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发光学应用及交叉前沿

微孔板结合化学发光法快速测定覆盆子中总糖蛋白的抗氧化活性

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摘要：在碱性条件下，覆盆子总糖蛋白对鲁米诺-过氧化氢、鲁米诺-邻苯三酚-氢氧化钠和鲁米诺-硫酸铜-过氧化氢化学发光体系具有明显的抑制作用。基于这一特点，本文将微孔板与化学发光法结合，在优化条件下建立了覆盆子总糖蛋白清除H₂O₂、O²⁻和·OH自由基能力的快速检测方法，结果表明该方法具有样品用量少、操作简单、检测速度快等优点，适用于药物中有效成分的活性检测及筛选。

关键词：微孔板 化学发光法 覆盆子 糖蛋白 抗氧化

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Rapid Determination of Antioxidant Activities of Glycoprotein of *Rubus chingii* Hu. by Chemiluminescence Method Coupled with Microwell Plate

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Abstract: Based on the phenomenon that glycoprotein can obviously inhibit the chemical luminescence (CL) signal of luminol-H₂O₂ system, luminol-pyrogallol-sodium hydroxide system and luminol-H₂O₂-copper sulfate system in basic medium, a simple and rapid chemiluminescence method integrated with microwell plate was developed for evaluating of the scavenge effects of glycoprotein of *Rubus chingii* Hu. on hydrogen peroxide (H₂O₂), superoxide anion (O²⁻) and hydroxyl radical (·OH). The experiment data indicated the proposed method described in this paper has proved to be fairly simple, reproducible and rapid and would be a valuable tool for fast screening of antioxidant activity of herbal.

Keywords: microwell plate chemiluminescence method *Rubus chingii* Hu. glycoprotein antioxidant activity

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