

The Vitamin C dosage from different *Capsicum annuum* types

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Abstract

The purpose of this research consists of a comparison of vitamin C from different varieties of *Capsicum annuum*. The quantity of vitamin C was led through the iodometric redox titration method with Iodine in excess when Ascorbic Acid is reduced to Dehydroascorbic Acid. The first evaluation of the quantity of vitamin C was in function of the pepper's color. In red pepper, the quantity of vitamin C is higher than in green pepper. In red pepper, the vitamin C is 8,917mg/100g pepper, and in green pepper is 4,693mg/100g pepper. The second comparison was made between capsicum which grows in a garden and capsicum bought in the supermarket. The quantity of vitamin C in capsicum which grows in a garden was 8,135mg/100g, and in capsicum bought in the supermarket was 7,884 mg/100g. The quantity of vitamin C in capsicum analyzed is between 4,693 – 11,264 mg /100 g.

Conclusion

The result shows that the quantity of vitamin C is influenced by the color of capsicum, and also the place of cultivation. The capsicum bought from the supermarket came from another country, but the other is from Romanian production.

Importance of Research

The natural source of vitamin C represent in real interest for pharmaceutical industry. The research shows the importance of Capsicum grown in garden due to the huge amount in vitamin C.

References

1. El Sharaa, I.; Mussa, S.B. Determination of Vitamin C (Ascorbic Acid) Contents in Vegetable Samples by UV-Spectrophotometry and Redox Titration Methods and Estimation the Effect of Time, Cooking and Frozen on Ascorbic Acid Contents, International Journal of Progressive Sciences and Technologies (IJPSAT), 2019, 15 No. 2, 281-293
ISSN: 2509-0119
2. East, G.A.; Nascimeento, E.C. Microscale determination of vitamin C by weight titrimetry, J. of Chemical Education, 2002, 79(1):100-102.
3. Du, J., Cullen, J.J., Buettner, G.R. Ascorbic acid: chemistry, biology and the treatment of cancer, Biochim Biophys Acta, 2012, 1826:443-57.
4. Cojocaru, D., Ciornea, E., Cojocaru, S.I. Biochimia vitaminelor și a hormonilor, Editura Academiei Române, București, 2010, 296-315.
5. Dobreanu, M. Biochimie clinică. Implicații practice, Ediția a II-a, București, Editura Medicală, 2010, 80-82.
6. Food and Nutrition Board, Institute of Medicine; Dietary Reference Intakes for Vitamin C, Vitamin E, Selenium, and Carotenoids: a Report of the Panel on Dietary Antioxidants and Related Compounds, Subcommittees on Upper Reference Levels of Nutrients and of Interpretation and Use of Dietary Reference Intakes, and the Standing Committee on the Scientific Evaluation of Dietary Reference Intakes, Washington, D.C: National Academy Press; 2000, 156-161.

Biography

Assoc. Prof. Melania Munteanu. Since 2006 I have been part of the Western University Vasile Goldis group first as an assistant, following by lecture from 2012, and since 2016 as an assoc. prof. to the Biochemistry, Environmental Chemistry, and Functional Nutrition disciplines. Graduated from the University of Medicines and Pharmacy, Targu Mures [Bachelor degree in Pharmacy, 1996], followed by the PhD. in Pharmaceutical science 2007, at the same University. Since 2017, I am a senior pharmacist in the Pharmaceutical laboratory, a title obtained from the University of Medicines and Pharmacy "Carol Davila" Bucuresti. Published over 50 scientific papers, more of them in important journals such as Int. J. Mol. Sci., Current Drug Delivery, Open Chem., Molecules, Chem Cent J., Cancer Cell Int. The written articles were over 280 quotes. I am a member of the Association of Pharmacy Professionals (APP). My area of research includes nutrition, the interaction between food and disease, plant research, and nanomolecules.

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