

王炳娟 北京市西三环北路105号 首都师范大学化学系 100037

李玲霞 北京市西三环北路105号 首都师范大学化学系 100037

邹洪 北京市西三环北路105号 首都师范大学化学系 100037

摘要: 邻苯三酚在Tris-HCl (pH8.30) 缓冲溶液中, 可以发生自氧化反应产生超氧阴离子自由基 (O_2^-), 其自氧化产物在-0.96V和-1.44V (SCE) 有两个还原波。铜锌超氧阴离子歧化酶 (SOD) 可催化 O_2^- 的歧化反应, 使邻苯三酚自氧化反应的速率降低。通过测定加入不同量SOD时邻苯三酚自氧化反应速率的变化来测定SOD活性, 建立一种简单、灵敏的测定SOD活性的电化学方法, 结果表明: 在-0.96V处测定SOD活性的灵敏度略高于-1.44V处的灵敏度。

关键词: 邻苯三酚, SOD活性, 超氧阴离子自由基, 极谱法

文章全文为PDF格式, 请下载 to 本机浏览。[[下载全文](#)]

如您没有PDF阅读器, 请先下载PDF阅读器 Acrobat Reader [[下载阅读器](#)]

Determination the activity of superoxide dismutase enzyme by electrochemical method based on the reaction of pyrogallol autoxidation

100037

100037

100037

Abstract: In Tris-HCl (pH8.30) buffer solution, pyrogallol reacted with oxygen to form superoxide radical and several intermediate products which gave two waves and the peak potentials were -0.96V and -1.44V (SCE). Superoxide dismutase enzyme can catalyzed the dismutation reaction of superoxide radical so that decreased the ratio of pyrogallol autoxidation, which could determinate superoxide dismutase enzyme activity by detect the change of the ratio of the pyrogallol autoxidation with different SOD. A simple and sensitive electrochemical method was described. The method has been applied into the research of scavenging activity of some flavonoids. The results indicated that the sensitivity of determination of SOD activity in -0.96V was better than in -1.44V. The results of four methods were summarized.

Key words: Pyrogallol, Superoxide dismutase activity, Superoxide anion radical, Polarography

[【大 中 小】](#) [[关闭窗口](#)]

旗舰型离子色谱

FEI COMPANY™
TOOLS FOR NANOTECH

