Objectives

The aim of this work was to isolate microorganisms from the distillery effluent and a soil receiving effluent for long period, capable of reducing colour from the effluent as well as soil. In this context, the work focused on the following aspects:

1. Isolation and screening of microorganisms capable of decolorizing distillery effluent
2. Morphological and molecular characterization of screened isolates
3. Identification of rate limiting factors and optimization of color removal
4. Enhancing ligninolytic enzyme activity of selected fungal isolates using solid-state fermentation
5. An approach to treat undiluted distillery effluent using an immobilized fungal consortium
6. Development of a microbial consortium for decolourisation using a bench-scale model

The following chapters present a comprehensive review of scientific literature pertaining to the subject followed by details of materials and methods used for the experiments, results obtained and their interpretation in form of discussion.