

Evaluation of antiradical properties of flax seed extract and its compositions with dihydroquercetin

© Ekaterina N. Zenya, Igor R. Ilyasov, Nonna A. Tukavkina,
Aleksy M. Savvateev, and Vladimir L. Beloborodov

Department of Organic Chemistry. I.M. Sechenov First Moscow State Medical University.

Parkovaya St., 21/1. Moscow, 105043. Russia. Phone: +7 (499) 165-37-36. E-mail: caress.kitten@mail.ru

*Supervising author; †Corresponding author

Keywords: *dihydroquercetin, secoisolariciresinol diglucoside, flaxseed extract, antiradical activity.*

Abstract

The antiradical activity of Bioflavonoid Complex «Dihydroquercetin», flaxseed extract and its compositions with different molar ratios of dihydroquercetin and secoisolariciresinol diglucoside was investigated *in vitro* by ABTS method. Its TEAC (Trolox Equivalent Antioxidant Capacity) and IC₅₀ values were calculated and compared by kinetic and dye decolorization method. The kinetic curves of ABTS^{•+} radical cation with «Dihydroquercetin» and flaxseed extract, the rate and degree of reduction of ABTS^{•+} by antioxidants were obtained and characterized by kinetic spectrophotometric method. The antioxidant activity of Bioflavonoid Complex «Dihydroquercetin» was several times more than antioxidant activity of flaxseed extract. Its compositions showed antagonism which depend on molar ratio of secoisolariciresinol diglucoside in mixture model.