files recall
- All analysis stored in Excel® compatible format
- LIMS compatible

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Particular attention has been payd to the integrated vacuum pump that is also protected by an inlet filter for residual recovery.

Crucible holder made in stainless steel keeps the cup assembly ready to use.

Protection gloves ans hook wrench, high quality materials for safety operations.

With the pliers the nut of the crucible cover is accurate and easily fixed.

Electrical Supply
- 220V ± 15% / 50 to 60 Hz
- 115V ± 15% / 60 Hz

Cord Cable:
- 3 conductors flexible cable 2 m (7 feet) length with PVC sheath oil and heat resistant as per CENELEC directives

Ambient Temperature
- Max 35°C
- H.R. 80%

Dimensions
- Length 400 mm
- Width 450 mm
- Max. height: 450 mm

Weight
- 22 Kg

Accessories
LAB-580-1001: Glassware acc. CEC L40-A-93, 1 complete set comprising 2 glass bottles 2 litres capacity, with the necessary rubber bungs, glass delivery tubes (internal Ø 4 mm) and silicone tubings
LAB-580-1002: Stand for glass bottles, including inclined manometer 0 to 50 mm water and Fresenius column
LAB-580-1003: Evaporation crucible
LAB-580-1009: Noack reference oil, 1 Ltr
LAB-580-0010: Noack software evaluation tools

Spare Parts
LAB-xxx/005-03: heather + auto adhesive + insulation
LAB-xxx/005-04: thermo switch
LAB-xxx/005-06: PT100 bath
LAB-xxx/007-02: static relay
LAB-xxx/007-04: PCB fuse 1 AT (box of 10 pcs)
LAB-xxx/006-01: cooling fluid valve + fitting
LAB-300/007-01: main electronic board Pour Point
LAB-300/002-16: precision potentiometer
LAB-300/008-12: PT100 product w/connector
LAB-300/008-13: PT100 detection
LAB-300/008-04: calibrated test jar
LAB-300/008-041: o-ring for test jar

Calibration Tools
OilLab 80: calibration decade box – PT100 simulator
OilLab 81: set of connectors and cables for cold range

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SWISS CERTIFICATION
SCES 040