

Abstract

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Diploma Thesis Title: Development of HPLC Method for the Determination of Betacarotene in Nutritional Supplements

A new HPLC method was optimized and developed for the determination of betacarotene contents in nutritional supplements Betakaroten Farmax, GS Betakaroten FORTE (GreenSwan pharmaceuticals), Walmark Betakaroten, Bioaktivní karoten (Pharma Nord Denmark), Beta karoten Max, BETAVID + LUTEIN (Naturvita), Karovit (Vitabalans Oy), SELZINK PLUS (PRO.MED.CS), Pupalkový olej (Aromatica). The method is based on using Ascentis Express C18 column (30 x 4.6 mm; 2.7 μ m) and UV detection at 450 nm. There was used isocratic elution of the mobile phase 100% methanol at a flow-rate of 1.5 ml/min. Column oven temperature was set at 60 °C during the measurement. The retention time of betacarotene under the optimized and validated conditions was 2.185 min.

Keywords: betacarotene, HPLC, Betakaroten Farmax, GS Betakaroten FORTE (GreenSwan pharmaceuticals), Walmark Betakaroten, Bioaktivní karoten (Pharma Nord Denmark), Beta karoten Max, BETAVID + LUTEIN (Naturvita), Karovit (Vitabalans Oy), SELZINK PLUS (PRO.MED.CS), Pupalkový olej (Aromatica)