BRITISH STANDARD

BS 2000 :
Part 196 : 1997
ISO 2049 : 1996

Methods of test for

Petroleum and its products

Part 196. Petroleum products - Determination of colour (ASTM scale)

(Identical with IP 196/97)

BSi
British Standards

National foreword

This British Standard was published under the authority of the Materials and Chemicals Sector Board and comes into effect on 1st March 1997. It is identical with ISO 2049 : 1996, prepared by Technical Committee 28, Petroleum products and lubricants, of the International Organization for Standardization (ISO).

This British Standard supersedes BS 5859 : 1980 which is withdrawn.

BS 2000 comprises a series of test methods for petroleum and its products that are published by the Institute of Petroleum (IP) and have been accorded the status of a British Standard. Each method should be read in conjunction with the preliminary pages of 'IP Standard methods for analysis and testing of petroleum and related products and British Standard 2000 Parts' which gives details of the BSI/IP agreement for publication of the series, provides general information on safety precautions, sampling and other matters, and lists the methods published as Parts of BS 2000.

Under the terms of the agreement between BSI and the Institute of Petroleum, the revised version of BS 2000 : Part 196 will be published by the IP (in 'Standard methods for analysis and testing of petroleum and related products and British Standard 2000 Parts' and as a separate publication). The numbering of the Parts of BS 2000 follows that of the corresponding IP methods. BS 2000 : Part 196 : 1997 is thus identical with IP 196/97.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

The following BSI references relate to the work on this standard:
Committee reference PTI/12
Draft for comment 95/502307 DC

IP 196/97 ISO 2049:1996 ASTM D1500 91 BS 2000 : Part 196 1997

Petroleum products — Determination of colour (ASTM scale)

WARNING — The use of this International Standard may involve hazardous materials, operations and equipment. This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This International Standard specifies a method for the visual determination of the colour of a variety of petroleum products, such as lubricating oils, heating fuels, diesel fuels and petroleum waxes. It is limited to products that do not contain artificial dyes.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3015:1992, *Petroleum products — Determination of cloud point.*

ISO 3016:1994, *Petroleum products — Determination of pour point.*

ISO 3696:1987, *Water for analytical laboratory use - Specification and test methods.*

ISO 6271:—[1], *Clear liquids — Estimation of colour by the platinum-cobalt scale.*

ISO 6353-2:1983, *Reagents for chemical analysis — Part 2: Specifications — First series*

3 Principle

A test portion of the petroleum product is viewed under an artificial daylight source and the colour compared with a number of standard colour glasses. The matching colour standard, or that closest to it on the darker side, is recorded as the colour value. If the colour is darker than the darkest standard, dilution with a specified solvent can be applied to permit matching.

4 Reagents and materials

4.1 Water, complying with the requirements of Grade 3 of ISO 3696 and colour no greater than 10 units (Hazen) in accordance with ISO 6271.

4.2 Kerosine, lighter in colour than a potassium dichromate ($K_2Cr_2O_7$) solution formed by dissolving 4,8 mg of pure anhydrous potassium dichromate, as specified in ISO 6353-2, in 1 litre of water (4.1).

5 Apparatus

5.1 Colorimeter, consisting of a light source, glass colour standards, sample container housing with cover and viewing piece, conforming to one of the designs described in annex A.

5.2 Sample container, of clear colourless glass. For referee tests, use the glass sample jar shown in figure 1. For routine tests, it is permissible to use a glass jar such as is used for the cloud point and pour point tests, in accordance with ISO 3015 and ISO 3016 respectively, i.e. a cylindrical jar with a flat bottom of 30 mm to 32,4 mm internal diameter, 115 mm to 125 mm external height, and a wall thickness no greater than 1,6 mm.

1) To be published. (Revision of ISO 6271:1981)