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KARAKTERISTIK DAN POTENSI MATAAIR DI KECAMATAN PRAMBANAN, KABUPATEN SLEMAN, PROVINSI DAERAH ISTIMEWA YOGYAKARTA

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INTISARI

Tujuan dari penelitian ini adalah 1) mengetahui karakteristik mataair (distribusi, tipe, kualitas fisika dan kimia), 2) mengevaluasi kualitas mataair sebagai sumber air minum, dan 3) mengetahui potensi (kuantitas dan kualitas) mataair di Kecamatan Prambanan.

Metode penelitian ini meliputi survei instansional, survei lapangan, dan analisis laboratorium. Data instansional yang digunakan berupa data lokasi mataair secara administrasi. Survei lapangan dilakukan secara sensus untuk mengetahui distribusi, tipe, debit, dan kualitas fisik mataair, sedangkan pengambilan sampel kualitas kimia mataair dilakukan dengan metode *purposive sampling* berdasarkan formasi geologi. Analisis data yang digunakan adalah spasial, deskriptif dan komparatif.

Hasil penelitian menunjukkan bahwa distribusi mataair di daerah penelitian mengelompok mengikuti aliran sungai permanen dan musiman serta mengelompok di dekat sesar. Berdasarkan hasil tenaga gravitasi, mataair di daerah penelitian terdiri atas mataair cekungan, mataair kontak dan mataair pada batuan kedap. Berdasarkan sifat pengalirannya, mataair di daerah penelitian didominasi oleh mataair menahun, sedangkan mataair musiman jumlahnya sedikit dan ditemui pada Formasi Semilir. Debit mataair di daerah penelitian berkisar antara 80 mililiter/detik sampai 0,625 liter/detik dan termasuk kelas debit 5, 6, 7, dan 8 menurut klasifikasi debit Meinzer. Nilai DHL mataair di daerah penelitian bervariasi yaitu antara 278-667 μmhos/cm. Berdasarkan PerGub DIY No. 20 tahun 2008 dan KepMenKes RI No. 907 tahun 2002, mataair di Kecamatan Prambanan masih berada di bawah ambang baku mutu untuk air minum sehingga masih layak untuk dikonsumsi. Potensi mataair secara kualitas di daerah penelitian baik dan layak digunakan sebagai sumber air minum. Tetapi secara kuantitas, pemanfaatan debit mataair masih belum optimal.

Kata kunci : mataair, formasi geologi, karakteristik, potensi mataair

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THE CHARACTERISTICS AND POTENTIALS OF SPRINGS IN PRAMBANAN, SLEMAN DISTRICT, YOGYAKARTA SPECIAL PROVINCE

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ABSTRACT

The aim of this research are to 1) identify the characteristics of springs (distribution, type, physical and chemical quality), 2) evaluate the qualities of springs as drinking water source, and 3) identify the potentials (quantity and quality) of springs in Prambanan sub-district.

Research method involved institutional survey, field survey, and laboratory analysis. Institutional data used involved administrative data on spring location. Field survey was conducted based on census method to identify the distribution, type, debit, and physical quality of springs, while samples on chemical quality of springs were taken by using geological formation-based purposive sampling method. Spatial, descriptive and comparative data analysis were used in this research.

Results showed that the distribution of springs in research area clustered and followed permanent and seasonal river stream and it was clustered near the fault. Based on the results of gravitation power, springs in the research site consisted of bedding spring, contact spring and springs in impermeable rocks. Based on the flowing properties, springs in the research area were dominated by perennial springs, while only less intermittent (periodic) spring was available and found in Semilir Formation. Spring debit in the research area ranged between 80 mili-liters/second until 0.625 liter/second. and based on Meinzer debit classification they were categorized as debit class 5, 6, 7, and 8. DHL value of springs in the research area varied between 278-667 umhos/cm. Based on PerGub DIY (Yogyakarta Governor Regulation) No. 20 of 2008 and KepMenKes RI (RI Ministry of Health) No. 907 of 2002, springs in Prambanan sub-district is still under the drinking water quality threshold, so that it is feasible for consumption. The spring potential quality is good and feasible for consumed-drinking water source. However, based on its quantity, the spring debit has not been optimally utilized yet.

Keywords: *springs, geological formation, characteristics, spring potentials*