



AUTOMATED Noack Evaporation Loss Tester

NCK2 5G

ADVANTAGES:

- Fully equipped unit in compact footprint
- Highly precise sample temperature control
- Smart temperature probe tracks offsets, calibrations
- Enhanced quality control and calibration features
- Sample weight management interface
- Programmable test duration & temperature
- Multiple safety features, including automatic pre-test leak check
- Glassware tubes heating option for testing waxy products

DL's safe, easy to use NCK2 5G Noack evaporation loss analyzer enables the most precise testing possible to meet increasing QS/OA requirements in **full compliance with CEC, ASTM & IP methods**. Excellent repeatability and reproducibility have been proven through numerous international round robin programs.

Designed for routine day-to-day work in labs with high sample workloads, the NCK2 5G test initiates with a **few simple keystrokes**. The test can be started with either a cold or hot heating block, significantly increasing test productivity. **Smart assistance** features automatically alert the operator if any test device is not properly set, and the instrument carefully tracks sample temperature and vacuum throughout the test's duration, providing a digital display of each and recording the values to memory.

NCK2 5G's **advanced quality control features**—including traceable automatic calibrations with lock-out control and detailed test reports with tracking numbers of all measuring devices—fulfill strict ISO 9000 quality system requirements. The metal temperature probe is delivered with an **engraved serial number and traceable calibration certificate**. Extended local memory capacity, graphic printer connection and PC link enable powerful, flexible results management.

APPLICATIONS:

Volatility

- BASE STOCK OIL
- FORMULATED MOTOR OIL
- GEAR BOX & TRANSMISSION OIL
- SHOCK ABSORBER OIL
- AUTOMATIC TRANSMISSION FLUID
- HYDRAULIC FLUID
- WAXY PRODUCTS

METHODS:

- CEC L-40-93
- ASTM D 5800
- IP 421

ISL NCK2 5G: Automated Evaporation Loss Tester

The **Noack Volatility Test** is used to determine evaporation loss of lubricating oils, an issue of particular importance in engine lubrication. Portions of an oil can evaporate under high temperature conditions, potentially altering oil properties such as viscosity. A low Noack score indicates an oil that will maintain its original protective and performance quality for a longer amount of time. These oils perform better under heat, translating to better engine protection, longer oil life, and improved fuel economy.

POWERFUL PRECISION, VERSATILE TESTING

- Directly measures specimen temperature, providing determinations in accordance to "Procedure B" of CEC, ASTM and IP methods
- Compact footprint and monoblock design
- High throughput capabilities; immediately start new test after one completes
- Sample temperature can be monitored at cooling
- Tube heating option enables testing of waxy products
- Programmable audible notification at end of test run
- Flexible programming of test temperature & duration

SMART, FLEXIBLE USER INTERFACE

- User friendly keypad programming
- User-selectable language interface
- 1-button test initiation, fully automated operation
- On-screen tracking of test progress and results
- Locally stores 40 product profiles, 10 standard/custom methods, 10 operator names, & 30 results with curves
- Automatically calculates evaporation loss with sample weighing management interface
- Optional direct balance connection
- Data output to any graphic printer, PC and/or LIMS

ENHANCED SAFETY & QUALITY FEATURES

- Eliminates use of Wood's alloy, increasing both safety and precision
- Over-temperature securities, independent for sample and for heating block
- Alarms and start test refusal if sample probe and/or crucible is not installed properly
- Smart temperature probe with built-in memory chip transmits ID, offset values and calibration history to instrument at plug-in
- Traceable automatic calibrations with lock-out control
- Detailed test report with tracking numbers of all measuring devices
- Air filter delivered in standard, optional flowmeter connection possible

FOR ADDITIONAL INFORMATION

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SPECIFICATIONS

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|--------------------------------------|--|--------------------|--|-----------------------------|---|-------------------------|---|--------|---|--------------------------|---|
| Ordering Information | NCK2 5G for highly precise evaporation loss (volatility) testing without use of hazardous Wood's Metal. Includes control unit, glassware, metal ball, clamp, spanner, crucible with lid, temperature probe with calibration certificate. Please specify 230-240V or 110-115V version. | | | | | | | | | | |
| Standard Test Methods | 10 standard or customized test methods, including: CEC L-40-93, ASTM D 5800, IP 421 40 product profiles (product name & test method used) | | | | | | | | | | |
| Operation | <table border="0"> <tr> <td>Heating</td> <td>Spring ring low voltage heating elements</td> </tr> <tr> <td>Test Duration</td> <td>30 minutes to 4 hours</td> </tr> <tr> <td>Temperature Measurement</td> <td>Direct specimen temperature control 100 to 300°C; ±0.1°C resolution; ±0.5°C stability</td> </tr> <tr> <td>Vacuum</td> <td>19 to 21 mm H₂O; ±0.05 accuracy, ±0.2 stability; no vacuum drift or dependence on ambient temperature; electronic vacuum control (std.), or connection to external standard manometer; vacuum circuit equipped with air filter (standard); optional flowmeter</td> </tr> <tr> <td>Sample Weight Management</td> <td>Key in by operator or optional direct balance connection; automatically calculates evaporation loss</td> </tr> </table> | Heating | Spring ring low voltage heating elements | Test Duration | 30 minutes to 4 hours | Temperature Measurement | Direct specimen temperature control 100 to 300°C; ±0.1°C resolution; ±0.5°C stability | Vacuum | 19 to 21 mm H ₂ O; ±0.05 accuracy, ±0.2 stability; no vacuum drift or dependence on ambient temperature; electronic vacuum control (std.), or connection to external standard manometer; vacuum circuit equipped with air filter (standard); optional flowmeter | Sample Weight Management | Key in by operator or optional direct balance connection; automatically calculates evaporation loss |
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| Calibration & Diagnostics | Automatic calibration with programmable frequency; 5-point probe offset correction table; automatic diagnostic routines on analyzer functions; upload/download service features via PC; calibration parameters and unit program backup/restore feature | | | | | | | | | | |
| Documentation | Detailed test report with temperature and vacuum curves plots and tracking numbers of all measuring devices; results date & time stamped; on-screen real time display of temperature, vacuum, elapsed time; 30 results stored in memory, with curves; output to any graphic printer: during run, immediately following test, or later from memory; transmitted to a PC and/or LIMS via built-in serial link | | | | | | | | | | |
| Safety | <table border="0"> <tr> <td>Vacuum Leak Check</td> <td>Automatic self-check for leaks at start of each test run</td> </tr> <tr> <td>Test Condition Verification</td> <td>Message warning & audible alarms if test conditions are not correct</td> </tr> <tr> <td>Temperature</td> <td>Programmable sample over-temperature security, +10°C setpoint; heating block overheating protection; test can be started with cold or hot heating block</td> </tr> </table> | Vacuum Leak Check | Automatic self-check for leaks at start of each test run | Test Condition Verification | Message warning & audible alarms if test conditions are not correct | Temperature | Programmable sample over-temperature security, +10°C setpoint; heating block overheating protection; test can be started with cold or hot heating block | | | | |
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| Options & Accessories | <p>External Manometer mounted on magnetic stand and with connections; delivered filled with liquid</p> <p>Tube Heating Mantle pre-heats interconnection tubing to inhibit condensation and/or clogging of oil in tubes</p> <p>Graphic Printer</p> <p>Noack Certified Reference Materials</p> | | | | | | | | | | |
| Also Available | NCK2 Upgrade Kit upgrades existing ISL NCK 1 units to conform with Procedure B requirements. Includes Wood's Metal-free heating block for enhanced safety and precision, NCK2 crucible, sample temperature probe with traceable calibration certificate, and NCK2 software. Contact ISL/PAC representative for additional information. | | | | | | | | | | |

Due to continuing product development, specifications subject to change at any time without notice. 

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