



Designation: D 6646 – 01³

Standard Test Method for Determination of the Accelerated Hydrogen Sulfide Breakthrough Capacity of Granular and Pelletized Activated Carbon¹

This standard is issued under the fixed designation D 6646; 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.

1. Scope

1.1 This test method is intended to evaluate the performance of virgin, newly impregnated or in-service, granular or pelletized activated carbon for the removal of hydrogen sulfide from an air stream, under the laboratory test conditions described herein. A humidified air stream containing 1 % (by volume) hydrogen sulfide is passed through a carbon bed until 50 ppm breakthrough of H₂S is observed. The H₂S adsorption capacity of the carbon per unit volume at 99.5 % removal efficiency (g H₂S/cm³ carbon) is then calculated. This test is not necessarily applicable to non-carbon adsorptive materials.

1.2 This standard as written is applicable only to granular and pelletized activated carbons with mean particle diameters (MPD) less than 2.5 mm. See paragraph 5.3 if activated carbons with larger MPDs are to be tested.

1.3 *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 and health practices and determine the applicability of regulatory limitations prior to use.*

¹ This test method is under the jurisdiction of ASTM Committee D28 on Activated Carbon and is the direct responsibility of Subcommittee D28.04 on Gas Phase Evaluation Tests.

Current edition approved April 10, 2001; Oct. 1, 2003. Published July November 2003. Originally approved in 2001. Last previous version approved in 2001 as D 6646–01.