

## عنوان مقاله:

Extraction and Characterization of Polyphenol Oxidase from Plant Materials: A Review

## محل انتشار:

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## خلاصه مقاله:

Polyphenol oxidase (PPO) is a copper-containing enzyme that can be used for different applications including wastewater treatment and biosensing. Given these wide arrays of application, the reaction and biochemical characteristics of the enzyme must be known to further determine its other applications and to control the essential factors during processing. The purpose of this research was to review the different factors that influence the effective extraction and characterization of PPO from plant materials. The pH of the extraction mixture, extraction temperature, type of buffer, mass to solvent ratio, extraction time, and additives are the factors that influence the effective extraction of PPO from plant materials. Since PPOs taken from different plant sources have varied protein structures, these factors have different effects during extraction. The isolated PPO from the extraction process can be characterized based on its activity as a function of pH, temperature, and type of substrate, and on the values of its kinetic parameters ( $K_m$  and  $V_{max}$ ). PPO isolated from different plant sources shows varied optimum pH, optimum temperature, substrate affinity, and kinetic parameter values.

## کلمات کلیدی:

Polyphenol oxidase, Extraction, Characterization, Kinetic parameters

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