

# 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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# Phase Technology Reference Materials

## 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

Price: \$675

Reference Material ID	Standard Type	ASTM Test Method	Approximate Value (°C)	Reproducibility (°C)
PTDL1	Diesel Fuel	D5773	-10	2.5
		D5949	-19	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

Price: \$675

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	-5	2.5
		D5949	-5	3.8
PTB03	Base Oil	D5773	-15	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

Price: \$1250

Reference Material ID	Standard Type	ASTM Test Method	Approximate Value (°C)	Reproducibility (°C)
PTDL1	Diesel Fuel	D5773	-10	2.5
		D5949	-19	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	-5	2.5
		D5949	-5	3.8
PTB03	Base Oil	D5773	-15	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

Price: \$675

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

Properly stored, the expected shelf life of Phase Technology Reference Material is one year after certification. Once opened, the stability and integrity of the material is susceptible to contamination if not handled properly. Actual kit contents and published values are subject to change due to ongoing product development.

Please note: All fuel shipments are subject to applicable \$75 Dangerous Goods processing and handling fee.

## Individual Standards

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

Price: \$175 each