

Studi timbulan dan komposisi sampah sebagai dasar usulan desain unit pengolahan sampah Jalan Raya Tajur, Kota Bogor

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Abstrak

Penelitian ini membahas timbulan dan komposisi sampah di area Jalan Raya Tajur meliputi perumahan, toko, dan sekolah. Penelitian ini bersifat kuantitatif dan menjadi dasar usulan desain unit pengolahan sampah. Hasil penelitian menyatakan timbulan sampah saat ini mencapai 0,38 kg/orang/hari meliputi 0,24 kg/orang/hari timbulan perumahan, 0,13 kg/orang/hari timbulan toko dan 0,01 kg/orang/hari timbulan sekolah atau 3,05 liter/orang/hari meliputi 1,60 liter/orang/hari timbulan perumahan, 1,20 liter/orang/hari timbulan toko dan 0,25 liter/orang/hari timbulan sekolah. Komposisi sampah perumahan area Jalan Raya Tajur terdiri dari 51,7% sisa makanan dan debu, 16,7% pampers dan sterofom, 15,6% plastik, 6,0% kertas, 4,2% kardus, 2,3% tekstil, 1,4% kaca, 1,1% logam dan kaleng, serta 0,9% karet.

Komposisi sampah toko area Jalan Raya Tajur terdiri dari 29,65% plastik, 24,70% kardus, 22,29% kaca, 11,92% kertas, 8,17% sisa makanan dan debu, 1,63% tekstil serta 1,63% kayu. Komposisi sampah sekolah area Jalan Raya Tajur terdiri dari 47,88% plastik, 21,24% kertas, 15,30% sisa makanan dan debu, 6,31% kayu, 4,57% kardus, 1,72% karet, 1,29% tekstil, 0,91% logam dan kaleng, serta 0,79% pampers dan sterofom. Unit pengolahan sampah didesain dengan kapasitas proyeksi tahun 2030 yaitu 14 ton/hari atau 91 m³/hari dan mampu mengelola sampah dengan komposisi 48,54% sisa makanan dan debu, 17,04% plastik, 15,43% pampers dan sterofom, 6,62% kertas, 5,38% kardus, 2,58% kaca, 2,29% tekstil, 1,07% logam dan kaleng, 0,86% karet, serta 0,21% kayu. Total luas desain unit pengolahan sampah mencapai 587,5 m² yang terdiri atas area penurunan muatan, area pemilahan, area pencacahan, area pengomposan, area penyaringan, area penyimpanan, dan area kantor.

.....This study discusses the generation and composition of waste in the area of Highway Tajur include housing, shops, and schools. This research is quantitative and the basis for the proposed design of material recovery facilities. The results stated the solid waste currently are 0,38 kg/person/day includes 0,24 kg/person/day residential generation, 0,13 kg/person/day stores generation and 0,01 kg/person/day school generation or 3,05 liters/person/day includes 1,60 liters/person/day residential generation, 1,20 liters/person/day stores generation and 0,25 liters/person/day generation of school. The composition of residential waste Tajur Road area consists of 51,7% food scraps and dust, 16,7% pampers and sterofom, 15,6% plastic, 6,0% paper, 4,2% cardboard, 2,3% textiles, 1,4% glass, 1,1% metal and tin, and 0,9% rubber. The composition of garbage store area Tajur Highway consists of 29,65%, plastic, 24,70% cardboard, 22,29% glass, 11,92% paper, 8,17% food scraps and dust, 1,63% textiles and 1,63% wood.

The composition of school waste Tajur Road area consists of 47,88% plastic, 21,24% paper, 15,30% food scraps and dust, 6,31% wood, 4,57% cardboard, 1,72% rubber, 1,29% textiles, 0,91% metal and tin, and 0,79% pampers and sterofom. Waste processing unit is designed with a capacity of 2030 projection is 14 tons/day or 91 m³/day, and manage the waste with a composition of 48,54% food scraps and dust, 17,04% plastic, 15,43% pampers and sterofom, 6,62% paper, 5,38% cardboard, 2,8% glass, 2,29% textiles, 1,07% tin and metal, 0,86% rubber, and 0,21% wood. Total area of waste processing unit design reaches 587,5 m²

consisting of a tipping floor area, sorting area, enumeration area, composting area, screening area, storage area and office area.