United States
Environmental Protection
Agency

Office of Air Quality
Planning and Standards
Research Triangle Park NC 27711

EPA-450/3-82-004
February 1982

Air

EPA

Test Method 107A-Summary of Comments and Responses

EPA-450/3-82-004

Revised Test Method 107A-
(Proposed February 12, 1981; 46 FR 12188)
Summary of Comments
and Responses

Emission Standards and Engineering Division

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air, Noise, and Radiation
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

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CHAPTER 1

INTRODUCTION

On February 12, 1981, the U. S. Environmental Protection Agency published in the Federal Register (46 FR 12188) Method 107A, "Determination of Vinyl Chloride Content of Solvents, Resin - Solvent Solution, Polyvinyl Chloride Resin, Resin Slurry, Wet Resin, and Latex Samples." This method was proposed under the authority of Sections 112, 114, and 301(a) of the Clean Air Act, as amended.

Public comments were solicited at the time of proposal. To provide interested persons the opportunity of oral presentation of data, views, or arguments concerning the proposed revisions and test methods, a public hearing was scheduled for March 26, 1981, at the Research Triangle Park, North Carolina, but no person desired to make an oral presentation. The public comment period was from February 12, 1981, to April 13, 1981.

Seven comment letters were received concerning issues relative to the proposed test method. A detailed discussion of these comments and responses is summarized in this document. The comments have been carefully considered, and it was determined that no changes were necessary in the proposed test method.

CHAPTER 2

SUMMARY OF CHANGES SINCE PROPOSAL

No changes to the method were required.

CHAPTER 3

SUMMARY OF PUBLIC COMMENTS AND RESPONSES

Commenter IV-D-1

1.1 Comment: The commenter felt that Method 107A is very similar to methods in use before the regulation containing Method 107 was promulgated in 1977, and a great deal of time and money could have been saved had Method 107A been permitted originally.

Response: The commenter apparently failed to recognize that Part 61 of Title 40, CFR, provides for approval by the Administrator of methods which have been demonstrated to the Administrator's satisfaction to produce results adequate for determination of compliance. Method 107 is an automated analytical technique that is best suited for the high-volume quality control analyses that are an integral part of most polyvinyl chloride facilities, but for those who may prefer to use another method, that option has always been a possibility.

Commenter IV-D-2

2.1 Comment: The proposed alternative method should generally be satisfactory.

Response: No response is required.

2.2 Comment: In Section 6.3.2, the specified column packing, Tergitol E-35 has not been manufactured since 1973, and may not be generally available. Therefore, alternative column packings should be specified.

Response: Tergitol E-35 was the column packing used when data to support Method 107-A was generated. Rather than require someone to formally revalidate an alternative method to the Environmental Protection Agency (EPA) each time a column packing becomes obsolete, EPA prefers to use the language in Section 6.3.2, which says that it is the analyst's responsibility to determine that the precision and accuracy are not impaired, and resolution of the vinyl chloride peak is satisfactory.

Commenter IV-D-3

3.1 Comment: Due to the hazards involved, EPA should not recommend the use of pure vinyl chloride to prepare liquid calibration standards. Furthermore, due to the availability of standard reference materials from the National Bureau of Standards, the accuracy of commercially prepared gaseous vinyl chloride mixtures is probably far superior to any liquid standards prepared by the procedure described in the proposed method.

Response: The Agency recognizes the need to exercise great caution in the use of pure vinyl chloride in Section 5, Safety, and Section 9.1, Preparation of Standards. Liquid standards are an integral part of the method, and gas standards would add considerable cost to the method without increasing the accuracy to a significant or necessary degree.

Commenter IV-D-4

4.1 Comment: The proposed alternative test method has been reviewed by members of a plastic trade association and is endorsed

as both straightforward and sound, and is a simplified and less costly alternative to the present reference method.

Response: No response is required.

Commenter IV-D-5, IV-D-7

5.1 Comment: The commenter agrees that the proposed alternative method is desirable from the standpoints previously mentioned.

Response: No response is required.

5.2 Comment: The peak shape and the baseline in the sample chromatograph of the solvent impurities are not very good and may present problems in quantitating small amounts of vinyl chloride. One reason for the poor chromatography may be the rather large injection of 10 microliters of sample. A technique that would improve the chromatography involves the addition of low levels of N_2O to the carrier gas of an electron capture detector. This technique is capable of detecting about 2×10^{-12} g of vinyl chloride, which is about 10^2 times more sensitive than a flame detector.

Response: While an electron capture detector will permit the determination of very low levels of vinyl chloride, the enhanced sensitivity is not necessary to measure the vinyl chloride concentration of concern in the application specified for Method 107A. However, if someone requested EPA approval of the use of an electron capture detector, no problem with that approval would be expected.

Commenter IV-D-6

6.1 Comment: A manufacturer of gas chromatographs and accessories objects to the citations of brand name products (Sections 6.3.1, 6.3.2, 6.3.7), and suggests they be replaced with generic equivalents. In their opinion, many potential method users will never question a particular brand selection if one is cited.

Response: Most method users find it helpful to know which particular brand has been shown to produce satisfactory results. However, as the EPA does not have the capability to screen all products to determine acceptability, it believes the best course of action is to clearly leave the method users the option to choose some other brand by adding the phrase "or equivalent" to each brand product cited.

Commenter IV-D-7

7.1 Comment: Refer to Comment and Response 5.2.

Table 1. LIST OF COMMENTERS

Docket Number A-80-37

Docket item number	Commenter/affiliation
IV-D-1	John T. Barr, Manager, Regulatory Response Air Products and Chemicals, Inc. Box 538 Allentown, Pennsylvania 18105
IV-D-2	R.T. Gottesman, Vice President Tenneco Chemicals Park 80 Plaza West-One Saddle Brook, New Jersey 07662
IV-D-3	Robert Denyszyh, Manager of R and D Scott Specialty Gases Scott Environmental Technology, Inc. Plumsteadville, Pennsylvania 18949
IV-D-4	Peter L. de la Cruz, Assistant General Council, The Society of the Plastics Industry, Inc. c/o Keller and Heckman 1150 17th Street, N.W. Suite 1000 Washington, D.C. 20036
IV-D-5	Robert E. Sievers, Director Cooperative Institute for Research in Environmental Sciences Campus Box 449 University of Colorado at Boulder Boulder, Colorado 80309
IV-D-6	Milton D. Siegel, Director, Product Regulatory Affairs Varian 611 Hansen Way Palo Alto, California 94303
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15. SUPPLEMENTARY NOTES

16. ABSTRACT

This document addresses the public comments submitted after proposal of Method 107A in the Federal Register. A detailed discussion of these comments and responses is summarized in this document.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
		13B

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