

Microbes in deep groundwater

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Existence of microorganisms was ascertained by enumerating the total numbers of bacteria by epifluorescent microscopy using an acridine orange direct-count technique.

Viable microorganisms were enumerated by using the most probable number(MPN) technique for heterotrophic, iron oxidizing, ammonia oxidizing, nitrite-oxidizing, nitrate reducing, sulfate-reducing,

denitrifying, methane producing bacteria. The study confirmed the existence of microorganisms underground under the natural state of conditions virtually free of contact with the surface, under expected environmental conditions (i.e., Eh, pH, temperature, pressure, nutrient and energy availability, etc.).