Biochemistry 2021: Resveratrol: A natural antioxidant from grapes regulates IL-1 and IL-6 in patients with myocardial infarction- Shireen Lamay, Anjum Chugtai, Abbas Ali Mahdi, Wasil Hasan and Najmul Islam- Aligarh Muslim University, India

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Abstract

Anthocyanin from red beet juice, cherry and red rose which is extracted mechanically is water soluble due to the many hydroxyl groups and glucose molecule which is carried on the anthocyanin (position 3 on it). This juice is slightly sweet due to the free sugar present. The juice is very slightly acidic due to its exchangeable proton (Transmembrane proton with radius=1.5×10-6 nm). The concentration of the proton=10-6.4 g-proton/L, pP=-log [P]=-log 10-6.4=6.4. In spite of very low concentration of the exchangeable proton in the juice, it is very active to attack metal ions as soon as it comes in contact with it, as well as hetero atoms (like O, N, S) in organic molecules, such process called protonation (exothermic process) in which this process pull the abnormal high energy molecules downhill and stabilize it. Proton is condensed in aqueous solution called hydrated proton PH2O which moves to the whole human body and when become near high energy molecule with hetero atom leaving the water and attacks that molecule similar to the aircraft carrier when becomes near to the target the air craft leaves the carrier and attacks the target. In such process, proton saves the energy for the attack. Results show that solid anthocyanin from the evaporation of juice go into condensation polymerization around 80°C with liberation of water, as well as boiling concentrated juice (home-made) resulted in polymerization with very fine solid particles which reduce the ability of the exchangeable proton to precipitate heavy metal ions. Ultra violet visible spectrum shows great difference between normal and filtered boiled juice. Thus it prefers to extract the juice mechanically not thermally and no any additional material added to the juice. Spectroscopic tests in addition to the visual one show that there is an interaction between anthocyanin and uric acid and urea in blood.

Biography

Shireen Lamay is currently pursuing her Doctorate degree as a Research Scholar from Department of Biochemistry, Faculty of Medicine, Aligarh Muslim University, India. She has completed her Masters and graduation in Biochemistry. She has her expertise in utilizing natural antioxidants/polyphenols in combating cardiac disorders. Her work is specifically focused on employing wide spectrum of such antioxidants like resveratrol from grapes, etc. which will be beneficial for elucidating the working action of safe and economical natural compounds that may be used as an adjunct in the management of MI.

This work is partly presented at 2nd International Conference on Biochemistry on September 28-29, 2017 held in Dubai, UAE