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Influence of Some Chemical Drinking Water Parameters on Germ Count in Nalout Region, Libya

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Abstract : Water is one of the world's natural resources. It is an essential source for the maintenance of human, animal, and plant life. It has a significant impact on the country's economy and all human activities. Over the past twenty years, pressure on water resources has increased due to population and industrial growth and increasing demand for agricultural and household products, which has become a major concern of the international community. The aim of this study is the physical and bacteriological analysis of drinking water in the city of Value. The study covered different locations in the city. Thirty-six groundwater samples were taken from wells and various tanks owned by the State and private wells, and the Ain Thalia spring and other samples were taken from underground water tanks. It fills up with rainwater during the rainy season. These samples were analyzed for their physical, chemical, and biological status and the results were compared to Libyan and World Health Organization drinking water specifications to assess the quality of drinking water in the city of Value. Physical and chemical analysis of water samples showed acceptable values for acidity and electrical conductivity, and turbidity was found in water samples collected from underground reservoirs compared to Libyan and World Health Organization standards. The highest levels of electrical conductivity and alkalinity, TDS, and water hardness in the samples collected were below the maximum acceptable levels for drinking water as recommended by Libyan and World Health Organization specifications. The biological test results also showed that the water samples were free of intestinal bacteria.

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