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A study on total dissolved solids and hardness level of drinking mineral water in Bangladesh

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Natural water is being processed by the Reverse Osmosis purification system in the different area of Bangladesh for drinking purposes. Most of the water processing companies fill the 500 mL, 1000 mL, 2000 mL and 5000 mL bottles with this processed water and sell widely in the different parts of Bangladesh. However, the dissolved minerals in their purified drinking water are not sufficient for human health. Total Dissolve Solids (TDS) is a parameter that counts all dissolved minerals in the water. Calcium, magnesium and potassium are minerals that are introduced as a “Beneficial Minerals” for human health. Calcium is an important mineral for bone development, potassium is needed for muscles and nervous system and magnesium is helpful to protect cardiovascular disease. The objective of the study is to examine the Total Dissolved Solids (minerals) and the Total Hardness (TH) in selected bottled water samples. The selected samples have been marketed by the local branded companies in Bangladesh. TDS and TH are measured in total eight of bottled water samples collected from the local confectionery shops in Dhaka city. The obtained results show that the levels of dissolved minerals in the drinking water samples are very low,

which is quite alarming. Particularly, calcium and magnesium are found in very low amount in water samples of three companies. It can be assumed that those bottled water do not bring additional benefits to human health.

The TDS of sample of one company was alarming low (9.44 mg/L). It may pose negative effects on human health especially malnourished people's health.

Speaker Biography

Mohammad Khairul Islam Sarkar, completed his BSc honors program (4 Years) in Biochemistry at Primeasia University and MSc in Biotechnology at North South University at the age of 25 years from Dhaka, Bangladesh. He joined a Pharmaceutical Industry, then BUREAU VERITAS Consumers Products Services (BD) Ltd and from last year, at last, he joined as Laboratory officer at Independent University, Bangladesh (IUB) the leading Environment and health science research institute of Bangladesh. He joined as Research Officer in the Environmental and Biochemistry Lab, IUB from August 2014. During this period he worked on a number of research projects and has over 20 publications that have been cited over 50 times, and his publication H-index and Scopus is 15 and has been serving as an editorial board member of reputed Journals.

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