

U. S. Department of Commerce
Alexander B. Trowbridge,
Secretary

National Bureau of Standards
A. V. Astin, Director

Certificate of Analysis

Standard Reference Material 41a

Dextrose

Ash.....less than 0.01%

Moisture.....less than 0.02%

The specific rotation of dextrose at equilibrium is represented by the formula

$$[\alpha]_{5461 \text{ \AA}}^{20 \text{ }^\circ\text{C}} = 62.032^\circ + 0.04257^\circ c,$$

where c is grams of anhydrous dextrose weighed in vacuo and contained in 100 ml of solution. This formula is valid for values of c between 6 g and 32 g. [Bull. B. S. 13, 633 (1916) S293; NBS Circular C440, p. 83 (1942)].

$$[\alpha]_{\text{D}}^{20 \text{ }^\circ\text{C}} = 52.7 \quad c = 4 \text{ g per 100 ml.}$$

Dextrose absorbs surface moisture which can be removed by drying in vacuum at 60 to 70 °C.

The dextrose was obtained from the Pfanstiehl Laboratories, Inc. of Chicago, Illinois. Chemical and physical testing to determine its suitability for a standard reference material were performed by B. S. Carpenter, B. Coxon, R. A. Paulson, R. Schaffer, and B. F. West of the Analytical Chemistry Division.

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W. Wayne Meinke, Chief,
Office of Standard Reference Materials.