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新疆紫草不同极性部位的抗氧化活性研究

Study on Antioxidant Activities of Different Polarity Parts Derived from *Arnebia Euchroma* (Royle) Johnston

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中文摘要:

目的 比较新疆紫草不同极性部位提取物的抗氧化活性。方法 采用超临界CO₂萃取得到超临界提取物后, 萃取物依次用95%乙醇和60%的乙醇提取, 对得到的乙醇提取物分别采用不同极性的溶剂分步萃取得到紫草不同极性部位的8个提取物, 对上述9个提取物的清除羟基自由基、清除DPPH自由基、总抗氧化活性、抑制脂质过氧化能力等进行了评价。结果 超临界CO₂萃取物的总抗氧化活性在所有试样中居中, 在1 mg·mL⁻¹的浓度下, 其清除羟基自由基和DPPH自由基的活性接近或略低于对照品芦丁和BHT, 而中等极性部分的乙酸乙酯提取物的抗氧化活性最强, 高于同等浓度的对照品BHA和芦丁, 但极性较大的部位试样的抗氧化活性总体上相对较弱。结论 紫草提取物极性部位均具有不同程度的抗氧化能力。

英文摘要:

OBJECTIVE To compare the different polarity extractions' antioxidant activity from *Arnebia euchroma* (Royle) Johnston. METHODS The sample was extracted by using supercritical CO₂ extract, and then the residue was eluted followed by 95% ethanol and 60% ethanol, which was concentrated and fractional solvent extracted by different polarity solvents to obtain eight extracts derived from *Arnebia euchroma* (Royle) Johnston. Antioxidant activities of 9 samples above-mentioned were evaluated using four complementary assays: the inhibition of protection of β-carotene-linoleic acid model system, hydroxyl radicals scavenging, DPPH radicals scavenging, ferric thiocyanated method (FTC), and thiobarbituric acid(TBA) method. RESULTS The total antioxidant activities of supercritical CO₂ extract was placed in the middle in all samples. At 1 mg·mL⁻¹, antioxidant activity of acetic ether extracts was strong in some of experiment systems and other polar components were weak compared with a comparison (BHA or rutin), and CO₂ extract nearly BHT or rutin for hydroxyl radicals scavenging and DPPH radicals scavenging. CONCLUSION All the different polarity fraction from extract showed varying degrees of antioxidant activities.

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