

ANALISIS KUALITAS AIR PDAM TIRTA MANGGAR KOTA BALIKPAPAN

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INTISARI

Penelitian dengan judul Analisis Kualitas Air PDAM Tirta Manggar Kota Balikpapan memiliki tujuan (1) mengkaji kualitas air sumber air baku, air hasil produksi instalasi pengolahan PDAM, air kran pelanggan PDAM, dan membandingkan dengan baku mutu air bersih dan air minum; dan (2) mengkaji perubahan kualitas air dari sumber air baku waduk hingga kran pelanggan PDAM Tirta Manggar dan faktor yang mempengaruhinya.

Data yang digunakan dalam penelitian berasal dari hasil uji laboratorium sampel air. Pengambilan sampel air menggunakan metode *purposive sampling*. Parameter yang diuji meliputi parameter fisik, kimia, dan biologi kualitas sumber air baku waduk, instalasi pengolahan air, dan air kran pelanggan PDAM Tirta Manggar. Hasil analisis dibandingkan dengan baku mutu air bersih dan minum sesuai dengan Peraturan Menteri Kesehatan No.416/Menkes/Per/IX/1990 Tentang Persyaratan Kualitas Air Bersih dan Peraturan Menteri Kesehatan Republik Indonesia Nomor 492/Menkes/Per/IV/2010 Tentang Persyaratan Kualitas Air Minum.

Hasil penelitian menunjukkan bahwa kualitas air Waduk Manggar belum memenuhi syarat menjadi sumber air bersih, begitu pula dengan air di instalasi pengolahan dan air kran pelanggan karena masih terdapat parameter kualitas air yang belum sesuai dengan baku mutu air bersih dan minum. Parameter tersebut meliputi besi, mangan, pH, zat organik, dan coliform yang berada di sampel air Waduk Manggar. Kualitas air IPA Manggar, IPA Kampung Damai, dan IPA Batu Ampar hampir sesuai, namun semua pH memiliki nilai yang rendah serta terdapat nilai mangan dan aluminium yang tinggi. Perubahan kualitas air semakin baik terlihat dari sumber air baku hingga kran pelanggan pada masing-masing IPA, walaupun belum memenuhi semua persyaratan kualitas air.

Kata kunci : *air minum, kualitas air, PDAM, instalasi pengolahan, waduk*

WATER QUALITY ANALYSIS OF TIRTA MANGGAR DRINK WATER DISTRICT COMPANY (PDAM) IN BALIKPAPAN CITY

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ABSTRACT

Title of research is Water Quality Analysis of Tirta Manggar Drink Water District Company (PDAM) in Balikpapan City, that have purposes (1) review water quality of raw water sources, water treatment installation from PDAM, customers tap water, and compared them with drinking and clean water quality standard; and (2) review change of water quality from raw water source in reservoir to customers tap water of PDAM.

Research used data from laboratory test of water samples. Purposive sampling method used in water sampling. Parameters tested include physical, chemical, and biological from raw water sources, water treatment installation, and customers tap water. Results compared with drinking and clean water quality standard according to Minister of Health Number 416/Menkes/Per/IX/1990 requirements about Clean Water Quality and Minister of Health Number 492/Menkes/Per/IV/2010 requirements about Drinking Water Quality.

Results showed that water quality of Manggar Reservoir isn't qualified to be source of clean water, also water treatment installation and customer tap water because some parameters aren't accordance with drinking and clean water quality standard. These parameters include iron, manganese, pH, organic matter, and coliform was found in water sample of Manggar Reservoir. Water quality of IPA Manggar, IPA Kampung Damai, and IPA Batu Ampar nearly within, but all of pH value below normal range and there are high value from manganese and aluminum. Change of water quality is getting better, it can be seen from raw water source to customers tap water in each water treatment installation, although not include in good water quality requirements.

Key words: *drinking water, water quality, drink water district company (PDAM), treatment installation, reservoirs*