

UNITED STATES DEPARTMENT OF COMMERCE
WASHINGTON

National Bureau of Standards

Certificate

FOR

STANDARD SAMPLE NO. 41

DEXTROSE

Ash..... 0.003%
Moisture..... .01%

Each 100 ml of a normal dextrose solution contains 32.231 g of the dried substance weighed in air with brass weights. At 20°C this solution in a 200-mm polariscope tube reads 100° S on the International Sugar Scale as defined at the Eighth Session of the International Commission for Uniform Methods of Sugar Analysis, Amsterdam, 1932 [Int. Sugar Jour. 35, 17, 62 (1933), N.B.S. Circular C440, 79, 775 (1942)]. The illumination is white light filtered through a 15-mm layer of a 6-percent solution of potassium dichromate.

The rotation in circular degrees of the normal dextrose solution observed in a 200-mm polariscope tube, for wave length 5461 Å is 40.897°.

The specific rotation of dextrose for wave length 5461 Å is represented by the formula:

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

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; N.B.S. Circular C440, 83 (1942)].

For the Director

by



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