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[\[PDF \(291K\)\]](#) [\[References\]](#)**Isolation and Identification of Novel Tri- and Tetra-saccharides Synthesized by *Thermoanaerobacter brockii* Kojibiose Phosphorylase**Natsuko Takahashi<sup>1)</sup>, Eri Fukushi<sup>2)</sup>, Shuichi Onodera<sup>1)</sup>, Tomoyuki Nishimoto<sup>3)</sup>, Jun Kawabata<sup>2)</sup> and Norio Shiomi<sup>1)</sup>

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Novel tri- and tetra-saccharides were synthesized by glucosyltransfer from  $\beta$ -D-glucose 1-phosphate ( $\beta$ -D-G1P) to palatinose using *Thermoanaerobacter brockii* kojibiose phosphorylase. These saccharides were isolated using carbon-Celite column chromatography and preparative high performance liquid chromatography. Gas liquid chromatography analysis of methyl derivatives, MALDI-TOF MS and NMR measurements were used for structural confirmation of the saccharides. The  $^1\text{H}$  and  $^{13}\text{C}$  NMR signals of the saccharides were assigned using 2D-NMR including COSY, HSQC, HSQC-TOCSY and HMBC. These oligosaccharides were identified as  $2^{\text{G}}\text{-}\alpha\text{-D-glucopyranosyl-palatinose}$ ;  $O\text{-}\alpha\text{-D-glucopyranosyl-(1}\rightarrow\text{2)-}O\text{-}\alpha\text{-D-glucopyranosyl-(1}\rightarrow\text{6)-D-fructofuranose}$  and  $2^{\text{G}}\text{(}\alpha\text{-D-glucopyranosyl)}_2\text{-palatinose}$ ;  $O\text{-}\alpha\text{-D-glucopyranosyl-(1}\rightarrow\text{2)-}O\text{-}\alpha\text{-D-glucopyranosyl-(1}\rightarrow\text{2)-}O\text{-}\alpha\text{-D-glucopyranosyl-(1}\rightarrow\text{6)-D-fructofuranose}$ .

**Key words:** Kojibiose phosphorylase, oligosaccharide, Palatinose, NMR[\[PDF \(291K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)

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