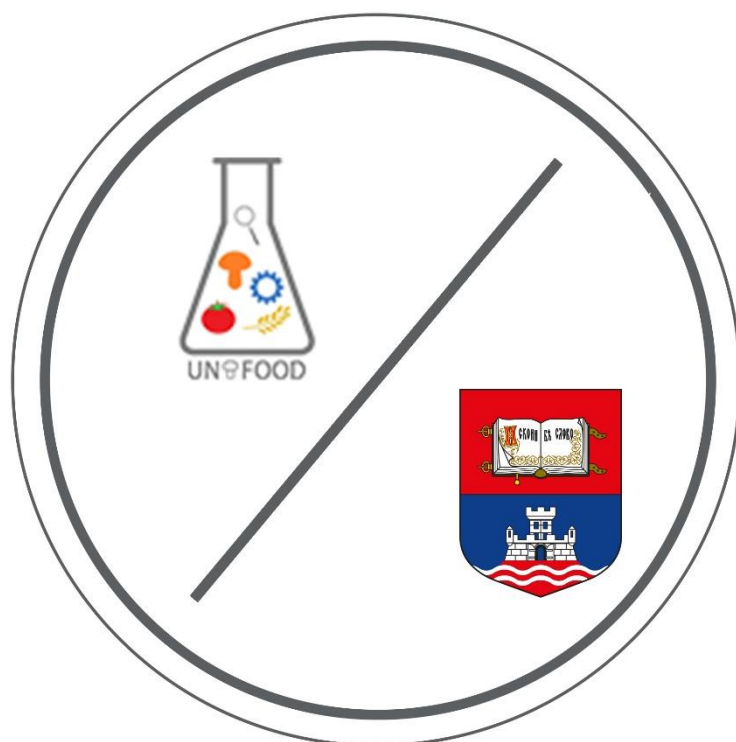


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## Book of Abstracts

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**AMINO ACIDS COMPOSITION IN SELECTED NUTS**

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In recent years, we are witnessed that a nuts very popular food and is recommended as part of a diet because it contains numerous bioactive compounds. Nuts contain a high quantity of protein, i.e. amino acids that are known to be necessary for important processes such as tissue growth, energy production, immune function and nutrient absorption. In order to check the amount of individual amino acids found in the favorite samples of nuts of our citizens, we determined total protein and amino acid profile (17 amino acids) in nine samples of nuts (peanut, almond, hazelnut, walnut, Brazil nut, cashew, pecan, pistachio, and pine nuts). Total amino acids composition was determined by ion chromatograph with electrochemical detector, manufactured by Thermo, model ICS-5000, with silver reference electrode (Ag / AgCl) and gold (Au) working electrode and chromatographic column AminoPac PA10 and pre-column AminoPac PA10 guard. Analyzed nuts samples contained 11.7-29.2 g/100 g total proteins. Pecan contained the least protein, while peanut was the richest in total protein. Among the amino acids, glutamic acid, aspartic acid and arginine contents were generally high, whereas methionine, cysteine, histidine and tyrosine contents were low. Peanut was the most important source for essential amino acids (lysine 1.08 g/100 g; histidine 0.71 g/100 g; threonine 0.87 g/100 g; leucine 1.97 g/100 g; isoleucine 1.25 g/100 g; valine 1.07 g/100 g; phenylalanine 1,38 g/100 g; and methionine 0.4 g/100 g). Cashew was the biggest source of essential amino acids, 37% (essential/total amino acids), while the smallest source was almond, 27%. Almond was the biggest source of non-essential amino acids, 73%. The obtained results indicate that the nuts are incomplete in the content of amino acids. Knowledge of the amino acid composition of nuts is essential for combination with other food groups when formulating a balanced diet.

*Keywords: Nuts, Diets, Proteins, Amino acids.*