

# Icon Scientific CloudPoint Analyser



## WHAT DOES IT DO?

The CloudPoint Analyser is used to provide an indicator of the lowest temperature at which typically a diesel fuel may be used. The analyser uses advanced thermoelectric cooling and optical detection to provide exceptional results, in most cases without the need for chilled water. The optical detector arrangement also provides excellent immunity to dissolved water in the sample, giving you outstanding repeatability.

The cell is equipped with an LED light source, photodiode detector and thermoelectric Peltier cooler. Crucially, there is no physical contact between the LED, detector and measuring cell. To improve cooling performance and eliminate condensation, ice formation and the effect of stray light, the whole system is housed in a patented, sealed containment vessel held under vacuum. The vessel features detection systems to monitor the vacuum and alert you to any sample leakage. The obtained results are compatible with those of any standard cloud point test methods such as ASTM D2500 and ASTM D5771/2/3.

## HOW DOES IT WORK?

The low mass measuring cell traps a small amount of the sample. This is then cooled at a controlled rate by the Peltier-based thermoelectric cooler using a pulse width modulated control signal. The cooling continues until sufficient light-scatter is detected from precipitating wax crystals to trigger cloud point detection. The old sample is then flushed away and the cycle is repeated. If the sample enters the unit at too low a temperature, the Peltier control is reversed to warm the sample before carrying on with the analysis.

## WHY CHOOSE THE ICON SCIENTIFIC CLOUDPOINT ANALYSER?

Excellent repeatability: with advanced detection algorithms and pulse width modulated variable rate Peltier cooler control it achieves better repeatability than the standard test methods.

Best in class cooling performance: with reduced thermal losses thanks to the low mass measuring cell, patented vacuum insulation system and non-contacting light source and detector, this provides the highest differential between cooling water temperature

and the lowest measurable cloud point.

Increased measuring cell life: as well as giving improved cooling performance, vacuum insulation eliminates premature cell failure caused by condensation and cooling errors due to ice formation.

Cell service exchange plan: to aid planned maintenance and reduce downtime in the unlikely event of a problem, icon operates a CloudPoint cell-service exchange plan. The cell is sent to icon or their local representative, and a fully-refurbished cell is delivered by return.

This process enables considerable savings on the individual cost of parts. It can also save you time and money by reducing the risks associated with carrying out your own cell repairs.



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