

Board Administration and Regulatory Coordination Unit

Division 3. Air Resources Board

Chapter 1. Air Resources Board

Subchapter 8.5 Consumer Products

Article 2. Consumer Products

§ 94515. Test Methods.

(a)(1) VOC content determination using ARB Method 310. Testing to determine compliance with the requirements of this article shall be performed using Air Resources Board Method 310, Determination of Volatile Organic Compounds (VOC) in Consumer Products, adopted September 25, 1997 and as last amended on September 3, 1999, which is incorporated herein by reference. Alternative methods which are shown to accurately determine the concentration of VOCs in a subject product or its emissions may be used upon approval of the Executive Officer.

(2) In sections 3.5, 3.6, and 3.7 of Air Resources Board (ARB) Method 310, a process is specified for the “Initial Determination of VOC Content” and the “Final Determination of VOC Content”. This process is an integral part of testing procedures set forth in ARB Method 310, and is reproduced below:

Sections 3.5, 3.6, and 3.7 of Air Resources Board Method 310

3.5 Initial Determination of VOC Content. The Executive Officer will determine the VOC content pursuant to sections 3.2 and 3.3. Only those components with concentrations equal to or greater than 0.1 percent by weight will be reported.

3.5.1 Using the appropriate formula specified in section 4.0, the Executive Officer will make an initial determination of whether the product meets the applicable VOC standards specified in ARB regulations. If initial results show that the product does not meet the applicable VOC standards, the Executive Officer may perform additional testing to confirm the initial results.

3.5.2 If the results obtained under section 3.5.1 show that the product does not meet the applicable VOC standards, the Executive Officer will request the product manufacturer or responsible party to supply product formulation data. The manufacturer or responsible party shall supply the requested information. Information submitted to the ARB Executive Officer may be claimed as confidential; such information will be handled in accordance with the confidentiality procedures specified in Title 17, California Code of Regulations, sections 91000 to 91022.

3.5.3 If the information supplied by the manufacturer or responsible party shows that the product does not meet the applicable VOC standards, then the Executive Officer will take appropriate enforcement action.

3.5.4 If the manufacturer or responsible party fails to provide formulation data as specified in section 3.5.2, the initial determination of VOC content under this section 3.5 shall determine if the product is in compliance with the applicable VOC standards. This determination may be used to establish a violation of ARB regulations.

3.6 Determination of the LVP-VOC status of compounds and mixtures. This section does not apply to antiperspirants and deodorants or aerosol coating products because there is no LVP-VOC exemption for these products.

3.6.1 Formulation data. If the vapor pressure is unknown, the following ASTM methods may be used to determine the LVP-VOC status of compounds and mixtures: ASTM D 86-96 (April 10, 1996), ASTM D 850-93 (April 15, 1993), ASTM D 1078-97 (July 10, 1997), ASTM D 2879-97 (April 10, 1997), as modified in Appendix B to this Method 310, ASTM D 2887-97 (April 10, 1997) as ASTM E 1719-97 (March 10, 1997).

3.6.2 LVP-VOC status of “compounds” or “mixtures.” The Executive Officer will test a sample of the LVP-VOC used in the product formulation to determine the boiling point for a compound or for a mixture. If the boiling point exceeds 2160 C, the compound or mixture is an LVP-VOC. If the boiling point is less than 2160 C, then the weight percent of the mixture which boils above 2160 C is an LVP-VOC. The Executive Officer will use the nearest 5 percent distillation cut that is greater than 2160 C as determined under 3.6.1 to determine the percentage of the mixture qualifying as an LVP-VOC.

3.6.3 Reference method for identification of LVP-VOC compounds and mixtures. If a product does not qualify as an LVP-VOC under 3.6.2, the Executive Officer will test a sample of the compound or mixture used in a products formulation utilizing one or both of the following: ASTM D 2879-97, as modified in Appendix B to this Method 310, and ASTM E 1719-97, to determine if the compound or mixture meets the requirements of Titles 17, CCR, section 94508(a)(79)(A).

3.7 Final Determination of VOC Content. If a product's compliance status is not satisfactorily resolved under sections 3.5 and 3.6, the Executive Officer will conduct further analyses and testing as necessary to verify the formulation data.

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3.7.1 If the accuracy of the supplied formulation data is verified and the product sample is determined to meet the applicable VOC standards, then no enforcement action for violation of the VOC standards will be taken.

3.7.2 If the Executive Officer is unable to verify the accuracy of the supplied formulation data, then the Executive Officer will request the product manufacturer or responsible party to supply information to explain the discrepancy.

3.7.3 If there exists a discrepancy that cannot be resolved between the results of Method 310 and the supplied formulation data, then the results of Method 310 shall take precedence over the supplied formulation data. The results of Method 310 shall then determine if the product is in compliance with the applicable VOC standards, and may be used to establish a violation of ARB regulations.

(b) VOC content determinations using product formulation and records. Testing to determine compliance with the requirements of this article may also be demonstrated through calculation of the VOC from records of the amounts of constituents used to make the product, pursuant to the following criteria:

(1) Compliance determination based on these records may not be used unless the manufacturer of a consumer product keeps accurate records for each day of production of the amounts and chemical composition of the individual product constituents. These records must be kept for at least three years.

(2) For the purpose of this section 94515(b), the VOC content shall be calculated according to the following equation:

$$\text{VOC Content} = \frac{B - C}{A} \times 100$$

where,

A = total net weight of unit (excluding container and packaging)

B = total weight of all VOCs, as defined in Section 94508(a), per unit

C = total weight of VOCs exempted under Section 94510, per unit

(3) If product records appear to demonstrate compliance with the VOC limits, but these records are contradicted by product testing performed using ARB Method 310, the results of ARB Method 310 shall take precedence over the product records and may be used to establish a violation of the requirements of this article.

(c) Determination of liquid or solid. Testing to determine whether a product is a liquid or solid shall be performed using ASTM D4359-90 (May 25, 1990), which is incorporated by reference herein.

(d) Compliance determinations for charcoal lighter material products. Testing to determine compliance with the certification requirements for charcoal lighter material shall be performed using the procedures specified in the South Coast Air Quality Management District Rule 1174 Ignition Method Compliance Certification Protocol (February 28, 1991), which is incorporated by reference herein.

(e) Testing to determine distillation points of petroleum distillate-based charcoal lighter material shall be performed using ASTM D86-90 (Sept. 28, 1990), which is incorporated by reference herein.

(f) Fragrance content determinations for personal fragrance products. Testing to determine the percent by weight of fragrance in personal fragrance products shall be performed according to the Association of Official Analytical Chemists (AOAC) Official Method of Analysis No. 932.11, 1990, "Essential Oil in Flavor Extracts and Toilet Preparations, Babcock Method" (AOAC Official Methods of Analysis, 15th Edition, 1990), which is incorporated by reference herein.

(g) No person shall create, alter, falsify, or otherwise modify records in such a way that the records do not accurately reflect the constituents used to manufacture a product, the chemical composition of the individual product, and any other test, processes, or records used in connection with product manufacture.

NOTE: Authority cited: Sections 39600, 39601, 39607, 41511 and 41712, Health and Safety Code. Reference: Sections 39002, 39600, 39607, 40000, 41511 and 41712, Health and Safety Code.

REFERENCES