

ANALISIS KADAR BESI (Fe) PADA AIR MINUM ISI ULANG DI KECAMATAN TERNATE SELATAN KOTA TERNATE

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ABSTRAK

Latar Belakang: Perkembangan jumlah penduduk di Kota Ternate setiap tahun mengalami peningkatan. Sehingga kebutuhan air minum pada masyarakat meningkat. Oleh karena itu, masyarakat Kota Ternate banyak yang membuka usaha depot air minum isi ulang, khususnya di Kecamatan Ternate Selatan yang penduduknya hidup tidak menetap (Kos-kosan). Depot air minum isi ulang bisa saja terkontaminasi dalam proses pengelolaan dan pengisian di tempat produksi yang kurang efektif dan kurang pengawasan. Salah satunya terkontaminasi adanya kadar Fe yang berlebihan di dalam air minum.

Tujuan: Untuk mengetahui uji organoleptik dan kadar Fe pada air minum isi ulang di Kecamatan Ternate Selatan Kota Ternate berdasarkan PERMENKES No. 492 Tahun 2010.

Metode: Penelitian ini menggunakan metode deskriptif, yang bertujuan untuk mengetahui kadar Fe pada air minum isi ulang di Kecamatan Ternate Selatan Kota Ternate menggunakan spektrofotometri UV-Vis.

Hasil: Hasil dari 27 sampel air minum isi ulang yang berada di Kecamatan Ternate Selatan Kota Ternate yang diuji secara organoleptik oleh 3 orang penguji menyatakan (100%) memenuhi syarat yaitu tidak berasa, tidak berwarna, dan tidak berbau. Untuk analisis kadar Fe pada 27 air minum isi ulang yang telah diteliti diperoleh hasil berkisar antara 0,048 mg/L - 0,280 mg/L. Hasil kadar Fe pada sumber air PDAM sebesar 0,184 mg/L, sumur bor sebesar 0,192 mg/L, dan sumur gali sebesar 0,32 mg/L.

Kesimpulan: 27 air minum isi ulang yang diuji secara organoleptik dan uji kadar Fe semuanya memenuhi syarat, diperoleh sampel A7 memiliki kadar Fe terendah yaitu 0,048 mg/L dan sampel A20 memiliki kadar Fe tertinggi yaitu 0,280 mg/L.

Kata Kunci: Air minum isi ulang, Kadar Fe, Uji organoleptik.

ANALYSIS OF IRON (Fe) CONCENTRATION IN REFILL DRINKING WATER IN SOUTH TERNATE DISTRICT, TERNATE CITY.

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ABSTRACT

Introduction: Ternate City experiences annual population growth, resulting in increased demand for drinking water among its residents. Consequently, many Ternate City inhabitants have established refill drinking water depots, particularly in the transient South Ternate District, known for its boarding houses. These depots are susceptible to contamination during processing and filling stages at inefficiently supervised production sites. One significant issue is the excessive presence of Fe in the drinking water.

Aim: To determine the organoleptic test and Fe concentration in refill drinking water in the South Ternate District, Ternate City, based on the Ministry of Health Regulation No. 492 of 2010.

Methods: This research used a descriptive method, aimed to determine Fe concentration in refill drinking water in the South Ternate District, Ternate City, using UV-Vis spectrophotometry.

Results: The results from 27 samples of refill drinking water in the South Ternate District, Ternate City, which were organoleptically tested by three testers, indicated that 100% of the samples met the regulations: they were tasteless, colorless, and odorless. The analysis of Fe concentration in the 27 samples of refill drinking water showed results ranging from 0.048 mg/L to 0.280 mg/L. The Fe concentration in the water sources were as follows: PDAM water source at 0.184 mg/L, borewell water at 0.192 mg/L, and dug well water at 0.32 mg/L.

Conclusion: Of the 27 refill drinking water samples tested both organoleptically and for Fe concentration, all met the required standards. The A7 sample had the lowest Fe concentration at 0.048 mg/L, while the A20 sample had the highest Fe concentration at 0.280 mg/L.

Keywords: Refill drinking water, Fe concentration, Organoleptic test.