The antimutagen capacity of synthesized polyphenol glycoside through transglycosylation by CGTase enzyme of bacilluspolymyxa D4

Abstract

Polyphenol gycoside was synthesized through enzimatic trausglycosylation by cyclodeztrin glucanotransferase I1.4-a-D-glucan 4-cz-D-1,4-glucano-transfcrssc or CGTase EC 2.4.1.19, of Bacillus poly,nyxa D4. Soluble starch and resorcinol were used as the aubstrat and the acceptor respectively. The transfer product was detected using thin layer chromatography as resorsinol glucoside. Purif.c*tion of transfer product was carried out using column chromatogra phy and resorsinol glucoalde was collected In fraction of 20% methanol. The bioassay of mutagenesis was detected by formation of mutation induced by afiatoin B1 1 ig/ml In Salmonella sypl.ymurium TA9S. The effect of antimutagenesis was evaluated using this culture on L-histidine deficiency medium containing resorcinol glucoside. Results show that rcaorcinol glucoside like arbutin and resorcinol can inhibit niutagenesis at concentration of 25 mM.