P 140

HPLC-MS/MS ANALYSIS OF SDG LIGNAN IN FLAXSEED

E. Ozkaynak Kanmaz[1*], G. Ova[2], B. Gümüştaş[3]

[1)] Artvin Çoruh University, Nutrition and Dietetics Dept, Artvin, Turkey
[2)] Ege University, Food Engineering Dept, İzmir, Turkey
[3)] Ege University Center of Drug Research and Development and Pharmacokinetic, İzmir, Turkey

In this study, SDG lignan content of flaxseed was measured by the direct hydrolysis method. Analysis of SDG lignan was performed using a HPLC-MS/MS system (API 4000) equipped with a Waters Model 600 pump, a 717 plus autosampler, an Agilent 1100 degasser, and a 996 photodiode array detector. The chromatographic separation of SDG lignan was carried out using a Zorbax Eclipse XDB-C18 extends with a guard column, 150 mmx2.1mmx5µm column. The column was thermostated at 40°C and the injection volume was 5µL. The mobile phase consisted of 0.05 $mmolL^{-1}$ ammonium acetate in water (solvent A), and 0.05 $mmolL^{-1}$ ammonium acetate in acetonitrile (solvent B). The solvent flow was 0.2 mL/min, and a linear gradient elution was followed with 2% B for 4.50 min, and 90% B from 4.50 to 8.50 min, and 2% B 8.50 to 13.30 min. SDG was identified and quantified by comparison to SDG standard. Firstly, the validation study for SDG lignan analysis was carried out. For calibration graphic, SDG lignan standard solutions (5 samples) were prepared between concentrations of 0-5 µg/ml and r vallue was determined as 0.9989. Standard deviation was 3.25% and injection repetability is good and also recovery was obtained as 88 and 107% which between recovery value (70-120%) of HPLC-MS/MS. Besides, level of dedection (LOD) was determined as 0.0016 ppm and level of quantification (LOQ) was 0.005 ppm.

Keywords: SDG lignan, HPLC-MS/MS, flaxseed

* Corresponding author: evrimka2000@yahoo.com