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**Synthesis of transfructosyl products by levansucrase from
Microbacterium laevaniformans ATCC 15953**

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Levansucrase from *Microbacterium laevaniformans* ATCC 15953 was purified from the culture filtrate by ammonium sulfate precipitation, DEAE-Sepharose Fast Flow and Sephacryl S-100 HR column chromatographies. The molecular mass of the purified enzyme was estimated to be 66 kDa on SDS-PAGE. The optimal pH and temperature for the enzyme activity were around 6.0 and 30°C for levan formation, respectively. In addition to levan formation, levansucrase also catalyzes the transfructosylation reaction of fructose moiety from sucrose to various sugar acceptors producing various fructosyl derivatives. Among the acceptors we used, cellobiose was the best acceptor followed closely by lactose, melibiose and maltose. The fructosyl derivatives were detected by TLC and HPLC. The transfer product from melibiose as an acceptor was isolated by Recycling Prep. LC and identified by ¹³C-NMR Spectroscopy. The chemical structure of the resulting fructosyl melibiose was identified as *O*- α -D-galactopyranosyl-(1 \rightarrow 6)- α -D-glucopyranosyl-(1 \rightarrow 2)- β -D-fructofuranoside.