

TABLE V-16.—PERFORMANCE OF HALOACETIC ACID METHODS—Continued

QC Parameter	MCAA	DCAA	TCAA	MBAA	DBAA
Accuracy (Range of % Recoveries in fortified drinking water samples) ²					
EPA 552.1	76–100	75–126	56–106	86–97	94–103
EPA 552.2	84–97	96–105	62–82	86–100	72–112
EPA 552.3 (MTBE option)	98–126	96–103	89–100	99–113	101–111
EPA 552.3 (TAME option)	97–131	97–107	89–103	99	101–105
SM 6251 B	99–103	96–103	100–103	97–101	102
Detection Limit (µg/L) ³					
EPA 552.1	0.21	0.45	0.07	0.24	0.09
EPA 552.2	0.27	0.24	0.08	0.20	0.07
EPA 552.3 (MTBE option)	0.17	0.02	0.02	0.03	0.01
EPA 552.3 (TAME option)	0.20	0.08	0.02	0.13	0.02
SM 6251 B	0.08	0.05	0.05	0.09	0.06

¹ The highest relative standard deviation (%RSD) for replicate analyses of fortified drinking water samples as shown in each method.

² The range of recoveries reported for replicate analyses of fortified drinking water samples as shown in each method.

³ The detection limit as determined by analyzing seven or more replicates of reagent water that is fortified with low concentrations of the haloacetic acids. The standard deviation of the mean dalapon concentration for each analyte is calculated and multiplied by the student's t-value at 99% confidence and n-1 degrees of freedom (3.143 for 7 replicates).

Two of the currently approved HAA5 methods (EPA Methods 552.1 (USEPA 1992) and 552.2 (USEPA 1995)) are also approved for analyses of water samples for the regulated contaminant dalapon,

a synthetic organic chemical. The new HAA5 method can also be used to determine dalapon in drinking water. As shown in Table V-17, both solvent options in EPA Method 552.3 provide

comparable or better method performance than the approved methods.

TABLE V-17.—PERFORMANCE OF DALAPON METHODS

Dalapon performance characteristic	EPA 552.1	EPA 552.2	EPA 552.3	
			MTBE	TAME
Precision ¹ (% RSD)	14	11	2	4
Accuracy ² (% Recovery)	88–102	86–100	98–112	87–103
Detection Limit ³ (µg/L)	0.32	0.12	0.02	0.14

¹ The highest relative standard deviation (%RSD) for replicate analyses of fortified drinking water samples as shown in each method.

² The range of recoveries reported for replicate analyses of fortified drinking water samples as shown in each method.

³ The detection limit as determined by analyzing seven or more replicates of reagent water that is fortified with low concentrations of dalapon. The standard deviation of the mean dalapon concentration is calculated and multiplied by the student's t-value at 99% confidence and n-1 degrees of freedom (3.143 for 7 replicates).

EPA is proposing to approve EPA Method 552.3 for dalapon (§ 141.24(e)(1)) in addition to HAA5 even though dalapon is not a contaminant that is addressed in this proposed rule. EPA believes that extending approval to all the regulated contaminants covered by the method provides more flexibility to laboratories. It allows the laboratories the option of reducing the number of methods that they need to keep in operation for their clients, because the new method can be used for dalapon and HAA5 compliance monitoring samples and for determining the additional HAAs for non-regulatory purposes. EPA recognizes that laboratories will probably not be determining dalapon concentrations for compliance purposes in the same samples as used for HAA5 compliance monitoring. However, EPA believes allowing the same method to be used even if the samples are not the same is more cost effective for laboratories, because switching between methods results in increased analyst and

instrument time. EPA is not proposing to withdraw the other dalapon methods, because that would reduce flexibility for the laboratories and place an unnecessary burden on laboratories that do not need to use EPA Method 552.3.

c. *ASTM D 6581-00 for bromate, chlorite, and bromide.* ASTM Method D 6581-00 (ASTM 2002) for the determination of bromate, chlorite, and bromide was adopted by ASTM in 2000. This method uses the same procedures as EPA Method 300.1 (USEPA 2000l) (the method promulgated in the Stage 1 DBPR) and thus is considered equivalent to the approved method (Hautman *et al.* 2001). The ASTM method includes interlaboratory study data that were not available when EPA Method 300.1 was published. The study data demonstrate good precision and low bias for all analytes.

Under section 12(d) of the National Technology Transfer and Advancement Act, the Agency is directed to consider whether to use voluntary consensus standards in its regulatory activities.

ASTM Method D 6581-00 is an acceptable consensus standard and it is published in the 2001, 2002, and 2003 editions of *The ASTM Annual Book of Standards*. EPA is proposing to approve ASTM Method D 6581-00 in order to provide additional flexibility to laboratories. Any edition containing the cited version may be used.

d. *EPA Method 317.0 revision 2 for bromate, chlorite, and bromide.* EPA Method 317.0 Revision 2 (USEPA 2001d) is an extension of the currently approved EPA Method 300.1 for bromate, chlorite, and bromide. It uses the EPA Method 300.1 technology, but it adds a postcolumn reactor that provides a more sensitive and specific analysis for bromate than is obtained using EPA Method 300.1. As with EPA Method 300.1, the anions are separated by ion chromatography and detected using a conductivity detector. (Bromate, chlorite, and bromide concentrations determined by the conductivity detector are equivalent to those measured using EPA Method 300.1.) After the sample