

# Wax Content Testing

with the

## Multi-Place Cold Finger CF6

### Characteristics

- 6 measuring places for simultaneous tests
- Precise finger and bottle positioning for accurate results
- Removeable sleeves for easy weighing and cleaning
- 100 and 250 ml bottles can be used
- Stand-alone device or automated with software

The Cold Finger is a common used device for those who examine the wax deposition of crude oil and condensate.

The Cold Finger by PSL Systemtechnik improved the established test method in its operation and provides measurement recording by Software.

The Multi-Place Cold Finger is equipped with 6 measuring places for multi-place testing with 100 ml or 250 ml bottles. Combining multiple cold fingers in one heating bath facilitates screenings on wax inhibitors, e.g. simultaneous testing of different chemicals on a single sample or testing of different inhibitor concentrations with the same sample.





Separately removable during tests

ensure that all of the sample gets in touch with the cold finger surface. The amount of wax that deposits at this surface at given temperature in ratio to the total amount of sample is an indication of potential amount of wax deposition as well as, related to a blank test, for the efficiency of a wax inhibitor (WI).

### The Advantages

1. More accurate and reproducible results  
Thanks to temperature control and locking mechanism.
2. Higher measurement reliability  
Thanks to easily removeable Cold Finger sleeves.
3. More flexibility in the test set-up  
Thanks to different sample volumes
4. Easier to handle  
Thanks to lifting system and secured water bath

### Our Solution

Our focus was a simple operation, higher safety level and a faster measuring process compared to similar cold finger devices on the market. We are very proud of our successful result. The CF6 complements the Cold Finger product family with an entry-level model for small budgets, but with the typical PSL quality. Remove the cold finger caps separately and reattach them to monitor deposition vs. time effects.

### Measurement Principle

A crude oil sample is stirred and kept above Wax Appearance Temperature (WAT). A cooled cylinder element - so called 'cold finger' - is immersed in the sample, providing a cold surface where the waxes of the crude oil shall deposit. An integrated magnetic stirrer is providing a gentle circulation to

### The Software

By using the Cold Finger with a PC and the software *WinCFC* you can control the temperature via PC and directly save the measuring data of the balance. With the software you can set the required parameters, which are documented for a test run. You can record single measurements or several measurements in an interval and evaluate the recorded data later.

We adapt the Cold Finger to your requirements.

### The PSL Cold Finger Family

- Multi-Rack Cold Finger CF15
- Coaxial-Shear Cold Finger cCF6
- mobile Cold Finger mCF2

### Specifications:

Temperature range:	
Cold Finger (surface)	-5 .. +65 °C (+23 .. +149 °F)
Water bath (sample)	+30 .. +90 °C (+86 .. +194 °F)
Number of measuring places:	6
Sample volume:	approx. 80 ml or 220 ml per finger
Stirrer speed:	100 ... 2000 rpm
Weight:	95 kg (CF6) + 40 kg (each thermostat)
Voltage input:	230 V~ or 115 V~
Dimensions (WxDxH):	35 x 68 x 97 cm + PC, thermostat(s)