# ABSTRAK

## ANALISIS INDEKS KUALITAS AIR (IKA) AIR SUMUR PENDUDUK DI KOTA BANDAR LAMPUNG

**Oleh**

**Elisa Rindiyani Vatresia**

Air sumur merupakan sumber air bersih utama bagi sebagian masyarakat di Kota Bandar Lampung yang belum terlayani jaringan PDAM sehingga kualitasnya perlu dievaluasi secara komprehensif untuk memastikan keamanan penggunaan sehari-hari. Penelitian ini bertujuan untuk menganalisis status mutu air menggunakan indeks kualitas air (IKA) menurut PerMenLHK No 27 Tahun 2021 Lampiran I. Titik pengambilan sampel dilakukan pada 9 titik lokasi/stasiun air sumur di Kota Bandar Lampung. Sampel air yang dianalisis meliputi parameter kekeruhan, warna, bau, pH, TDS, nitrat, nitrit, mangan, besi, kromium heksavalen, *Escherichia coli*, dan Total coliform. Hasil analisis menunjukkan bahwa sebagian besar parameter masih memenuhi baku mutu sesuai dengan Permenkes RI No. 2 Tahun 2023, kecuali nitrat pada stasiun 1, *E. coli* pada stasiun 7, 8, dan Total Coliform pada stasiun 9. Berdasarkan hasil analisis Indeks Pencemaran (IP) menunjukkan bahwa stasiun 2, 3, 4, 5, dan 6 memenuhi baku mutu, stasiun 1 dan 9 tergolong tercemar ringan, sedangkan stasiun 7 dan 8 masuk kategori cemar sedang. Berdasarkan nilai IP ditentukan nilai IKA air sumur di Kota Bandar Lampung tergolong dalam kategori sedang dengan nilai IKA=56,6. Hasil penelitian ini memberikan gambaran status kualitas air sumur dan dapat menjadi dasar pengelolaan serta pengendalian kualitas air bersih di wilayah perkotaan.

**Kata Kunci:** Air Sumur; Indeks Kualitas Air; Indeks Pencemaran; Kualitas Air Bersih; Kota Bandar Lampung

# ABSTRACT

## ANALYSIS OF THE WATER QUALITY INDEX (IKA) OF RESIDENTIAL WELL WATER IN BANDAR LAMPUNG CITY

**By**

**Elisa Rindiyani Vatresia**

Well water is the primary source of clean water for a portion of the population in Bandar Lampung City that has not been served by the municipal water supply (PDAM); therefore, its quality needs to be comprehensively evaluated to ensure safe daily use. This study aimed to analyze the water quality status using the Water Quality Index (WQI) based on the Regulation of the Minister of Environment and Forestry of Indonesia (PerMenLHK) No. 27 of 2021, Appendix I. Water samples were collected from nine well water sampling stations across Bandar Lampung City. The analyzed parameters included turbidity, color, odor, pH, total dissolved solids (TDS), nitrate, nitrite, manganese, iron, hexavalent chromium, *Escherichia coli*, and total coliform. The results showed that most parameters met the water quality standards stipulated in the Regulation of the Minister of Health of the Republic of Indonesia No. 2 of 2023, except for nitrate at Station 1, *E. coli* at Stations 7 and 8, and total coliform at Station 9. Based on the Pollution Index (PI) analysis, Stations 2, 3, 4, 5, and 6 met the quality standards, Stations 1 and 9 were classified as lightly polluted, while Stations 7 and 8 were categorized as moderately polluted. Based on the PI values, the WQI of well water in Bandar Lampung City was classified as moderate, with a WQI value of 56.6. This study provides an overview of the well water quality status and can serve as a basis for the management and control of clean water quality in urban areas.

**Keywords:** Well Water; Water Quality Index; Pollution Index; Clean Water Quality; Bandar Lampung City