ABSTRAK

Sumber masuknya senyawa hidrokarbon di perairan Segara Anakan berasal dari aktivitas industri kilang minyak yang berpotensi menimbulkan dampak pada ekosistem mangrove. Penelitian ini bertujuan untuk menganalisis konsentrasi TPH pada air, sedimen, dan potensi konsentrasi TPH mangrove, bioakumulasi faktor (BAF) dan translokasi faktor (TF) pada mangrove *Ceriops tagal* dan *Ceriops decandra*, serta menggambarkan potensi TPH pada air, sedimen, dan mangrove *Ceriops tagal* dan *Ceriops decandra.* Metode pengambilan sampel menggunakan metode *random sampling* pada 2 stasiun. Hasil penelitian menunjukkan bahwa rata-rata konsentrasi TPH pada air stasiun Sapuregel sebesar 100 mg/L dan stasiun Donan Barat sebesar 166,67 ± 57,74 mg/L, yang menunjukan bahwa konsentrasi tersebut sudah melewati ambang batas baku mutu berdasarkan PP No. 22 Tahun 2021. Sedangkan rata-rata konsentrasi TPH pada sedimen stasiun Sapuregel sebesar 32.666,67 ± 8621,68 mg/kg dan stasiun Donan Barat sebesar 68.333,33 ± 10016,65 mg/kg, yang mengindikasikan bahwa kondisi sedimen kedua stasiun telah mengalami kontaminasi berat. Hasil akumulasi TPH pada mangrove *Ceriops tagal* sebesar 20.000 mg/kg dan *Ceriops decandra* sebesar 8.766,67 mg/kg. Menurut perhitungan BAF dan TF, kedua jenis mangrove (*Ceriops tagal* dan *Ceriops decandra*) relatif tidak mampu dalam mengakumulasi dan mentranslokasi senyawa TPH di tubuhnya.

Kata kunci: *BAF dan TF; Ceriops decandra; Ceriops tagal; Perairan Segara Anakan; dan Total Petroleum Hidrokarbon*

ABSTRACT

The source of the entry of hydrocarbon compounds into the Segara Anakan waters comes from oil refinery industrial activities which have the potential to have an impact on the mangrove ecosystem. This study aimed to analyze the concentration of TPH in sediment, water, and the potential for mangrove TPH accumulation, bioaccumulation factors (BAF) and translocation factors (TF) in Ceriops tagal and Ceriops decandra mangroves, and to describe the potential for TPH in sediment, water, and Ceriops tagal and Ceriops decandra mangroves. The sampling method used a random sampling method at 2 stations. The results showed that the average concentration of TPH in water at Sapuregel station was 100 mg/L and West Donan station had average of 166.67 ± 57.74 mg/L, which indicates that the concentration has exceeded the standard quality threshold based on PP No. 22 of 2021. Meanwhile, the average concentration of TPH in sediment at Sapuregel station was 32,666.67 ± 8621.68 mg/kg and West Donan station was 68,333.33 ± 10016.65 mg/kg, which indicated that the sediment conditions of both stations had experienced heavy contamination. The results of TPH accumulation in Ceriops tagal mangroves were 20,000 mg/kg and Ceriops decandra were 8,766.67 mg/kg. According to BAF and TF calculations, both types of mangroves (Ceriops tagal and Ceriops decandra) are relatively unable to accumulate and translocate TPH compounds in their bodies.

Keywords: *BAF and TF; Ceriops decandra; Ceriops tagal; Segara Anakan Lagoon; and Total Petroleum Hydrocarbons*