

Quality Reference Materials

for Laboratory Analyzers

from Phase Technology

Standards You Can Trust; Quality You Can Depend On

Phase Technology Reference Materials are carefully selected and packaged to maintain the highest quality possible:

- *Made from 100% hydrocarbon oils, Not a mineral oil substitute.*
- *Individually tested; supplied with a Certificate of Analysis and vial label detailing expected and tested values with allowable range for the ASTM test method.*
- *Bottled in sterile, 25 ml dark glass vials to protect integrity. Tightly sealed with fitted caps to eliminate contamination.*
- *Shipped in specially designed packaging that complies with IATA Dangerous Goods requirements*
- *Full MSDS supplied with each bottle.*

This unique range of standards ensures the reliability of cloud, pour and freeze point measurements as prescribed by ASTM International and used in 70X and 70V series analyzers:*

- *ASTM D5773, Standard Test Method for Cloud Point*
- *ASTM D5949, Standard Test Method for Pour Point*
- *ASTM D5972, Standard Test Method for Freeze Point*
- *ASTM D6660, Standard Test Method for Freeze Point of Antifreeze Engine Coolants*

Phase Technology Reference Materials

Assure Quality and Increase Confidence in Your Cold Flow Test Results

Your laboratory plays a crucial role in the quality management of released product. Without a quality assurance program in place, there is no way to know if your test results are accurate.

Phase Technology Reference Materials are a vital tool for routine quality assurance and verification of test results. Use this comprehensive range of high quality standards to:

- Verify performance and assure accuracy of vital test equipment
- Increase confidence in test results
- Ensure the reliability of measurements
- Alert you to possible problems

Certified Analysis Values

Each Phase Technology Reference Material standard has undergone multiple rounds of internal laboratory tests using specified ASTM test methods.

A Certificate of Analysis provides the actual tested results, as well as the average values derived from independent international interlaboratory and intracompany studies. An allowable range of acceptability provides the tolerance level when verifying accuracy of the test result.

Battling Bias

Bias is your worst enemy in the lab. Bias in the measurement process can affect both test runs and internally produced QA check samples. Using external reference materials to verify test results is the best way to get around this problem before it cuts into your bottom line profitability.

Phase Technology Reference Materials are just one part of a well-managed quality assurance program. Phase Technology also recommends annual Recertification of Calibration of analyzer equipment to ensure optimum instrument performance and satisfy certification requirements. For more information about available Recertification programs, contact Phase Technology.

*ASTM International is a registered trademark of the American Society of Testing and Materials



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Fuels Standards Kit

A combination of diesel and jet fuels in sufficient quantity to perform quality checks of cloud, pour and freeze point according to ASTM methods D5773, D5949 and D5972.

Contents: 1 each of 5 different standards listed in chart at right in 5 individual 25 ml vials.

Catalog #: FST-RM

| Reference Material ID | Standard Type | ASTM Test Method | Approximate Value (°C) | Reproducibility (°C) |
|-----------------------|-----------------|------------------|------------------------|----------------------|
| PTDL1 | Diesel Fuel | D5773 | -10 | 2.5 |
| | | D5949 | -15 | 3.8 |
| PTDL2 | Diesel Fuel | D5773 | -15 | 2.5 |
| | | D5949 | -20 | 3.8 |
| PTDL3 | Diesel Fuel | D5773 | -20 | 2.5 |
| | | D5949 | -25 | 3.8 |
| PTJF1 | Jet A1/Kerosene | D5972 | -45 | 0.8 |
| PTJF2 | Jet A1/Kerosene | D5972 | -50 | 0.8 |

Oils and Lubes Standards Kit

A carefully selected set of base oils and lubricating oils for performing quality checks of cloud and pour point according to ASTM methods D5773 and D5949.

Contents: 1 each of 5 different standards listed in chart at right in 5 individual 25 ml vials.

Catalog #: OLS-RM

| Reference Material ID | Standard Type | ASTM Test Method | Approximate Value (°C) | Reproducibility (°C) |
|-----------------------|-----------------|------------------|------------------------|----------------------|
| PTB01 | Base Oil | D5773 | 0 | 2.5 |
| | | D5949 | 0 | 3.8 |
| PTB02 | Base Oil | D5773 | -10 | 2.5 |
| | | D5949 | -15 | 3.8 |
| PTB03 | Base Oil | D5773 | -10 | 2.5 |
| | | D5949 | -15 | 3.8 |
| PTLU1 | Lubricating Oil | D5949 | -30 | 3.8 |
| PTLU2 | Lubricating Oil | D5949 | -40 | 3.8 |

Master Reference Standards Kit

The most comprehensive set of cold flow standards available. Includes ample supply of diesel fuels, jet fuels, base oils, and lubricating oils for quality checks of cloud, pour, and freeze point according to ASTM methods D5773, D5949 and D5972.

Contents: 1 each of 10 different standards listed in chart at right in 10 individual 25 ml vials.

Catalog #: MRS-RM

| Reference Material ID | Standard Type | ASTM Test Method | Approximate Value (°C) | Reproducibility (°C) |
|-----------------------|-----------------|------------------|------------------------|----------------------|
| PTDL1 | Diesel Fuel | D5773 | -10 | 2.5 |
| | | D5949 | -15 | 3.8 |
| PTDL2 | Diesel Fuel | D5773 | -15 | 2.5 |
| | | D5949 | -20 | 3.8 |
| PTDL3 | Diesel Fuel | D5773 | -20 | 2.5 |
| | | D5949 | -25 | 3.8 |
| PTJF1 | Jet A1/Kerosene | D5972 | -45 | 0.8 |
| PTJF2 | Jet A1/Kerosene | D5972 | -50 | 0.8 |
| PTB01 | Base Oil | D5773 | 0 | 2.5 |
| | | D5949 | 0 | 3.8 |
| PTB02 | Base Oil | D5773 | -10 | 2.5 |
| | | D5949 | -15 | 3.8 |
| PTB03 | Base Oil | D5773 | -10 | 2.5 |
| | | D5949 | -15 | 3.8 |
| PTLU1 | Lubricating Oil | D5949 | -30 | 3.8 |
| PTLU2 | Lubricating Oil | D5949 | -40 | 3.8 |

Custom Standards Kit

Mix and match! Customize your own selection of any combination of 5 vials (25 ml each) of Reference Materials.

Catalog #: CST-RM

| Reference Material ID | Standard Type | ASTM Test Method | Approximate Value (°C) | Reproducibility (°C) |
|-----------------------|------------------------------|------------------|------------------------|----------------------|
| PTEG1 | Ethylene Glycol (Antifreeze) | D6660 | -20 | 0.8 |
| PTEG2 | Ethylene Glycol (Antifreeze) | D6660 | -30 | 0.8 |

Individual Standards

All Reference Materials can be purchased as single standards in 25 ml vials.

| Reference Material ID | Standard Type | ASTM Test Method | Approximate Value (°C) | Reproducibility (°C) |
|-----------------------|-----------------|---|------------------------|----------------------|
| PTJFKV1 | Jet A1/Kerosene | D5972 | -48.5 | 0.8 |
| | | D7945 Kinematic Viscosity @ -20°C, mm ² /s | 5.027 | 0.021 |
| | | D7945 Kinematic Viscosity @ -40°C, mm ² /s | 10.78 | 0.06 |
| | | D4052 | 0.8132 | 0.0005 |