described in multi kinetic processes that appear as two differentially bioavailable pools: one in a reversible pool and another in a resistant pool. The fraction of contaminant that resides in each of these pools changes, depending upon the sorption duration. During this equilibration phase, contaminant bioavailability can also be expected to change with time. The extent to which humus-associated contaminants are biologically available and bioaccumulated is important in order to assess their direct effects on organisms. More well designed studies are required to determine the potential for bioaccumulation that can be interpreted and modelled for predicting the impact of accumulated chemicals. This is a demanding work because bioavailability of any given contaminant is not a constant factor but rather an organism and system dependent parameter.

ASSOCIATION OF LACCASE WITH HUMIC ACIDS

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Laccase (Lc, EC 1.10.3.2) is an extracellular multicopper oxidase widely presented in soils. In the environment Lc behavior is determined mainly by its association with humic acids (HA). This study was aimed to provide direct evidence for the complex formation and to get deeper insight in its chemical nature. Lc from *Coriolus hirsutus* and coal HA was used. The Lc-HA complexes were prepared by incubation of Lc and HA in phosphate buffer. An additional peak corresponding to a component with molecular weight exceeding that of both Lc and HA was observed in size-exclusion chromatography (SEC) profiles of Lc-HA complexes, what was evident for Lc-HA complex formation. The finding was confirmed by measuring enzyme activity profile as the additional peak contained nearly 80% of total Lc activity applied. Assuming stability of Lc-HA complex under conditions provided compensation of partial negative charge of both Lc and HA, one can exclude ionic interaction as mechanism of complex formation. On the other hand, isoelectrofocusing (IEF) data allowed concluding on non covalent binding as complex was unstable under electrophoresis conditions. Association between Lc and HA by weak dispersive forces such as hydrophobic, van der Waals, π-π etc. was therefore hypothesized.

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