MICRO

CARBON

RESIDUE

TESTER

ACR-M3

CE

ACR-M3 is a tester to be used for the determination of the amount of carbon residue formed after evaporation and pyrolysis of petroleum material under certain conditions and is intended to provide some indication of the relative coke forming tendency of such materials.

Note-About Micro Carbon Residue Test: A weighed quantity of sample is placed in a glass vial and heated to 500℃ under an inert (nitrogen) atmosphere in a controlled manner for a specific time. The sample undergoes coking reactions and volatiles formed are swept away by reported as a percent of the original sample as "carbon residue (micro)."

Micro Method offers advantages of better control of test conditions, smaller samples, and less operator attention compared to Conradson Carbon Residue test to which it is equivalent.

Up to twelve samples may be run simultaneously including a control sample.

SMALL SAMPLE: Test can be run with a small quantity of sample (0.15 to 1.5g for small vials, 3.0g for medium vials and 5.0g for large vials, depending on carbon residue content).

EASY OPERATION: Test automatically proceeds exactly as prescribed by simply pushing the START switch. Pressure controller (2nd stage regulator) and solenoid valve supply constant pressure. No fine tuning is required after test starts. The buzzer sounds intermittently for 10 seconds when the process is finished.

EQUIPPED WITH GAS FLOW METER: With the N_2Gas flow meter and needle valve fitted on the front panel, process parameters can be easily checked and calibrated.

VINYL LAMINATED TRAP: The condensate trap is equipped on the front of the tester. Thanks to this, the condensate volume is easy to confirm and the trap easily attaches and detaches. Trap jar is vinyl laminated for the safety.

EXCELLENT REPEATABILITY/REPRODUCIBILITY:

Repeatability and reproducibility are excellent. Since the electronic temperature control is far more precise compared to that of Conradson method's.

TANAKA

Micro Carbon Residue Tester, model ACR-M3

SPECIFICATIONS:

CONFORMING STANDARDS:

ISO 10370, ASTM D4530, etc.

Measuring Range:

0.10 to 30 % (m/m)

COKING OVEN:

with circular heating chamber, 85mm diameter by 105mm deep, made of stainless steel

Heater: Pipe type, 700W x 2, made of stainless steel

Heating Range: Up to 500°C

PROCESS CONTROLLER:

Digital Programmable Controller, model PC-935

THERMOCOUPLE:

JIS J-type (Fe-Constantan)

PRESSURE CONTROLLER (2nd stage regulator):

Primary Pressure: 1400kPa max.

Control Range: 20 to 750kPa (usually 150kPa)

FLOW METER:

0.1 to 1L/min

FLOW RATE:

Automatically regulated at 150ml/min and 600ml/min, According to ASTM D4530

CONDENSATE TRAP:

200ml vinyl laminated glass jar with threaded mouth

SAFETY:

The tester stops operation with the secondary pressure less than 80kPa

programmable controller cuts the heater output and sounds buzzer continuously when the oven is abnormally heated above 550 ^{o}C. Further more, a separate circuit performs the same function when the oven heated above 600 ^{o}C.

DIMENSION & WEIGHT:

350W x 390D x 460H (mm), 21kg

UTILITY AND OTHERS:

 - POWER SUPPLY:

 AC100/120V or 220/240V 50/60Hz 1.6kW(max)

- N$_2$GAS SUPPLY:

From cylinder or piping, 200-500kPa

Inlet: 10mm diameter, hose nipple

(Consumption: Approx. 40L of N$_2$Gas/test)

- EXHAUST:

To be placed to a ventilator or fume hood

Exhaust Outlet:10mm diameter, hose nipple

- OTHERS:

An analytical balance

ORDERING INFORMATION:

STANDARD ACCESSORIES:

1. Small Vials (100/box)		1box
2. Large Vials (50/box)		1box
3. Holder for Small Vials		1pc
4. Holder for Large Vials		1pc
5. Hook		1pc
6. Condensate Trap		1pc
7. Oven Seal Lid		1pc
8. AC Power Cord, 3.0m (<AC125V)		
or 2.5m (>AC200V)		1pc
9. Braided Hose for N$_2$Gas (3m)		1pc
10. Wire Band for N$_2$Gas		2pcs
11. Rubber Hose for Exhaust (5m)		1pc
12. Hose Band for Exhaust		1pc
13. Instruction Manual		1copy

OPTIONAL ACCESSORIES:

1. Medium Vials (50/box): Test for ISO 10370

2. Holder for Mixed Vials

 (small/medium x 6 and Large x 3)

3. 1st Stage Regulator for nitrogen gas cylinder :

 model YR-70V

 Primary Pressure: 15000kPa max.

 Control Range: 0 to 600kPa

 Screw size: OUT M16 x 1.5hexagon cap nut

SUGGESTED SPARES:

1. Small Vials (100/box)	5 boxes
2. Large Vials (50/box)	5 boxes

Specifications subject to change without prior notice.