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### Enhanced Stability of Laccase by Xylitol

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Laccase is a multicopper oxidase able to perform one-electron oxidation of several aromatic substrates.

The application of laccase on wood delignification, drug analysis, biosensor, wine clarification, bioremediation, etc., was proposed [1].

As every enzymatic system, laccase has some limitations due to the reaction conditions, mainly temperature and pH.

Deactivation of laccase at pH values over 6 and lower 3 are undesirable properties that must be improved. The addition of some compounds is an easy and conventional way to get the stabilization of laccase [2].

In this work laccase from *Trametes hirsuta* was studied in order to get its stabilization towards different pH values by addition of xylitol, a polyol used in food industry with optimal characteristics with respect to its prize and non-toxic properties.

[1] Mayer, A.M., Staples R.C. Laccase: new functions for an ols enzyme. *Photochemistry* 60 **2002** 551-565.

[2] E. V. Stepanova, O.V. Koroleva, V.P. Gvrilova, E.O. Landesman, A. Makower. Comparative stability assessment of laccases from basidiomycetes *Coriolus hirsutus* and *Coriolus zonatus* in the presence of effectors. *Applied Biochemistry and Microbiology* 39(5) **2003** 482-487