

Flavonoids are plant secondary metabolites, which belong to several groups varying in their chemical structure. Anthocyanins and tannins are important flavonoid components of wine that are responsible for its color, taste and other sensory properties. The concentration of anthocyanins in wine is affected by grape variety, processing technology, and climatic conditions.

In this Thesis, we studied the changes in color and in related chemical composition, using three non-commercial samples of red wine: Svatovavřinecké (year 2010 and 2012), and home-made wine (prepared without addition of SO<sub>2</sub>). These changes in color were determined using standard colorimetric method (CIELab) and also a simplified two-parametric spectrophotometric method (tint/color density). The content of anthocyanins was followed using analytical RP-HPLC method. In parallel, simplified oenologic methods for estimation of phenolic compounds were used.

Generally the wine samples changed color to darker tint. Chemically, this was caused by polymerisation reactions between anthocyanins and phenolic compounds. This led to the formation of stable pigments characterised by a higher absorption maximum at longer wavelength, hence a darker tint.

**Key words:** anthocyanins, color, red wine, phenolic compounds, malvidin-3-glucosid, polymeric reactions, pigments.