

Anthocyanin Extracts with Antioxidant and Radical Scavenging Effect

Janina Gabrielska^a, Jan Oszmiański^b, Małgorzata Komorowska^c
and Marek Langner^a

^a Department of Physics and Biophysics,

^b Department of Fruit and Vegetable Technology, Agricultural University,
Norwida 25, 50–375 Wrocław, Poland

^c Institute of Physics, Wrocław University of Technology, Wyb. Wyspiańskiego 27,
50–375 Wrocław, Poland

Z. Naturforsch. **54c**, 319–324 (1999); received December 2, 1998/January 22, 1999

Antioxidant, Anthocyanin, Liposome, TBA-Reactive Product

The antioxidative activity of three anthocyanin pigments, extracted from the fruits of chokeberry, honeysuckle and sloe, were studied. Lipid oxidation in the liposome membrane, induced by UV radiation, was evaluated with a thiobarbituric acid-reactive substances assay. The antioxidant efficiency of the studied compounds follows this sequence: chokeberry > sloe > honeysuckle. The extract concentrations at which a 50% reduction of phosphatidylcholine oxidation was observed, were respectively: 48, 54 and 60 mg/l. The end products of lipid membrane oxidation were evaluated using HPLC. It was found that the antioxidative potency of anthocyanin extracts is concentration-dependent. As shown by EPR technique the efficiency of the extracts to eliminate free radicals from the solution follows the order of the antioxidant activity.

Reprint request to Janina Gabrielska. Fax: (+48)-71-20 5172. E-mail: jaga@ozi.ar.wroc.pl