

## ABSTRACT

Today, the city waste management requires a specific strategy to reduce the burden of Landfill and to reduce the impact of environmental pollution caused by waste. In several major cities including Surabaya, Composting is choice. Surabaya has a home composting program that managed to turn organic waste into compost. But apparently, the composting process also has the potential for polluting the environment and health hazard, especially for the workers.

The research was conducted using a cross sectional observational and descriptive research with laboratory examination for air sample. Interviews conducted in 10 compost workers Bratang. Variable result of this research was in the form of ill health problems swallowing, itchy throat, dry cough, allergy, eye pain, red eyes, watery eyes, headaches, blurred vision, hearing dysfunction, shortness of breath, tremors, buzzing ears, nausea, vomiting, skin redness, muscle weakness and fainting.

The conclusion of this research were the temperature of workplace exceeding the standard and the level of humidity still on the ideal conditions. Meanwhile, chemical quality of indoor air were the concentration of dust, CO<sub>2</sub> and H<sub>2</sub>S still below Threshold Limit Value. The most common health problems experienced by workers were shortness of breath.

*Key words: air quality, home compost, health problems*

## ABSTRAK

Dewasa ini pengelolaan sampah kota memerlukan strategi khusus untuk mengurangi beban Tempat Pembuangan Akhir dan mengurangi dampak pencemaran lingkungan akibat sampah. Di beberapa kota besar termasuk Surabaya, pengomposan menjadi pilihan. Surabaya memiliki program rumah kompos yang berhasil mengubah sampah organik menjadi pupuk kompos. Tapi ternyata, proses pengomposan juga memiliki potensi mencemari lingkungan dan berbahaya bagi kesehatan, khususnya bagi pengolah sampah jika tidak dilakukan pengendalian lingkungan ketika memproduksi.

Penelitian dilaksanakan dengan rancangan *cross sectional* dan termasuk penelitian deskriptif observasional, menggunakan pemeriksaan laboratorium untuk sampel udara. Wawancara dilaksanakan pada seluruh pekerja rumah kompos Bratang sebanyak 10 orang. Variabel akibat penelitian ini adalah gangguan kesehatan berupa sakit menelan, gatal tenggorokan, batuk kering, alergi, mata pedih, mata merah, mata berair, sakit kepala, penglihatan buram, disfungsi pendengaran, sesak nafas, tremor, telinga berdengung, mual, muntah, kulit kemerahan, kelemahan otot dan pingsan.

Kesimpulan penelitian adalah kualitas fisik berupa suhu melebihi persyaratan sedangkan kelembaban masih dalam kondisi ideal. Kualitas kimia udara dalam ruangan berupa kadar debu, kadar gas CO<sub>2</sub> dan kadar H<sub>2</sub>S berada di bawah Nilai Ambang Batas. Gangguan kesehatan yang paling sering dialami pekerja adalah sesak nafas.

Kata kunci: kualitas udara, rumah kompos, gangguan kesehatan