U. S. Department of Commerce
C. R. Smith
Secretary
National Bureau of Standards
A. V. Astin, Director

Certificate of Analysis

Standard Reference Material 149

o—Fluorobenzoic Acid

This standard was purified at the National Bureau of Standards for use in verifying the microdetermination of fluorine in organic materials. Analysis by chemical and physical methods indicate a minimum purity of 99.7 mole percent.

The fluorine content of the standard was determined by decomposition using the oxygen-flask method and subsequent determination of fluoride by potentiometric titration with lanthanum (III) using an ion-selective electrode as fluoride sensor. For 14 determinations, an average fluorine content of 13.57% was found with a standard deviation of the mean of 0.07%, to be compared with the theoretical value for *o*-fluorobenzoic acid of 13.56% fluorine. Accordingly, it is recommended that the theoretical percentages be used, namely:

Fluorine	13.56%
Carbon	60.00%
Hydrogen	3.60%

The material was purified by C. L. Stanley. Chemical analyses leading to certification were performed by R. A. Durst, R. A. Paulson, W. P. Schmidt, and R. F. Brady.

The overall direction and coodination of the technical measurements leading to certification were performed under the chairmanship of J. K. Taylor.

The technical and support aspects involved in the preparation, certification, and issuance of this Standard Reference Material were coordinated through the Office of Standard Reference Materials by T. W. Mears.

Washington, D. C. 20234
May 3, 1968

W. Wayne Meinke, Chief
Office of Standard Reference Materials