

Assessment of Ground Water Quality from Ywar Thit Gyi Village, Htantapin Township, Yangon Region, Myanmar

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Abstract

Groundwater as their primary source of potable water. Fresh water has become a scare commodity due to over exploitation and pollution. The study was conducted for assessing ground water quality from Ywar Thit Gyi village, Htantabin Township, Yangon Region. Water supplies were obtained throughout the village of this area mostly from tube well water. The samples were collected from five different locations. Collected water samples were determined for their physicochemical parameters (pH, turbidity, total dissolved solid, total suspended solid, total hardness, alkalinity, total chlorine, cyanuric acid, DO and BOD, toxic metal such as arsenic content) for quality assessment. The results of the data were compared with WHO drinking water quality standards to know the ground water quality status of the study area. Arsenic content in some samples exceeded the allowable limit of WHO standard (10 ppb). Due to high contamination of arsenic, removal of arsenic from samples were done by water hyacinth root powder and sand using column method. From the results, it is observed that there is substantial reduction after three time successive passed through treatment column. The study showed that the water samples were not suitable for consumption and preliminary treatment needed prior to the use of the ground water for drinking purposes and domestic use in this area.

Key words: ground water, physicochemical parameters, toxic metal, arsenic

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