



Standard Terminology of Aromatic Hydrocarbons and Related Chemicals¹

This standard is issued under the fixed designation D 4790; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

absorbance—the logarithm to the base 10 of the reciprocal of the relative transmittance, T , expressed as:

$$A = \log_{10} (1/T) = -\log_{10} T \quad (1)$$

D 1840, D 2269, D 4053; D-2

accuracy—the agreement between the mean of a series of repeated measurements of a property and the accepted reference value of the property. **D 3980; D-1**

acidity—the number of milligrams of sodium hydroxide consumed when 100 mL of the sample are titrated under the conditions prescribed in this method. **D 847; D-16**

acid reaction—a characteristic of materials producing the acid-color of the indicator used under the conditions prescribed in this method. **D 847; D-16**

acid wash color—the color developed in the separated acid when a sample is agitated with sulfuric acid under the condition prescribed in this method. **D 848; D 2279; D-16**

aldehydes—a broad class of organic compounds having a generic formula $RCHO$, and characterized by a carbonyl group.

alkaline or basic reaction—a characteristic of the materials producing the alkalicolor of the indicator used under the conditions prescribed in this method. **D 847; D-16**

alpha-methylstyrene—2-phenylpropene (C_9H_{10}) mol weight 119.16; colorless liquid; subject to polymerization by heat or catalysts; freezing point, -23.21°C ; boiling point, 165.38°C .

apparent density—the density calculated when the pycnometer is calibrated with water, weighed in air, and when the sample is weighed in air and no air buoyancy correction is used for either weighing, even though the density in vacuum of water is used in calculating the apparent volume of the pycnometer.

apparent density at 60°F —the weight in air of a unit volume of sample at 60°F ; in this method, the weight is in pounds and the volume in U.S. liquid gallons. Average air in this method is assumed to have a density of 0.0012 g/cm^3 .

DISCUSSION—This definition is not in conflict with that given in the

current version of Definitions E 12.

D 2935; D-16

at-line analysis—analytical procedure performed in a process environment using manually entered samples.

benzene—cyclohexatriene, benzol (obsolete) (C_6H_6) mol weight 78.11; clear, colorless, highly flammable liquid; characteristic odor; solidification point $+5.5^\circ\text{C}$; boiling point 80.1°C .

benzene, carbon disulfide-free—benzene treated with alcoholic sodium hydroxide and used as a spectrophotometric reference standard.

benzene-535, refined—benzene with impurities limited to trace amounts by a solidification point of 5.35°C and having a total distillation range of no more than 1.0°C . Refer to Specification D 2359 for complete specifications.

benzene-545, refined—benzene with impurities limited to trace amounts by a solidification point of 5.45°C and having a total distillation range of no more than 1°C . Refer to Specification D 4734.

benzene-485, refined (nitration grade)—benzene with impurities limited by a solidification point of 4.85°C and having a total distillation range of no more than 1.0°C . Refer to Specification D 835 for complete specifications.

benzene, thiophene-free—benzene refined by special treatment and used as a reagent in ASTM standards.

bias—a persistent positive or negative deviation of a test method average value from the assumed or accepted true value. **D 1129; D 2777; D-19**

bromine index—the number of milligrams of bromine consumed by 100 g of sample under given conditions. **D 1492; D-16**

carbon disulfide (CS_2)—mol weight 76.14; clear, colorless, flammable, volatile liquid; boiling point, 45.6°C ; freezing point, 111.6°C .

clear—free of turbidity.

cloud point of phenol—the temperature at which a separate phase forms when a homogeneous solution of phenol in water is allowed to cool at a prescribed rate from a temperature above that at which phase separation occurs. It may precisely be defined as follows: when a homogeneous solution of phenol and water is allowed to cool at a prescribed rate with stirring, the solution will show a slight cloudiness or turbidity as the cloud point is approached. On further cooling, the cloudiness will increase rapidly and the thermometer bulb, which is centrally located in the test tube,

¹ This terminology is under the jurisdiction of ASTM Committee D16 on Aromatic Hydrocarbons and Related Chemicals and is the direct responsibility of Subcommittee D16.05 on Editorial and Nomenclature.

Current edition approved June 10, 1999. Published August 1999. Originally published as D 4790 – 88. Last previous edition D 4790 – 96.

The boldface designations refer to the original source of the definition and the ASTM Technical Committee having jurisdiction.