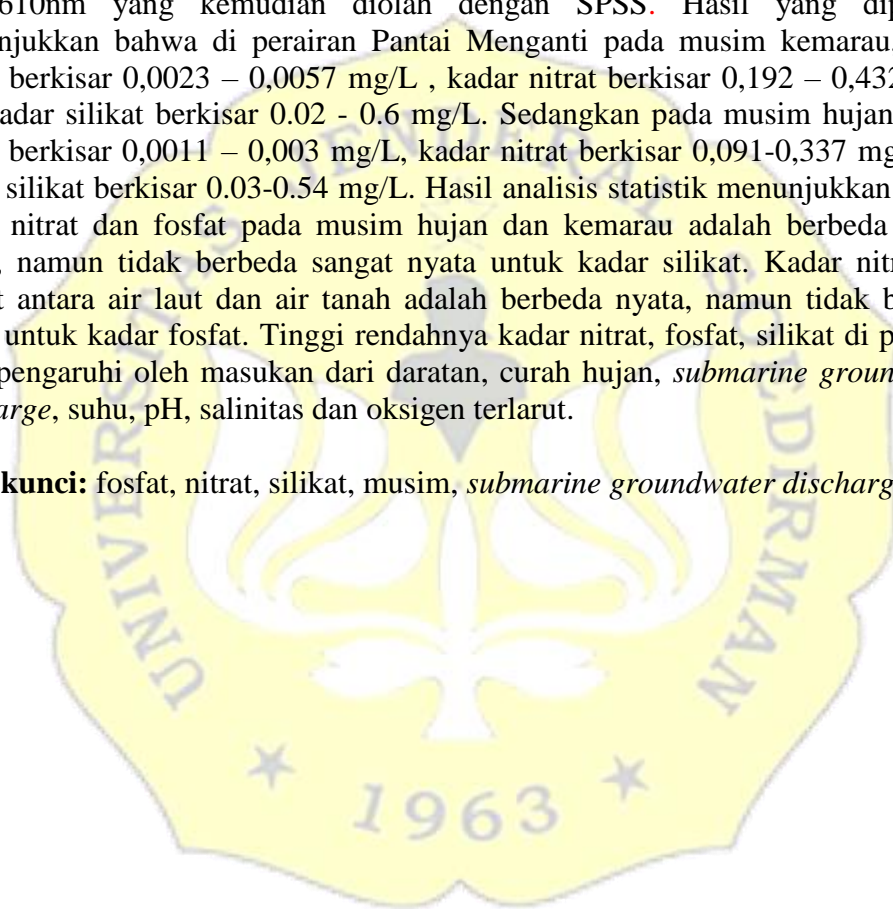


ABSTRAK

Perairan Pantai Menganti merupakan bagian dari perairan Laut Selatan Jawa yang memiliki potensi kekayaan hayati maupun non hayati. Informasi terkini tentang makronutrien perairan di perairan Pantai Menganti masih terbatas. Penelitian ini bertujuan mengetahui kadar makronutrien (Fosfat, Nitrat dan Silikat) dalam perbedaan musim di perairan Pantai Menganti. Sampel diambil pada bulan September 2020 dan Februari 2021 dengan meliputi 13 stasiun pengamatan. Kadar fosfat, nitrat dan silikat dianalisis dengan menggunakan metoda Spektrofotometri pada panjang gelombang masing-masing 650nm, 410nm dan 610nm yang kemudian diolah dengan SPSS. Hasil yang diperoleh menunjukkan bahwa di perairan Pantai Menganti pada musim kemarau, kadar fosfat berkisar 0,0023 – 0,0057 mg/L , kadar nitrat berkisar 0,192 – 0,432 mg/L dan kadar silikat berkisar 0.02 - 0.6 mg/L. Sedangkan pada musim hujan, kadar fosfat berkisar 0,0011 – 0,003 mg/L, kadar nitrat berkisar 0,091-0,337 mg/L dan kadar silikat berkisar 0.03-0.54 mg/L. Hasil analisis statistik menunjukkan bahwa kadar nitrat dan fosfat pada musim hujan dan kemarau adalah berbeda sangat nyata, namun tidak berbeda sangat nyata untuk kadar silikat. Kadar nitrat dan silikat antara air laut dan air tanah adalah berbeda nyata, namun tidak berbeda nyata untuk kadar fosfat. Tinggi rendahnya kadar nitrat, fosfat, silikat di perairan ini dipengaruhi oleh masukan dari daratan, curah hujan, *submarine groundwater discharge*, suhu, pH, salinitas dan oksigen terlarut.

Kata kunci: fosfat, nitrat, silikat, musim, *submarine groundwater discharge*



ABSTRACT

Menganti coastal waters are part of the Southern Java Sea waters that have the potential for biological and non-biological wealth. The current information on macronutrients in the waters of Menganti Beach is still limited. This study aimed to determine the levels of macronutrients (Phosphate, Nitrate and Silicate) in different seasons in the waters of Menganti Beach. Samples were taken in September 2020 and February 2021 covering 12 observation stations. The levels of phosphate, nitrate and silicate were analyzed using spectrophotometric methods at wavelength of 650nm, 410nm dan 610nm, respectively, which were then processed with SPSS. The results showed that in the waters of Menganti Beach during the dry season, phosphate levels ranged from 0.0023 to 0.0057 mg/L, nitrate levels ranged from 0.192 to 0.432 mg/L and silicate levels ranged from 0.02 to 0.6 mg/L. While in the rainy season, phosphate levels ranged from 0.0011 to 0.003 mg/L, nitrate levels ranged from 0.091- 0.337 mg/L and silicate levels ranged from 0.03 to 0.54 mg/L. The results of statistical analysis showed that the levels of nitrate and phosphate in the rainy and dry seasons were significantly different, but not significantly for silicate levels. Nitrate and silicate levels between seawater and groundwater were significantly different, but not significantly different for phosphate levels. The high and low levels of phosphate, nitrate and silicate in these waters are influenced by input from land, rainfall, Submarine Groundwater Discharge, temperature, pH, salinity and Dissolved Oxygen.

Keywords: *phosphate, nitrate, silicate, season, submarine groundwater discharge*