

AUBURN UNIVERSITY

Inexpensive Production of Cellodextrins (Cello-Oligosaccharides)

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Reference: Cellodextrins

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Overview

Auburn University is seeking a licensee or development partner for a process for the production of cellodextrins (or cello-oligosaccharides) — short chains of 2-8 glucose monomers. Cellodextrins currently have utility as reagents in the study of cellulases and other chemicals, but the extremely high costs preclude them from being used in other areas. This technology has the potential to produce cellodextrins in bulk quantities at drastically reduced costs, opening up such areas as the health food market.

Advantages

- Inexpensive production of cellodextrins
- Lowered costs enable new applications for the end product, including health food products similar to xylo-oligosaccharides already on the market

Description

Cellodextrins, also known as cello-oligosaccharides, are water soluble short chain beta-polymers of glucose with a degree of polymerization between 2-8. In nature, these serve as energy sources for many forms of bacteria and are often created from the breakdown of cellulose. Due to this later relationship, they can be useful as a reagent in the study of cellulose chemistry, including cellulase enzymes.

Currently, cellodextrins are produced artificially using very expensive processes that raise the typically selling price to between \$5 and \$10 per milligram. While this pricing retains the feasibility of using these compounds as research reagents, it prohibits broader use in other applications, such as in the health food industry. Cellodextrins have been shown to improve the growth of beneficial bacteria, or probiotics, such as bifidobacteria which aid in digestion and GI health. Being able to produce cellodextrins in larger quantities at reasonable prices would open up the health food market for cellodextrins, similar to xylo-oligosaccharides currently available on the market.

This invention relates to a new process for the production of cellodextrins which will increase production capacity and drastically reduce the manufacturing costs, opening up the door to opportunities not only in research reagents, but also in bulk areas such as health foods.

Status

- A patent application has been filed
- Cellodextrins have been produced in multigram quantities

Licensing Opportunities

- This technology is available for exclusive or non-exclusive licensing
- Joint development opportunities include funded research or a joint venture