

Polyphenols Content in Apple and in Strawberry Fruits: an Evaluation of Extractors

Silva, G. A.¹; Ferrareze, J. P.²; Fabbris, F.³; Lazzarotto, M¹; Antonioli, L. R.⁴; Rombaldi, C. V.⁵; Girardi, C. L.⁴

¹Department of Microbiology

²UFPel – MSc Student

³Unisinos –Student

⁴Department of Post-harvest Embrapa Uva e Vinho - Bento Gonçalves, Rio Grande do Sul, Brazil

⁵Department of Agro industrial Science and Technology Universidade Federal de Pelotas, RS, Brazil

Epidemiological studies have shown that fruits and vegetables are involved with protective effects against degenerative diseases. This beneficial health effect is tied up to diverse metabolic compounds: vitamin C, carotenoids, sulphur compounds, polyphenols and several other antioxidant molecules. Phenolic compounds have one or more aromatic rings with hydroxyl groups and are the most studied of the phytochemicals. These molecules are classified as phenolic acids, avonoids, stibenes, coumarins, tannins and each of these groups is again subdivided according to the chemical characteristics. The analytical content of total phenols of the samples depends upon the extraction ability of the organic compounds used. The most extractors used are ethanol, methanol, and acetone in different concentrations. This paper presents the influence of different concentrations of ethanol, methanol, and acetone on the phenolic compounds extraction in apples (Gala) and strawberries (Aromas). The samples were prepared using liquid nitrogen to aid in pulverizing the skin and the flesh of both apple and strawberry. Extractions were carried out in 0, 25, 50, 75 and 100% (v/v) of