

12<sup>th</sup> World Congress on

# STRUCTURAL BIOLOGY

May 14-15, 2018 Osaka, Japan



## Jaleel Kareem Ahmed

Babylon University, Iraq

### Red beet juice and urine system

A case study is carried out on the urine of a man with 40 years old. Two samples of urine are taken from the urine system one after drinking concentrated red beet juice (mechanically extracted) and the second one without drinking. Using Ultraviolet-visible absorption spectra measurements was done, the results showed that with concentrated juice the absorption bands are shifted toward low energy due to the hydrogen bond formation by exchangeable proton from the juice (anthocyanin pigments) to the lone pair of electrons on the oxygen and nitrogen atoms in uric acid and urea and vice versa which shifted the  $n-\pi^*$  absorption band to the lower energy, while dilution the above sample spectrum shows shifting to the higher energy, this is due to the low hydrogen bonding formation with uric acid and urea due to the low concentration of exchangeable proton upon dilution, as well as water is a good hydrogen bonding competitor. From ultraviolet-visible spectra we conclude that absorption band shifted to the lower energy with drinking concentrated juice and to the higher energy with diluted one which reflects the importance of concentration of the juice on hydrogen bonding formation and on the enhancing of detoxification of uric acid and urea from the blood, thus we recommended high concentration juice which can obtain from red beet (highest concentration of anthocyanin than other fruit). Dilution of pure urine sample does not affect its spectrum; this is because water is already present in urine in a good quantity comparing with uric acid and urea concentrations thus no effect from more water. Results shows that with drinking high concentrated red beet juice viscosity, electrical conductivity and refractive index of exit urine decreased, which enhances detoxification process. The viscosity of urine with juice lower than viscosity of pure water which is 1.00 cP at 20°C, this make urine+juice easier to flow through urine system than water alone. The pP of urine after drinking the juice is increased; this is due to the capture of the proton of uric acid by anthocyanin which is less acidic then former. The increase of pP results in lessens the tension of the human. The density of the urine increases slightly due to the more hydrogen bonding formation with the anthocyanin results in reducing the volume of the unit weight of the sample.

### Biography

Jaleel Kareem Ahmed has his expertise in evaluation in iron and steel industry. He has registered 3 patents in USA, UK and Iraq about using water in iron industry and wax for storage and transportation and using wax for carburizing of steel. He has used chlorophyll as gamma ray absorber to protect Iraqi children from cancer and mechanically red beet juice as scavenger for poisonous heavy metal ions and anticancer and detoxification of urea and uric acid from human body via urine system. In 2013, he was awarded with Scientific Medal from Iraqi Government. In 2014, he got qualified as a Member in Who is Who network. He has been serving as a Reviewer of *Journal of Advances in Polymer Technology*.

Jaleel\_karim@yahoo.com

### Notes: