CPA-T30 Portable Cloud Point Analyzer

for Diesel & Biodiesel Fuels

from Phase Technology

Precision and Portability at an Economical Price Point

- Unsurpassed precision — repeatability as low as 0.4 °C, reproducibility as low as 0.5 °C
- Super fast speed — diesel test results in just 3 - 5 minutes
- Compact, portable design — goes anywhere, lab or field
- Complete self-contained system — plug into electricity, or use optional cigarette-plug adapter or rechargeable battery
- Incredibly simple to use — intuitive, touch-sensitive LCD touch screen — just load the sample, touch the "START TEST" button and the analyzer does the rest

For Biodiesel Handling and Operability Improvement

Typical B100 biodiesel has a cloud point around 0 °C (32 °F). Conventional diesel has a much lower cloud point.

Blending the fuels together or combing with additives is necessary to be stored, pumped and used in colder climates. Requirements change depending on geographic region and time of year.

Finding the optimum blend saves unnecessary, costly inclusion of No. 1 and No. 2 diesel fuel.

With increasing government support of renewable fuels and mandates requiring use of biodiesel, producers and blenders rely on Phase Technology to provide a cloud point analyzer that fits well within their budget.

Cloud Point for Diesel & Biodiesel Fuels

The Practical Solution That Pays Off

Convenience, ease-of-use, and quick, precise test results – all in a small, portable package that is the most affordable cloud point analyzer available.

Phase Technology's CPA-T30 Portable Cloud Point Analyzer is the ideal quality control tool for fuel distributors, truck fleets, biodiesel producers and users, terminals, pipelines, military, educational and R&D labs.

Cost-saving Benefits With Big Payoffs

Reduce fuel cost – ensure proper blending ratio of diesel and biodiesel to meet specific climate requirements

Prevent downtime – accurate cloud point information prevents possible fuel gelling.

Blending support – the on-screen "blends" function calculates approximate volume ratio of two fuels to mix together to obtain a target cloud point.

Optimize additives – add sufficient amounts without overdosing

Monitor fuel quality – added checkpoint for quality control of product and suppliers

By pressing the "blends" button on the T30's screen, you can estimates the blend ratio necessary to achieve a target cloud point given the cloud points of two starting components. Perfect for diesel and biodiesel blending.

ASTM Methods

The CPA-T30 meets and complies with ASTM International cloud point standard D7397.

ASTM D7397 and D5773 (as used in Phase Technology CPA-T30 and 70X analyzers) are the only automatic methods for determining cloud point allowed in ASTM D6751, the specification used to control pure biodiesel (B100) quality prior to blending with conventional diesel type fuels.

ASTM D7397 and D5773 are included as methods for determining cloud point in ASTM D7467, the specification that covers finished fuel blends of between six (B6) and twenty (B20) percent biodiesel for on- and off-road diesel engine use.

> **If an ounce of prevention is worth a pound of cure then the 3-pound CPA-T30 cloud point analyzer should be worth its weight in gold when it comes to preventive maintenance. Actually it should be worth the weight of a tanker full of fuel, to be more precise.** *Sue Dickens*, Canadian Trucking News

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Technical Specifications

CPA-T30 Cloud Point Analyzer

CLOUD POINT TEST METHOD	ASTM D7397	
STATED PRECISION: REPEATABILITY & REPRODUCIBILITY	Repeatability	Reproducibility
	as low as 0.4 °C 0.8 °C typical*	as low as 0.5 °C 1.1 °C typical*
BIAS	0 (relative to ASTM manual method)	
SAMPLE TEMPERATURE RANGE	-40 °C to 20 °C	
TEST RESOLUTION	0.1 °C	
TEST DURATION	3 to 5 minutes	
REQUIRED OPERATOR TIME	0.5 minutes	
SAMPLE SIZE	30 mL	
DETECTION METHOD	Patented Diffusive Light Scattering (DLS) technology	
COOLING SYSTEM	Integrated Peltier device cooling system	
DISPLAY	Touch-sensitive 3.25" (8.3 cm) LCD screen	
TEMPERATURE MEASUREMENT	°C or °F (User selectable)	
INTERNAL MEMORY	Storage up to 100 test runs	
AMBIENT OPERATING CONDITIONS	10 to 30 °C (50 to 86 °F) Extreme temperatures not recommended Do not expose the CPA-T30 to excessive moisture such as rain or snow	
DIMENSIONS (W x D x H)	10 x 5.5 x 5 inches 27 x 54 x 31 cm	
WEIGHT	3 lbs (1.3 kg)	
UTILITY REQUIREMENTS	100 – 240 VAC, 50 – 60 Hz or 12 VDC input	

*Stated precision depends on actual cloud point of test sample

Application

The CPA-T30 is designed to test the cloud point of middle distillate fuels. These typically include light to middle distillate Number 1 or 2 fuels, biodiesel and biodiesel blends intended for light- or heavy-duty diesel engines.

For operability purposes and adequate cold weather protection, the diesel cloud point should be a minimum of 7 °F (approximately 4 °C) below the lowest anticipated ambient temperature that the fuel is expected to operate. For biodiesel, a minimum 10 °F (approximately 6 °C) difference is recommended.

Options

Phase Technology CPA-T30 Analyzers can be used in both the lab and field. Flexibility in power options include:

BAT-T30	Rechargeable battery
DCA-T30	DC power adaptor (with automobile cigarette lighter plug)

We use Phase Technology analyzers throughout our company in various locations. Our business depends upon the accuracy of the results. For reliability, Phase Technology is our instrument of choice.

Louis A. Delgado, Lab Manager, Valero Energy Corporation