

Qualitative and Quantitative Analysis of Some Brands of Valerian Pharmaceutical Products

Saeedeh Ghafari*, Somayeh Esmaeili, Hamedeh Aref, Farzaneh Naghibi and
Mahmoud Mosaddegh

*Traditional Medicine and Materia Medica Research Center, Shaheed Beheshti University of
Medical Sciences, P.O.Box 14155-6354, Tehran, Iran
Telephone / Fax: +98 21 88776027, *E-mail: sghafari@itmrc.org*

KEYWORDS HPLC (High Performance Liquid Chromatography). Valerenic Acid-Determination

ABSTRACT One of the important active compounds of valerian is valerenic acid, which is supposed to be the chemical factor responsible for the sedative effect of valerian. The aim of this work is identification and determination of valerenic acid in some brands of valerian pharmaceutical products including tablet, caplet, capsule, drop and comparison them. Following extraction by maceration method with methanol 80%, thin layer chromatography (TLC) method was used to qualify the valerenic acid content of some brands of valerian pharmaceutical products using ethyl acetate- hexane- methanol (0.5: 3: 7) as a mobile phase comparing to the authentic sample. Also high performance liquid chromatography (HPLC) method was used to quantify the valerenic acid content. The operating conditions were C- 18 reversed phase (VP-ODS-250 x 4.6 mm) column, acetonitrile as mobile phase with constant flow rate of 0.8 ml/min and UV detection at 220 nm. Valerenic acid amount in some brands of German valerian products (Futuran Baldrian tablet, Baldrian Hopfen tablet, Euvegal caplet) was 0.03- 0.16% and in some of Iranian products (Neurogol tablet, Valerian capsule and Antimigrain Herbal drop) was 0.05- 2.8%. A rapid, simple and utilizable high performance liquid chromatography (HPLC) method was used for determination of valerenic acid in valerian products. All of the brands contain acceptable range of valerenic acid (not less than 0.04%). The amount of valerenic acid according the suggested direction on the label of these products, in Iranian valerian products was less than German valerian products.