



Medicines and Medical
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Determination of total polyphenols in some vegetables

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Introduction and aim:

Phenolic and polyphenolic compounds are synthesized in plants, in most cases from shikimic acid in phenylpropanoid biosynthetic pathway.

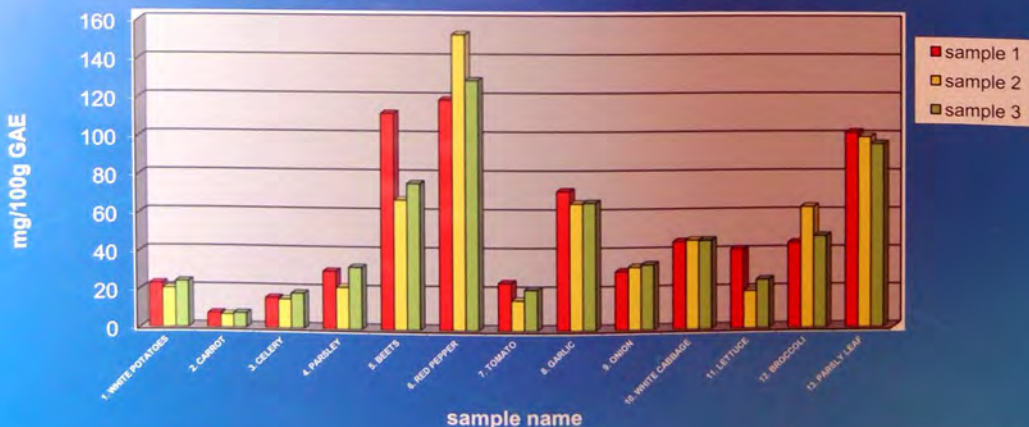
Different types of polyphenol compounds, synthesized in plants from shikimic acid in phenylpropanoid biosynthetic pathway can be found in various foods such as vegetables, fruit, dark chocolate, wine, coffee and tea leaf beverages. Total polyphenolic content and ratio of polyphenolic complexes in this food are different, this can potentially affect their biological value. This paper presents authors' intent to determine the total polyphenol content in some vegetables obtained from different markets (samples 1, 2, 3).

Methodology:

Total polyphenol content was determined using Folin-Ciocalteu method. The following samples were used: root and tubers vegetables – 5 samples (white potatoes, carrot, celery, parsley, beets); fruity vegetables – 2 samples (red pepper, tomato); bulb vegetables – 2 samples (garlic, onion); green leafy vegetables – 4 samples (white cabbage, lettuce, broccoli, parsley leaf). Total polyphenol compounds were determined using the Folin-Ciocalteu method. Results were expressed as gallic acid equivalent (GAE) in mg/100g.

Results:

THE TOTAL POLYPHENOL CONTENT IN mg/100g GAE



Conclusion:

Comparing the results of total polyphenol content in this group of vegetables, one group can not be separated that clearly shows the highest content of total polyphenols. The highest content of polyphenols was found in red pepper, then beet and garlic. Difference in total polyphenol content between lettuce using samples were 60%, and broccoli using samples about 50%.

