SYNOPSIS

Number and Title of the Indian Standard: IS 1448[P:175]:2020/ ISO 6296:2000 Methods of test for petroleum and its products [P:175] Petroleum products — Determination of water - Potentiometric Karl Fischer titration method

a) Scope: This Standard specifies a method for the direct determination of water in petroleum products boiling below 390 °C. It covers the mass fraction range 0,003 % (m/m) to 0,100 % (m/m). This Standard may be applicable to petroleum products boiling above 390 °C and lubricating base oils. However, the precision has not been established for these materials.

NOTE 1 A number of substances and classes of compounds associated with condensation or oxidation-reduction reactions interfere in the determination of water by Karl Fischer titration. In petroleum products, the most common interferences are hydrogen sulfide and mercaptan sulfur, however, concentrations of these below 0,003 % (m/m) as sulfur will not cause significant interference over the range 0,003 % (m/m) to 0,100 % (m/m) water. Other organic sulfur compounds commonly present such as sulfides, disulfides and thiophenes, do not interfere.

NOTE 2 For the purposes of this Standard, the terms "% (m/m)" and "% (V/V)" are used to represent the mass and volume fractions of a material respectively

b) Users: Petroleum industry, automobile industry, academia, testing and R&D labs

c) Ministry: Ministry of Petroleum & Natural Gas, Department of Heavy Industries