U. S. Department of Commerce
Alexander B. Trowbridge,
Secretary
National Bureau of Standards
A. V. Astin, Director

Certificate of Analysis

Standard Reference Material 1592

2,3-*O*-Isopropylidene-β-D-*threo*-pentulose

This Standard Reference Material is certified regarding identity and has the following properties:

Melting Point	70°–71°C
Specific Rotation $[\alpha]_D^{22}$	+1.6° (c 4; acetone)

This compound is also known by the synonyms monoacetone–D–lyxoketose, monoacetone–D–lyxulose, monoacetone–D–xyloketose, and monoacetone–D–xylulose.

To obtain the free pentulose (the crystalline form of this sugar has never been reported) dissolve 2 mg of the Standard Reference Material in 1 ml of water, add 1.25 mg of oxalic acid dihydrate and heat the solution to 65°C for eight hours. Cool, add finely powdered calcium carbonate, with stirring, until the solution is neutral to congo red. Filter and wash the calcium salts with water. Combine the filtrate and washings and evaporate to dryness at 30°C at 25 mm Hg. Dissolve the syrup in absolute ethanol, filter, and evaporate the filtrate to dryness.

Washington, D. C. 20234
January 18, 1968

W. Wayne Meinke, Chief
Office of Standard Reference Materials