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AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Guide for Sampling and Testing Volatile Solvents and Chemical Intermediates for Use in Paint and Related Coatings and Material¹

This standard is issued under the fixed designation D 268; 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.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This guide covers procedures for the sampling and testing of volatile solvents used in the manufacture of paint, lacquer, varnish, and related products. The test methods are listed in Table 1.

1.2 *This standard does not purport to address the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- D 13 Specification for Spirits of Turpentine²
- D 56 Test Method for Flash Point by Tag Closed Tester³
- D 86 Test Method for Distillation of Petroleum Products³
- D 93 Test Methods for Flash Point by Pensky-Martens Closed Cup Tester³
- D 156 Test Method for Saybolt Color of Petroleum Products (Saybolt Chromometer Method)³
- D 233 Methods of Sampling and Testing Turpentine²
- D 235 Specification for Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent)⁴
- D 329 Specification for Acetone⁴
- D 611 Test Method for Aniline Point and Mixed Aniline Point of Petroleum Products and Hydrocarbon Solvents³
- D 847 Test Method for Acidity of Benzene, Toluene, Xylenes, Solvent Naphthas, and Similar Industrial Aromatic Hydrocarbons⁴
- D 848 Test Method for Acid Wash Color of Industrial Aromatic Hydrocarbons⁴
- D 849 Test Method for Copper Strip Corrosion of Industrial Aromatic Hydrocarbons⁴
- D 850 Test Method for Distillation of Industrial Aromatic

TABLE 1 List of Test Methods

Test Method	Section	ASTM Method
Acidity in:		
Aromatic hydrocarbons	11	D 847
Volatile solvents	11	D 1613
Acid wash color of aromatics	23	D 848
Alcohols in ketones	18	D 2804, D 3329
Alkalinity in acetone	12	D 1614
Aromatics in mineral spirits	25	D 3257
Color, platinum cobalt scale	6	D 1209
Copper corrosion test:		
Aromatic hydrocarbons	14	D 849
Mineral spirits	14	D 1616
Distillation range:		
Aromatic hydrocarbons	7	D 850
Mineral spirits, turpentine	7	D 86
Volatile organic liquids	7	D 1078
Ester value	13	D 1617
Esters, purity	13	D 3545
Flash point:		
Pensky-Martens closed cup	17	D 93
Tag closed cup	17	D 56
Tag open cup	17	D 1310
Setaflash tester	17	D 3278
Method surveys:		
Ethylene and propylene glycols	22	E 202
Methanol	21	E 346
Nonaromatics in aromatics	24	D 2360
Nonvolatile matter	8	D 1353
Odor	9	D 1296
Paraffins in aromatics	24	D 2360
Permanganate time for acetone and methanol	16	D 1363
Purity of ketones	18	D 2192, D 2804, D 3329, D 3893
Sampling	4	E 300
Solvent power evaluation:		
Aniline point and mixed aniline point of petroleum products and hydrocarbon solvents	19	D 611
Kauri-butanol value of hydrocarbon solvents	19	D 1133
Dilution ratio in cellulose nitrate solution for active solvents, hydrocarbon diluents, and cellulose nitrates	19	D 1720
Specific gravity	5	D 891, D 2935, D 3505, D 1555
Sulfur as hydrogen sulfide and sulfur dioxide	15	D 853
Water:		
Fischer reagent titration method	10	D 1364, E 203
Turbidity method	10	D 1476
Water miscibility of water-soluble solvents	20	D 1722

¹ This guide is under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.35 on Solvents, Plasticizers, and Chemical Intermediates.

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² Annual Book of ASTM Standards, Vol 06.03.

³ Annual Book of ASTM Standards, Vol 05.01.

⁴ Annual Book of ASTM Standards, Vol 06.04.