

ISO 3838:2004-05 (E)

Crude petroleum and liquid or solid petroleum products - Determination of density or relative density - Capillary-stoppered pyknometer and graduated bicapillary pyknometer methods

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Principle	2
4.1	Capillary-stoppered pyknometer	2
4.2	Graduated bicapillary pyknometer	2
5	Apparatus	2
6	Preparation of pyknometer	6
7	Calibration of pyknometer	6
7.1	Conditioning	6
7.2	Capillary-stoppered pyknometer	8
7.3	Graduated bicapillary pyknometer	8
7.4	Other reference temperatures	8
7.5	Recalibration	8
8	Procedure for capillary-stoppered pyknometers	9
8.1	Procedure for liquids	9
8.2	Procedure for solid or semi-solid samples	9
9	Procedure for graduated bicapillary pyknometers	10
10	Calculations	10
10.1	Symbols	10
10.2	Reference, calibration and test temperatures	11
10.3	Correction for the thermal expansion of the pyknometer	12
10.4	Calculation of density of a liquid	14
10.5	Calculation of relative density of a liquid	15
10.6	Calculation of density or relative density of a solid or semi-solid	16
11	Precision	16
11.1	Capillary-stoppered pyknometer method	16
11.2	Graduated bicapillary pyknometer method	17
12	Test report	17