



孙梦茹, 朱大伟, 王明丽. 耐盐紫甘薯花色苷的纯化工艺研究[J]. 中国现代应用药学, 2013, 30(12): 1323-1330

耐盐紫甘薯花色苷的纯化工艺研究

Study on the Purification Craft of Anthocyanins from Salt-tolerant Purple Sweet Potato

投稿时间: 2013-03-15 最后修改时间: 2013-07-31

DOI:

中文关键词: [紫甘薯](#) [花色苷](#) [纯化](#) [大孔树脂](#)

英文关键词: [purple sweet potato](#) [anthocyanins](#) [purification](#) [macroporous resin](#)

基金项目:

作者	单位	E-mail
孙梦茹	常州市第一人民医院, 江苏 常州 213003	sunmengru72@163.com
朱大伟	常州市第一人民医院, 江苏 常州 213003	
王明丽	常州市第一人民医院, 江苏 常州 213003	

摘要点击次数: 69

全文下载次数: 104

中文摘要:

目的 建立有效的紫甘薯花色苷提取物分离纯化方法, 为其产业化发展提供理论依据。方法 通过静态吸附解吸试验筛选适合耐盐紫甘薯Z103花色苷纯化的大孔树脂, 并进行动态吸附解吸工艺条件优化。结果 在供试树脂中, HPD-300大孔树脂纯化效果最好。其静态吸附达平衡的时间为6~8 h, 解吸附平衡时间为1~2 h, 最大吸附量为 $33.67 \text{ mg} \cdot \text{g}^{-1}$ 。动态吸附解析最适工艺条件为: 上样流速 $1.0 \text{ mL} \cdot \text{min}^{-1}$, 上样浓度为 $0.3 \text{ mg} \cdot \text{mL}^{-1}$, 体积为145 mL时, HPD-300树脂动态最大吸附量为 $13.82 \text{ mg} \cdot \text{g}^{-1}$ (树脂), 采用80%乙醇溶液作为洗脱剂, 洗脱流速 $1.0 \text{ mL} \cdot \text{min}^{-1}$, 用3倍柱体积洗脱花色苷, 收率可达92.01%。纯化后的紫甘薯花色苷含量为 $181.58 \text{ mg} \cdot \text{g}^{-1}$, 比纯化前提高13.18倍; 色价(528 nm)为142.63, 比纯化前提高11.01倍。结论 该工艺具有较好的实用性与参考价值。

英文摘要:

OBJECTIVE To establish an efficient method for isolating and purifying anthocyanins from purple sweet potato, provide a theoretical basis for its industrial development. METHODS The static adsorption and desorption tests had been done to screen for the optimum macroporous resin and condition for purifying anthocyanins extracted from salt-tolerant purple sweet potato Z103, the dynamic adsorption and desorption properties of the resins were studied additionally. RESULTS The macroporous resin HPD-300 was the most favorable adsorbent. The time of absorption and desorption equilibrium was 6-8 h and 1-2 h, respectively. The absorption capacity of HPD-300 was

33.67 mg · g⁻¹. The optimized parameters of dynamic adsorption resolve were 1.0 mL · min⁻¹ current velocity, initial concentration 0.3 mg · mL⁻¹, with a flow rate of 1.0 mL · min⁻¹, and sample volume of 145 mL, the adsorption content was 13.82 mg · g⁻¹(resin), while 80% ethanol with pH 1.0 as eluent, 3 BV, flow rate at 1.0 mL · min⁻¹, the desorption rate was 92.01%. The content of purified anthocyanins was 181.58 mg · g⁻¹, with a increase of 13.18 times compared with before purification, the color value of purified anthocyanins was 142.63, with a increase of 11.01 times. CONCLUSION The optimized process has practical and reference value.

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

[关闭](#)

版权所有 © 2008 中国现代应用药学杂志社 浙ICP备12047155号

地址：杭州市文一西路1500号，海创园科创中心6号楼4单元1301室

电话：0571-87297398 传真：0571-87245809 电子信箱：xdyd@chinajournal.net.cn

技术支持：北京勤云科技发展有限公司