



The Influence of Wild Rose Extract on the Color of Cloudy Apple Juice

Inga Klimczak, Anna Gliszczyńska-Świgło

Poznan University of Economics and Business/Institute of Quality Science

Abstract

The color significantly influences the quality assessment of a given product and may decide about its final choice by the consumer. Many academic papers have been devoted to the study of the enzymatic browning of cloudy apple juice. However there are not many studies dealing with the possibility of plant extracts application to prolong the shelf life of unpasteurised cloudy apple juice with respect to its color.

The aim of the study was to determine the effect of wild rose extract on the color of cloudy apple juice. The studies involved fresh juices and those stored for 3 and 6 h (room temperature, with access to light) with different addition of wild rose extract. The rate of browning was measured by the changes parameters $L^*a^*b^*$, ΔE^*_{ab} , BI (Browning Index), YI (Yellowness Index) and absorbance value at wavelength 420 nm in analysed juice samples.

The addition of wild rose extract stabilized the color of stored cloudy apple juice. The degree of juice browning inhibition depended on the concentration of the extract in the juice. It was demonstrated that the optimal concentration of wild rose extract influencing the inhibition of browning and at the same time ensuring the color stability of the stored juice is 3 g of wild rose extract / L juice.

Keywords: browning index; color stability; enzymatic browning, plant extract, polyphenoloxidase, unpasteurised juice