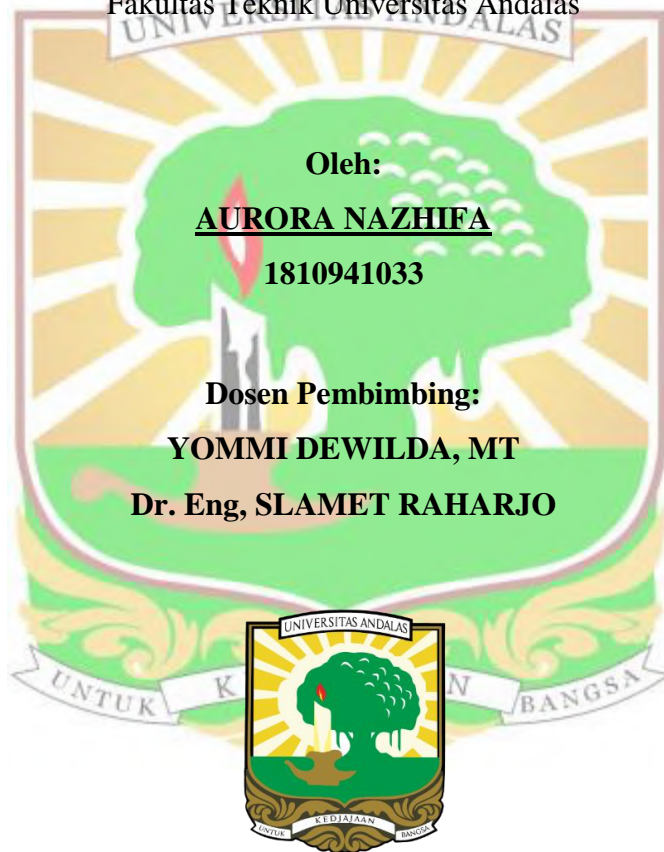


**STUDI TIMBULAN, KOMPOSISI, KARAKTERISTIK DAN
POTENSI DAUR ULANG SAMPAH DOMESTIK DI
KABUPATEN SOLOK**

TUGAS AKHIR

Sebagai salah satu syarat untuk menyelesaikan
Program Strata-1 pada
Departemen Teknik Lingkungan
Fakultas Teknik Universitas Andalas



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ABSTRAK

Sistem pengelolaan sampah di Kabupaten Solok terutama sampah domestik sampai saat ini belum dikelola dengan baik oleh pemerintah daerah. Pengelolaan sampah oleh Dinas Lingkungan Hidup (DLH) Kabupaten Solok hanya terbatas pada kawasan perkantoran dan pasar, sedangkan untuk kawasan permukiman pengelolaan sampah masih dilakukan sendiri oleh masyarakat setempat. Tujuan dari penelitian ini adalah menganalisis timbulan, komposisi, karakteristik dan potensi daur ulang sampah domestik di Kabupaten Solok. Penelitian dilakukan sesuai SNI 19-3964-1994 selama 8 hari berturut-turut pada 4 kecamatan di Kabupaten Solok. Pengukuran timbulan sampah akan dilakukan dalam satuan berat dan volume, komposisi dan potensi daur ulang sampah dilakukan berdasarkan persentase berat basah. Pengukuran karakteristik fisika meliputi berat jenis dan faktor pemadatan. Pengukuran karakteristik kimia yaitu *proximate analysis* dan rasio C/N, dan karakteristik biologi yaitu populasi lalat dan biodegradabilitas. Hasil penelitian timbulan sampah domestik Kabupaten Solok Tahun 2022 yaitu 326,82 ton/h dalam satuan berat 0,829 kg/o/h dan satuan volume 2,824 l/o/h. Komposisi sampah domestik Kabupaten Solok yaitu sampah makanan 50,39%, sampah halaman 8,12%, sampah plastik 12,25%, sampah kertas 9,22%, sampah kain/tekstil 3,79%, sampah kaca 4,26%, sampah logam/kaleng 6,07%, sampah B3/lain-lain 5,00% dan sampah Covid-19 0,89%. Karakteristik fisika yaitu berat jenis sampah sebesar 0,307 kg/liter dan faktor pemadatan sampah sebesar 1,38. Karakteristik kimia yaitu kadar air 39,279%, kadar *volatile* 55,213%, kadar abu 2,871% dan kadar *fixed carbon* 2,637%. Rasio C/N pada kategori *High Income* 20,00, *Medium Income* 17,38% dan *Low Income* 9,90. Karakteristik biologi yaitu biodegradabilitas sampah sebesar 60,90% dan populasi lalat sebesar 7 ekor/m². Potensi daur ulang sampah domestik Kabupaten Solok yaitu 62,43% dari total timbulan sampah domestik Kabupaten Solok. Timbulan sampah dipengaruhi oleh tingkat pendapatan penduduk, dimana semakin tinggi penghasilan suatu penduduk maka semakin tinggi pula timbulan sampah yang dihasilkan.

Kata kunci: timbulan sampah, komposisi, karakteristik, potensi daur ulang, sampah domestik Kabupaten Solok

ABSTRACT

The waste management system in Solok Regency, especially domestic waste, has not been managed properly by the local government. Waste management by the Solok Regency Environmental Service (DLH) is only limited to office areas and markets, while for residential areas, waste management is still carried out by the local community. The purpose of this research is to analyze the generation, composition, characteristics, and recycling potential of domestic waste in Solok Regency. The research was conducted according to SNI 19-3964-1994 for 8 consecutive days in 4 sub-districts in Solok Regency. Generation measurements are carried out in units of weight and volume, and the composition and potential for recycling waste are carried out based on the percentage of wet weight. Measurement of physical characteristics includes specific gravity and compaction factors. Measurement of chemical characteristics (proximate analysis and C/N ratio) and biological characteristics, namely fly population and biodegradability. The results of research on domestic waste generation in Solok Regency in 2022 are 326.82 metric tons per day in units of weight of 0.829 kg/o/h and volume of 2.824 l/o/h. The composition of domestic waste in Solok Regency is 50.39% food waste, 8.12% yard waste, 12.25% plastic waste, 9.22% paper waste, 3.79% fabric/textile waste, 4.26% glass waste, metal/can waste 6.07%, B3/other waste 5.00%, and COVID-19 waste 0.89%. Physical characteristics, namely the specific gravity of the waste is 0.307 kg/liter and the waste compaction factor is 1.38, The chemical characteristics are 39.279% water content, volatile content of 55,213%, ash rate of 2,871%, and fixed carbon rate of 2.637%. C/N ratio in the categories of high income (20,00, Medium Income (17,38%), and Low Income (9.90). The biological characteristics are that the biodegradability of the waste is 60.90%, and the fly population is 7 individuals/m². The potential for recycling domestic waste in Solok Regency is 62.43% of the total domestic waste generation in Solok Regency. Waste generation is influenced by the level of income of the population; the higher the income of a resident, the higher the amount of waste generated.

Keywords: waste generation, composition, characteristics, recycling potential, domestic waste in Solok Regency