

Analysis of the Content of Sugars, Vitamin C, Preservatives, Synthetic Dyes, Sweeteners, Sodium and Potassium and Microbiological Purity in Selected Products Made From Fruit and Vegetables in Small Regional Factories and in Large Food Corporations

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Abstract : The aim of the study was to analyse a selection of 12 pasteurised products made from fruit and vegetables, such as fruit juices, fruit drinks, jams, marmalades and jam produced by small regional factories as well as large food corporations. The research was carried out as part of the project "Innovative system of healthy and regional food distribution", funded by the Ministry of Education and Science (Poland), which aims to create an economically and organisationally strong agri-food industry in Poland through effective cooperation between scientific and socio-economic actors. The main activities of the project include support for the creation of new distribution channels for regional food products and their easy access to a wide group of potential customers while maintaining the highest quality standards. One of the key areas of the project is food quality analyses conducted to indicate the competitive advantage of regional products. Presented here are studies on the content of sugars, vitamin C, preservatives, synthetic colours, sweeteners, sodium and potassium, as well as studies on the microbiological purity of selected products made from fruit and vegetables. The composition of products made from fruit and vegetables varies greatly and depends on both the type of raw material and the way it is processed. Of the samples tested, fruit drinks contained the least amount of sugars, and jam and marmalade made by large producers and bought in large chain stores contained the most. However, the low sugar content of some fruit drinks is due to the presence of the sweetener sucralose in their composition. The vitamin C content of the samples varied, being higher in products where it was added during production. All products made in small local factories were free of food additives such as preservatives, sweeteners and synthetic colours, indicating their superiority over products made by large producers. Products made in small local factories were characterised by a relatively high potassium content. The microbiological purity of commercial products was confirmed - no *Salmonella* spp. were detected, and the number of mesophilic bacteria, moulds, yeasts, and β -glucuronidase-positive *E. coli* was below the limit of quantification.

Keywords : fruit and vegetable products, sugars, food additives, HPLC, ICP-OES

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