

IDENTIFIKASI TIMBULAN DAN KOMPOSISI SAMPAH BAHAN BERBAHAYA DAN BERACUN (B3) DARI FASILITAS TRANSPORTASI DI KOTA PADANG

TUGAS AKHIR

Sebagai salah satu syarat untuk menyelesaikan
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ABSTRAK

Berbagai aktivitas di fasilitas transportasi menghasilkan sampah, termasuk sampah bahan berbahaya dan beracun (B3). Penelitian ini bertujuan menganalisis timbulan, komposisi, pengetahuan responden, dan pengelolaan eksisting sampah B3 di fasilitas transportasi Kota Padang yang meliputi pool bus, stasiun kereta api, dan pelabuhan. Data dikumpulkan melalui survei lapangan, pengambilan sampel mingguan selama delapan minggu, pengukuran timbulan dan komposisi, serta identifikasi pengetahuan dan pengelolaan melalui observasi, wawancara pengelola, dan kuesioner kepada pengunjung, pegawai, serta petugas kebersihan yang dianalisis menggunakan uji Chi-Square. Jumlah sampel ditentukan berdasarkan SNI 19-3964-1994, yaitu 5 dari 14 unit fasilitas transportasi dengan keandalan survei 98,51%. Hasil penelitian menunjukkan satuan timbulan sampah B3 sebesar $2,22 \pm 0,41$ g/o/h ($0,30 \pm 0,03$ g/m²/h) atau $7,74 \pm 0,03$ ml/o/h ($1,67 \pm 0,14$ ml/m²/h) dengan total timbulan 28,20 kg/h atau 39,30 L/h. Komposisi sampah B3 berdasarkan jenis terdiri dari kemasan B3 51%, sampah elektronik 28%, dan produk B3 20%, sedangkan berdasarkan karakteristik didominasi sampah beracun (84%). Pengetahuan responden terhadap sampah B3 menunjukkan 51% tahu dan 49% tidak tahu. Upaya pengurangan dilakukan melalui penggunaan produk berkemasan besar dan barang elektronik berumur pakai lama. Namun, penanganan sampah B3 masih tercampur dengan sampah lain dan belum tersedia fasilitas khusus dari pemerintah. Rekomendasi meliputi optimalisasi pengurangan, pemilahan dan pewadahan di sumber, serta penyediaan Fasilitas Pengelolaan Sampah Spesifik (FPSS) oleh Dinas Lingkungan Hidup melalui kerja sama dengan pihak berizin dan peningkatan sosialisasi kepada masyarakat

Kata Kunci: Fasilitas transportasi, Karakteristik, Komposisi, Sampah B3, Timbulan



ABSTRACT

Various activities in transportation facilities generate waste, including hazardous and toxic waste (B3). This study aims to analyze the generation, composition, respondents' knowledge, and existing management of B3 waste in transportation facilities in Padang City, including bus depots, railway stations, and ports. Data were collected through field surveys, weekly sampling for eight weeks, measurement of waste generation and composition, as well as identification of knowledge and management practices through observation, interviews with managers, and questionnaires distributed to visitors, employees, and cleaning staff. The data were analyzed using the Chi-Square test. The number of samples was determined based on SNI 19-3964-1994, comprising 5 out of 14 transportation facilities with a survey reliability of 98.51%. The results showed that the specific generation rate of B3 waste was 2.22 ± 0.41 g/person/hour (0.30 ± 0.03 g/m²/hour) or 7.74 ± 0.03 ml/person/hour (1.67 ± 0.14 ml/m²/hour), with a total generation of 28,20 kg/hour or 39,30 L/hour. The composition of B3 waste by type consisted of B3 packaging (51%), electronic waste (28%), and B3 products (20%), while by characteristics it was dominated by toxic waste (84%). Respondents' knowledge about B3 waste indicated that 51% were aware and 49% were not. Reduction efforts include the use of bulk-packaged cleaning products and the use of durable electronic devices. However, B3 waste handling remains mixed with other wastes and lacks specific facilities. Recommendations include optimizing reduction, segregation, and storage at the source, as well as providing Specific Waste Management Facilities (FPSS) through collaboration with licensed parties and enhanced public awareness.

Keywords: Composition, Generation, Hazardous waste, Management, Transportation facilities

