

**KES**

Test Method of Cold  
Filter Plugging Point  
for Petroleum Products

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## 1. Scope of application

This standard shall specify the test for measuring filter plugging point for gasoline

## 2. Meaning of terms

- (1) Filter plugging point is when essential time take long more than 60 sec for 200 ml reagent passing filter under cold filtering in the regulated condition or that maximum temperature (unit : 1 °C) without passing filter.

Estimate the degree of cold filtering gasoline under this temperature.

## 3. Introduction of test method

After cooling reagent under the regulated condition. Under pressure 200 mm water pole each 1 °C, suck up reagent through the filter and then find the filter plugging point

## 4. Device

Use the device described in the following additional table figure 1 and 2.

- (1) Test tub : A transparent glass, a cylindrical tube with the flat bottom, inside diameter (31.5 ~ 32.5 mm), height(115 ~ 125 mm), thickness(1.0 ~ 1.5 mm), the tube is marked line at 45ml capacity.
- (2) Exterior tube : A brass tube, a cylindrical tube with the flat bottom, according to its measurements described in additional table figure 2, use what doesn't leak water.
- (3) Ring type support : Oil-resistance plastics, according to its measurements described in additional table figure 2. Use it for supporting the exterior tube like described in the additional table figure 1.
- (4) Ring type spacer: oil-resistance plastics, according to its measurements described in the additional table figure 2. Use it for supporting the test tube from the bottom and the side of the exterior tube remaining the interval for regulation.

- (5) Cap of test tube : Oil-resistance plastics, according to its measurements described in the additional table figure 2. Mount a thermometer and a pipette. There are three holes for ventilating. Appropriable cap to test tube.
- (6) Thermometer
- (7) Pipette mounted filter: use a colorless transparent glass pipette like described in the additional table figure 2.
- (8) Cooler : Use what can keep regulate temperature. It has a proper shape and size for supporting the exterior tube at the regulate depth.
- (9) Aspirator : Compound of a glass bottle with water, a U-type tube manometer and a vacuum pump. It can keep fixed pressure for 200 mm water pole with continuos circulation of air under the decreasing pressure.
- (10) Microchronometer (or Stopwatch)

## 5. Preparation for reagent

Filter the reagent under the above 15 °C temperature.

## 6. Preparation for device

Before test, disassemble filter, tweezers, body, cap and golden net holder.

And wash all the parts with petroleum benzene or low boiling temperature solvent like 1,1,1 trichloroethane.

After washing, repeat washing process and dry.

Specially, we should investigate contamination and damage of golden net in detail.

## 7. Operation

- (1) Put dry spacer on the bottom of previously dry exterior tube and fill reagent into the test tube to the limit of marked line. And then cleanly dry the outside of the test tube.