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HPLC ANALYSIS OF ASCORBIC ACID IN PRETREATED AND DRIED RED PEPPER (*CAPSICUM ANNUM*)

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Red pepper (*Capsicum annum*) fruits contain high amount of ascorbic acid (vitamin C), which is of great importance for human health. The aim of this study was to found how various pretreatments and drying methods influence on retention of ascorbic acid in dried pepper. The cultivar “Horgoška sweet 6”, often used for the production of paprika, was selected for analysis. Five sets of experiments were performed to investigate the effect of the following parameters: pretreatment temperature (20 °C, 50 °C, 80 °C), pH value (3, 6.5, 10), additive (0.25% citric acid, 0.25 % potassium metabisulfite and 0.25 % citric acid + 0.25 % potassium metabisulfite), ultrasound (off and on) and drying method (hot air drying and freeze drying). The initial content of ascorbic acid in fresh pepper was 292 mg/100 g dry basis (d.b.) and it was reduced after all pretreatment and after drying of pretreated samples. Most of examined pre-drying treatments improve retention of ascorbic acid in final dried peppers, except treatments at 80 °C. Our results indicate that temperature and drying method were parameters that significantly influenced ascorbic acid content in dried peppers. Other parameters were not significant, but had a certain effect on retention of ascorbic acid. The best parameters were temperature 20 °C, pH 6.5, citric acid/potassium metabisulfite, without applying ultrasound including freeze drying method.

Keywords: citric acid, potassium metabisulfite, ultrasound, hot air drying, freeze drying

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