荷叶活性物质提取工艺与抗氧化活性研究 Extracting Technology and Antioxidant Activity of Bioactive Components from Lotus Leaf

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关键词： 荷叶 抗氧化活性 提取工艺 生物活性追踪法

摘 要： 对荷叶活性物质提取工艺与抗氧化活性进行了研究。结果表明，荷叶抗氧化活性物质最佳提取工艺为提取时间50 min、提取温度80℃、乙醇体积分数60%和料液比1∶20；采用生物活性追踪法研究发现，在极性依次增大的正己烷、乙酸乙酯、正丁醇和水相4个极性萃取组分中，乙酸乙酯萃取组分抗氧化活性（总还原力、FRAP法抗氧化能力和DPPH自由基清除能力）最强并具有显著性差异（$P<0.001$或 $P<0.01$）；通过验证试验发现该组分抗氧化能力（OD593和DPPH自由基清除率）均显著高于阳性对照BHT和GBE（$P<0.05$）。 The extracting technology and antioxidant activities of lotus leaf were studied. The results showed that the optimal parameters of the extracting technology were the extracting time was 50 min, the extracting temperature was 80℃, the concentration of ethanol was 60% and the ratio of sample to extracting solution was 1∶20. The ethyl acetate fraction possessed the strongest antioxidant activities ($P<0.001$or $P<0.01$), i. e., the reducing power, FRAP value and DPPH radicals scavenging capacity among the four increasing polar fractions (hexane, ethyl acetate, butanol and aqueous fractions) through the bio-assay guided method. The OD593 values and DPPH radicals scavenging capacities of this fraction were better than those of the positive controls of BHT and GBE ($P<0.05$) through the experiments of verification.

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