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[1]李先佳,宋清焕,任丽平.紫外辐射对大豆异黄酮含量变化的影响[J].大豆科学,2009,28(02):357-359.[doi:10.11861/j.issn.1000-9841.2009.02.0357]

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摘要: 研究了UV-B强度增加对大豆异黄酮含量变化的影响,建立高效液相色谱检测方法用于大豆异黄酮的检测。大豆植株经不同辐照度UV-B辐射后,收获成熟籽粒,超声波振荡法提取大豆异黄酮,采用BDS Hypersil C18柱,以含甲醇:0.4%磷酸(30:70, v/v)洗脱,DAD254 nm检测,内标法定量。结果显示大豆在180 mm²UV-B处理后出现了不同程度的伤害,大豆异黄酮含量明显降低,其中Daidzin、Glycitin、Genistin和Daidzein含量分别比对照降低4.5%、8.6%、1.1%和11.4%,且具有较好的相关性。

Abstract: The effect of enhanced ultraviolet radiation(UV-B) on soybean isoflavone content was investigated, a high performance liquid chromatography(HPLC) method for the determination of soybean isoflavones was presented. Soybean plants were treated with enhanced UV-B till mature. The harvested soybean seeds were extracted by ultrasonic assisting and then separated on BDS Hypersil C18 column and methanol-0.4% phosphoric acid solution (30:70, by volum). The elute was detected by a UV detector at 254 nm. Results showed the 180 mm²UV-B treatment significantly affects soybean isoflavones, Daidzin, Glycitin, Genistin and Daidzein decreased by 4.5%, 8.6%, 1.1% and 11.4%, respectively. The increase of UV-B treatment and the decrease of isoflavones content had good linearity.

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