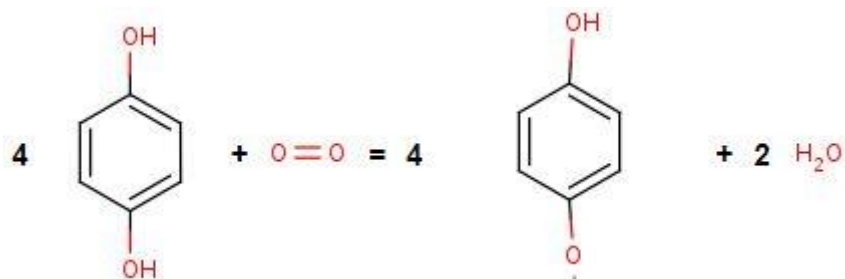


Laccase A

Benzenediol: oxygen oxidoreductase, E.C. 1.10.3.2

Description: Enzyme preparation which oxidised monovalent and polyvalent phenolic compounds. It catalyses reactions to products similar like humic substances under less oxygenic conditions. Basically, Laccase oxidises ortho- and para-diphenols into the corresponding quinones and phenoxy radicals which polymerises spontaneously and are precipitated in the solution.

Catalysed reaction:



Phenol + O_2 → *Chinone radical* + H_2O

Origin: *Agaricus bisporus*

Application:

- Precipitation of phenolic substances
- Enzymatic browning of food (cacao, coffee)
- Glueing of flake boards
- Modification of elasticity and consistency of pastes, gums, dispersion media, phenolic resins
- Production of microbicides
- Analysis of phenols

Activity: > 4 000 U/ g
(Substrate: Catechol)

Specific activity: > 250 U/ mg Protein

Parameter: pH Optimum: 5.6, effective in the range of pH 2.5 - 8.5
Temperature Optimum: 50 - 60°C, effective in the range of 15 - 70°C

Substrate specificity: Laccase A catalyses the reaction of a large number of substrates like Catechol, 2,6-Dimethoxyphenol or Syringaldazin

Substrate	relative activity [%]
p-Phenylenediamine	100
N,N-Dimethyl-p-phenylenediamine	97
Guaiacol	72
Pyrogallol	62
1-Naphtol	60
Catechin	26
Ascorbic acid	16
Phloroglucinol	8

Inhibitors:	Substrate	Inhibition [%]
	Sodium azide (1 mM)	100
	Sodium azide (0.1 mM)	90
	Potassium cyanide (1 mM)	100
	Potassium cyanide (0.1 mM)	86
	Cetylpyridinium bromides (1 mM)	87
	Cetylpyridinium bromides (0.1 mM)	5
	Cetyltrimethylammonium bromide (1 mM)	80
	Cetyltrimethylammonium bromide (0.1 mM)	8
	EDTA (1 mM)	26
	EDTA (0.1 mM)	5

Article-no.: 2025

Form of delivery: Light brown powder/ lyophilizate

Stability: Stable at -20°C

Storage: – 20°C

Literature: [1] Wood, D.A., (1979), J. Gen. Microbiol., 117, 327-338
[2] Wrigley, S.K., Gibson, J.F., (1987), Biochim. Biophys. Acta, 916, 259-264