PHYSICAL AND CHEMICAL ANALYSES OF DRINKING WATER FROM SPRINGS IN SELECTED BARANGAYS OF INDANG, CAVITE

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ABSTRACT

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The physical and chemical analyses of spring drinking water from Bancod, Guyam Malaki, Kaytambog, and Limbon in Indang, Cavite were conducted to determine the quality and potability of water in some areas in Indang, Cavite. Specifically it aimed to identify some properties of spring drinking water differents using preliminary tests and identify other chemical components using analytical techniques and measurements.

Preliminary analysis showed that samples of spring drinking water from springs in some areas in Indang, Cavite were colorless, odorless and sweet with a pH value ranging from 6.77 to 8.05. The calculated values for Total Dissolved Solids (TDS) found in spring drinking water ranged from 156.22 to 394.33 mg/L. The results showed that the amount of total dissolved solids, hardness, alkalinity, chloride content, and iron in drinking water from springs in the said areas did not exceed the allowable range set by the World Health Organization (WHO) which is 500 mg/L. Analysis of the Total Suspended Solids (TSS) and Turbidity from the same places showed zero values for each place which means that there was no solid particle nor any turbid characteristics in the drinking water in these places. Hardness determination was done and obtained values, which did not surpass the standard which did not, surpassed the standard for soft water.

The alkalinity of drinking water from springs ranged from 83.18 to 100.36, which did not exceed 500 mg/L, the standard for alkalinity set by World Health Organization

(WHO) for drinking water. Chloride content analysis of drinking water from springs in Indang, Cavite ranged from 5.22 mg/ L to 7.80 mg/L. These values did not exceed the 250mg/L standard set by World Health Organization (WHO). Iron content analysis of the sample was also conducted. The values obtained for iron content analysis were all zero which indicates the absence of iron in spring drinking water samples in Indang, Cavite.

Overall, physical and chemical analyses showed that spring drinking water from Bancod, Guyam Malaki, Kaytambog and Limbon passed the quality for drinking water standards set by the World Health Organization (WHO).

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