

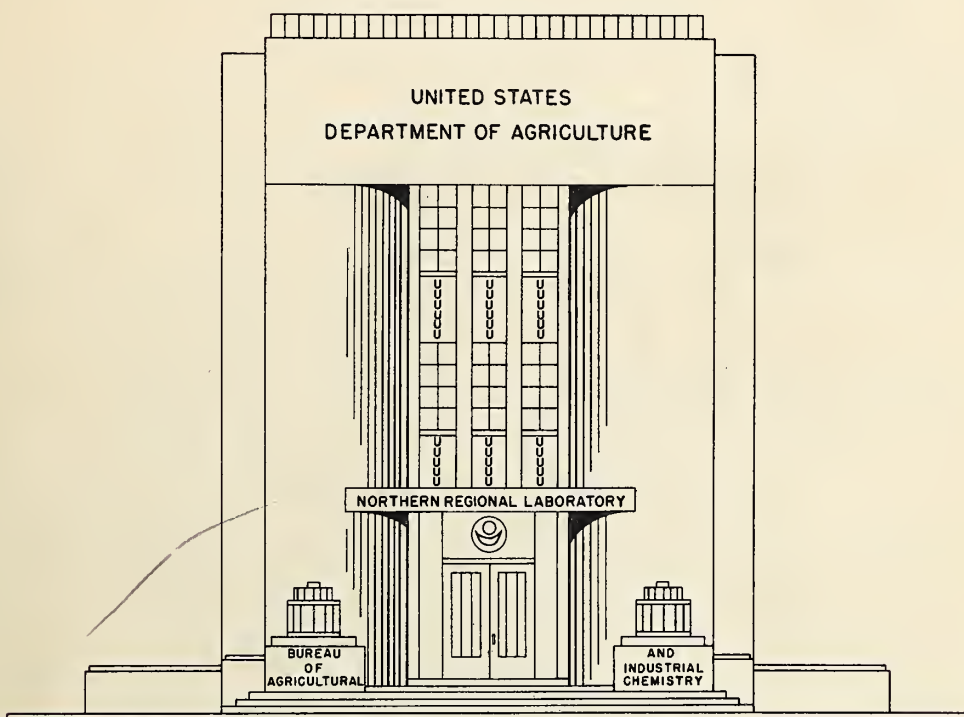
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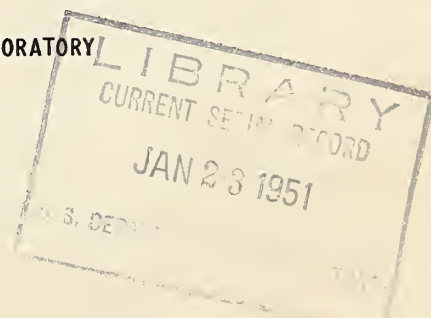
DEXTRAN -- A SELECTED BIBLIOGRAPHY



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DEXTRAN--A SELECTED BIBLIOGRAPHY

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INTRODUCTION

The rapidly expanding interest in dextran, the alpha-1,6-linked polymer of glucose synthesized by *Leuconostoc mesenteroides* and its congeners, has shown the desirability of compiling and classifying for ready reference the significant literature references up to the present. The great majority of the publications listed have appeared since 1940, although the oldest publication dates back to 1878.

The outstanding current interest in dextran is its use as a source of synthetic blood plasma³. However, other applications of dextran are being reported in medical work and in the industrial field, and dextran is of unusual interest in fundamental research on carbohydrates. All these aspects are covered in this bibliography.

The plan of organization and the general subjects included in this bibliography are as follows:

I. PRODUCTION OF DEXTRAN

Preparation of dextran on both laboratory- and industrial-scale; related topics on the occurrence, microbiology, and nutrition of *Leuconostoc*, and on the mechanism of dextran formation.

II. PROPERTIES, STRUCTURE, AND CHARACTERIZATION

III. PREPARATION AND USE OF SYNTHETIC BLOOD PLASMA FROM DEXTRAN

A. Conversion of dextran into synthetic blood plasma.

B. Clinical results: Response of human and animal subjects to injection with synthetic blood plasma from dextran; reaction and fate of dextran and degraded dextran in the body; analytical methods; related topics.

IV. INDUSTRIAL AND OTHER APPLICATIONS

Includes several medical applications; dextran as the substrate for preparation of a new enzyme, dextranase; dextran and its derivatives as emulsifying, stabilizing, and coating agents.

V. REVIEW ARTICLES AND BOOKS

General reviews, and books dealing with dextran in its relation to the cane and beet sugar industries.

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² One of the laboratories of the Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Department of Agriculture.

³ This terminology is used for brevity with the knowledge that there is no real substitute for blood plasma. More properly, the solutions of degraded dextran are those of suitable physico-chemical properties useful in maintaining circulatory volume.

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