

ANALISIS KETIDAKMURNIAN AIR SUMUR GALI DI DESA SIKAPAS KABUPATEN MANDAILING NATAL

ABSTRAK

Telah dilakukan penelitian analisis ketidakmurnian air sumur gali di Desa Sikapas, Kabupaten Mandailing Natal terletak pada koordinat $1^{\circ} 10' 42.25''$ Lintang Utara dan $98^{\circ} 56' 47.81''$ Bujur Timur. Penelitian ini bertujuan untuk mengetahui kualitas air sumur gali berdasarkan tingkat daya hantar listrik, salinitas, suhu, kekeruhan dan kandungan mineral yang terkandung dalam air sumur gali di Desa Sikapas menggunakan metode konduktivitas. Pengambilan sampel dilakukan dengan mengambil air sumur gali sebanyak 10 sampel dimulai dari sumur gali yang terdekat ke tepi pantai menuju pemukiman masyarakat dengan titik acuan ialah tepi pantai. Hasil penelitian menunjukkan bahwa air sumur gali di Desa Sikapas masih belum terintrusi air laut (murni) dan layak digunakan sebagai air bersih. Hal ini diketahui berdasarkan nilai daya hantar listrik hasil pengukuran tidak melebihi nilai dari konduktivitas yang diperbolehkan yaitu $\leq 200 \mu\text{mho/cm}$, 25°C . Daya hantar listrik air sumur gali di Desa Sikapas berkisar $17,53 - 76,87 \mu\text{mho/cm}$, 25°C , salinitas berkisar $9,26 - 41,1 \text{ ppm}$ dengan baku mutu 200 ppm , suhu berkisar $26,6 - 26,8^{\circ}\text{C}$ dengan baku mutu $\pm 3^{\circ}\text{C}$, kekeruhan berkisar $0 - 1,73 \text{ NTU}$ dengan baku mutu 25 NTU dan kandungan mineral magnesium berkisar $1,4 - 3,6 \text{ mg/L}$ dengan baku mutu 150 mg/L , iodium berkisar $0,9613 - 5,1545 \text{ mcg/gr}$ dengan baku mutu 18 mcg/L , besi berkisar $< 0,009 - 0,09 \text{ mg/L}$ dengan baku mutu 1 mg/L , dan kadar klorida berkisar $5,91 - 20,3 \text{ mg/L}$ dengan baku mutu 600 mg/L .

Kata kunci: *Kualitas Air, Daya Hantar Listrik, Konduktivitas, Kandungan Mineral*

ANALYSIS OF DUCK WELL WATER IMMUNITY IN SIKAPAS VILLAGE MANDAILING NATAL DISTRICT

ABSTRACT

Research has been conducted on the analysis of water impurity dug wells in Sikapas Village, Mandailing Natal Regency which is located at coordinates 1° 10' 42.25" North Latitude and 98° 56' 47.81" East Longitude. This study aims to determine the quality of dug well water based on the level of electrical conductivity, salinity, temperature, turbidity, and mineral content contained in dug well water in Sikapas Village using the conductivity method. Sampling was carried out by taking 10 samples of dug well water starting from the dug well closest to the shore to the community settlement with the reference point being the beach. The results showed that the dug well water in Sikapas Village was still not intruded by seawater (pure) and was suitable for use as clean water. It is known that based on the value of the electrical conductivity, the measurement results do not exceed the allowable conductivity value is $\leq 200 \mu\text{mho/cm}$, 25°C. The electrical conductivity of dug well water in Sikapas Village ranges from 17.53 - 76.87 $\mu\text{mho/cm}$, 25°C, salinity ranges from 9.26 - 41.1 ppm with a quality standard of 200 ppm, temperatures range from 26.6 - 26.8 °C with a quality standard of $\pm 3^\circ\text{C}$, turbidity ranges from 0 - 1.73 NTU with a quality standard of 25 NTU and magnesium mineral content ranges from 1.4 - 3.6 mg/L with a quality standard of 150 mg/L, iodine ranges from 0.9613 to 5.1545 mcg/gr with a quality standard of 18 mcg/L, iron ranges from $< 0.009 - 0,09$ mg/L with a quality standard of 1 mg/L, and chloride levels ranging from 5.91 - 20.3 mg/L with a quality standard of 600 mg/L.

Keywords: *Water Quality, Electrical Conductivity, Conductivity, Mineral Content*

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