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The time courses of optical rotation and fluoride ion release during hydrolysis of  $\beta$ -D-glucopyranosyl fluoride by the  $\beta(1 \rightarrow 3)$ -glucanase of *Phanerochaete chrysosporium* (J. L. Copa-Patiño and P. Broda, unpublished work) indicated that the initial sugar product was  $\beta$ -D-glucopyranose. This was confirmed by monitoring the hydrolysis of 1- $^{13}\text{C}$  $\beta$ -D-glucopyranosyl fluoride by this enzyme with  $^{13}\text{C}$  n.m.r. (without proton decoupling). The

same two techniques were used to confirm that hydrolysis of  $\beta$ -D-glucopyranosyl fluoride by the exo  $\beta( \rightarrow 3)$ -glucanase of 'Basidiomycete QM 806' (identified as *Sporotrichum dimorphosporum*) yielded  $\alpha$ -glucopyranose as first sugar product, in accordance with previous results using laminarin as substrate [Parrish and Reese (1963) Carbohydr. Res. 3, 424-429; Nelson (1970) J. Biol. Chem. 245, 869-872].

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