

ANALISIS KUALITAS DAN KELAYAKAN AIR SUMUR DI DAERAH BANTARAN SUNGAI CIPINANG BARU KECAMATAN JATINEGARA KOTA JAKARTA TIMUR

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ABSTRAK

Kelurahan Cipinang Cempedak dan Kelurahan Bidara Cina terletak di Kecamatan Jatinegara Kota Jakarta Timur. Lokasi sumur yang berdekatan dengan Sungai Cipinang Baru yang kondisinya tercemar oleh pembuangan limbah domestik dan sampah-sampah organik langsung ke Sungai Cipinang Baru mempengaruhi kualitas air sumur yang digunakan masyarakat sehari-hari. Penelitian ini bertujuan untuk mengetahui kualitas dan kelayakan air sumur yang berpedoman pada Permenkes RI No. 32 Tahun 2017 untuk air hygiene sanitasi dan Permenkes RI Nomer 492/MENKES/PER/IV/2010 untuk air minum. Pengambilan sampel mengacu pada SNI 6989.58:2008 Metoda Pengambilan Contoh Air Tanah. Metode penelitian menggunakan deskripsif kuantitatif, dengan pengujian secara insitu dan uji laboratorium. Penentuan titik sampel air sumur menggunakan stratified random sampling sebanyak 6 sampel di Kelurahan Cipinang Cempedak dan 6 sampel di Kelurahan Bidara Cina yang berjarak ≤ 30 meter dari sungai. Hasil penelitian kualitas air tanah yang melebihi baku mutu yakni parameter kimia pH berada di Kelurahan Cipinang Cempedak dengan kode sampel CC01 6,10, kode CC02 6,467, kode CC03 6,3, dan kode CC04 6,2. Untuk zat organik (KMnO₄) yang melebihi baku mutu di titik sampel Kelurahan Cipinang Cempedak dengan kode CC02 sebesar 10,428 mg/l. Parameter yang masuk baku mutu ada parameter fisik suhu, zat padat terlarut (TDS), dan kekeruhan (turbidity), untuk parameter kimia ada zat organik (KMnO₄) dan nitrat (NO₃). Hal ini menunjukkan bahwa air sumur di Kelurahan Cipinang Cempedak perlu mendapat pertimbangan untuk dikonsumsi secara langsung sebagai air minum, tetapi untuk keperluan air hygiene sanitasi termasuk layak digunakan dengan hasil rata-rata validasi 93% layak.

Kata Kunci: Air Sumur, Air Tanah, Kualitas Air Sumur, Kelayakan Air Sumur.

ANALYSIS OF THE QUALITY AND FEASIBILITY OF WELL WATER IN THE BORDER AREA OF THE CIPINANG BARU RIVER, JATINEGARA DISTRICT EAST JAKARTA CITY

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ABSTRACT

Cipinang Cempedak Village and Bidara Cina Village are located in Jatinegara District, East Jakarta City. The location of the well is close to the Cipinang Baru River, which is polluted by the discharge of domestic waste and organic waste directly into the Cipinang Baru River, affecting the quality of the well water used by the community on a daily basis. This research aims to determine the quality and suitability of well water which is guided by the Republic of Indonesia Minister of Health Regulation No. 32 of 2017 for hygienic water, sanitation and Indonesian Minister of Health Regulation Number 492/MENKES/PER/IV/2010 for drinking water. Sampling refers to SNI 6989.58:2008 Groundwater Sampling Methods. The research method uses quantitative description, with in situ testing and laboratory tests. Determining the well water sample points using stratified random sampling with 6 samples in Cipinang Cempedak Village and 6 samples in Bidara Cina Village which is ≤ 30 meters from the river. The results of groundwater quality research that exceeds quality standards, namely the chemical parameter pH, are in Cipinang Cempedak Village with sample code CC01 6.10, code CC02 6.467, code CC03 6.3, and code CC04 6.2. For organic substances (KMnO₄) that exceed the quality standard at the Cipinang Cempedak Village sample point with the code CC02, it is 10.428 mg/l. The parameters included in the quality standards are the physical parameters of temperature, dissolved solids (TDS), and turbidity. For chemical parameters there are organic substances (KMnO₄) and nitrates (NO₃). This shows that well water in Cipinang Cempedak Village needs to be considered for direct consumption as drinking water, but for sanitary hygiene water purposes it is considered suitable for use with an average validation result of 93% suitable.

Keywords: Well Water, Ground Water, Well Water Quality, Well Water Feasibility.