

Redox Potential, the Main Barrier of Laccase-Mediated Biobleaching of Pulp in Paper Industry

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ABSTRACT

A recently published article identified the main difficulties of implementing laccases at industrial scale for eco-friendly biobleaching of pulps for papers. This paper analyses the difficulties, mathematically, to prioritize them. Expert's opinion is input data for the analysis. Multi-criteria decision making method is used for analysis. From the result and among the barriers that effect on stability of laccase, Redox potential with 52.2% priority is the most important difficulties; it is followed by pH with 25.3% priority. Moreover, this paper also provides a list of suggestion for future studies.

KEYWORDS: Paper Industry; Redox potential; pH; temperature; lack of oxygen; grafting reactions