

## **Isolation of anthocyanins by high-speed countercurrent chromatography and application of the color activity concept to different varieties of red grape pomace from Macedonia.**

### **Abstract**

Anthocyanins of Macedonian grape pomace from three varieties “Pinot noir”, “Merlot” and “Vranec” were isolated by high speed countercurrent chromatography. After purification of the fractions by means of preparative high performance liquid chromatography the structures of isolated pigments were elucidated by electrospray ionization multiple mass spectrometry (ESI-MSn) and nuclear magnetic resonance (NMR) spectroscopy. The major anthocyanin malvidin-3-glucoside and the minor pigments delphinidin-3-glucoside, cyaniding-3-glucoside, petunidin-3-glucoside, and malvidin-3-p-coumaroyl-glucoside were isolated. The “Color activity concept” was applied and visual detection thresholds of isolated anthocyanins were determined. The results of the “color activity value” of the isolated pigments and their detection thresholds were in good agreement with the color shade of the different varieties of red grape pomace.

**Keyword:** Red grape pomace; HSCCC; NMR; Anthocyanins; Color activity concept