This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

Designation: D8194 – 18ε1

Standard Practice for Evaluation of Suitability of 37 mm Filter Monitors and 47 mm Filters Used to Determine Particulate Contaminant in Aviation Turbine Fuels[1]

This standard is issued under the fixed designation D8194; 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.

ε1 NOTE—Subsection 9.1.2 was corrected editorially in August 2020.

1. Scope

1.1 This practice determines suitability of products used for measuring particulate contamination in aviation turbine fuel when using Test Methods D5452 and D2276.

1.2 There are two major parts of this practice. The first is for evaluation of the cellulose acetate butyrate field monitors that are used in combination with the filters and the filter support pads. The second part is for evaluation of the filter when used with an appropriate cellulose acetate butyrate field monitor.

1.3 *Units*—The values stated in SI units are to be regarded as the standard. No other units of measurement are included in this standard.

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

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D362 Specification for Industrial Grade Toluene (Withdrawn 1989)[3]

D1193 Specification for Reagent Water

D1319 Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption

D1655 Specification for Aviation Turbine Fuels

D2276 Test Method for Particulate Contaminant in Aviation Fuel by Line Sampling

D2624 Test Methods for Electrical Conductivity of Aviation and Distillate Fuels

D3948 Test Method for Determining Water Separation Characteristics of Aviation Turbine Fuels by Portable Separometer

D4171 Specification for Fuel System Icing Inhibitors

D5452 Test Method for Particulate Contamination in Aviation Fuels by Laboratory Filtration

F316 Test Methods for Pore Size Characteristics of Membrane Filters by Bubble Point and Mean Flow Pore Test

2.2 *Federal Standard:*

MIL-DTL-85470 Inhibitor, Icing, Fuel System, High Flash NATO Code Number S-1745[4]

3. Terminology

3.1 *Definitions:*

3.1.1 *cellulose acetate butyrate, n*—thermoplastic that is known to be adequate for manufacture of field monitors and chemically compatible for use with aviation fuel.

3.1.2 *field monitor, n*—two-part device (inlet plus outlet) used to hold a filter securely.

3.1.2.1 *Discussion*—In this practice, all field monitors are manufactured from cellulose acetate butyrate polymer.

3.1.3 *filter, n*—thin, porous membrane used to separate particulate contamination from a liquid.

3.1.4 *plugs, n*—small plastic parts designed to block inlets and outlets of field monitors.

[1] This practice is under the jurisdiction of ASTM Committee D02 on Petroleum Products, Liquid Fuels, and Lubricants and is the direct responsibility of Subcommittee D02.J0.05 on Fuel Cleanliness.

Current edition approved Dec. 1, 2018. Published February 2019. DOI: 10.1520/D8194-18E01.

[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] The last approved version of this historical standard is referenced on www.astm.org.

[4] Available from DLA Document Services, Bldg. 4/D, 700 Robbins Ave., Philadelphia, PA 19111-5094, http://quicksearch.dla.miL.

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