Pemanfaatan limbah padat food hall dengan melakukan uji proximate analysis dan ultimate analysis (studi kasus: Southbox Food Hall, Jakarta Selatan) = Utilization of solid waste infood hall by doing test of proximate analysis and ultimate analaysis (case study Southbox Food Hall South Jakarta)

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Abstrak

Food Hall merupakan tempat kumpulan kios-kios makanan yang kehadirannya turut menyumbang beban timbulan limbah padat pada Tempat Pembuangan Akhir. Penelitian di Southbox food hall ini bertujuan untuk mengetahui proximate analysis (kadar air, kadar abu, kadar volatil, dan kadar fixed carbon) dan ultimate analysis (kadar karbon, kadar hidrogen, kadar oksigen, kadar nitrogen, dan kadar sulfur) sampel sisa makanan dan plastik, serta pemanfaatan limbah padat yang dapat diterapkan. Pengujian kadar air, kadar abu, kadar volatil, kadar fixed carbon, kadar karbon, kadar hidrogen, kadar oksigen, kadar nitrogen, dan kadar sulfur berturut-turut mengacu pada metode ASTM D. 3302-12, ASTM D. 3174-12, ISO 562-2010, ASTM D. 3172-12, ASTM D. 5373-14, ASTM D. 5373-14, ASTM D. 3176-09, ASTM D. 5373-14, dan ASTM D. 4239-14. Pada sampel sisa makanan, hasil untuk uji proximate analysis berturut-turut sebesar 86,8%, 15,7%, 65,5%, dan 9,6%. Sementara, untuk ultimate analysis berturut-turut diperoleh hasil sebesar 36,07%, 5,73%, 39,85%, 2,42%, dan 0,23%. Pada sampel plastik, diperoleh hasil untuk uji proximate analysis berturut-turut sebesar 12,3%, 0,1%, 96,7%, dan 2,2%. Sementara, untuk ultimate analysis berturut-turut sebesar 77,56%, 12,7%, 9,6%, 0%, dan 0,02%. Usulan untuk pemanfaatan limbah padat, yaitu daur ulang, dry anaerobic digestion, pakan ternak, konversi menjadi energi, dan penggunaan jasa angkut terpadu. <hr>Food Hall is a place of food stalls which contributes to the generation load of solid waste at the final disposal. Research in Southbox food hall is intended to determine proximate analysis (moisture content, ash content, content of volatile, and fixed carbon) and ultimate analysis (content of carbon, hydrogen, oxygen, nitrogen, and sulfur) remaining samples of food and plastics, also the utilization of solid waste that can be applied. Testing moisture content, ash, volatile, fixed carbon, carbon, hydrogen, oxygen, nitrogen and sulfur refers to these methods, ASTM D 3302-12, ASTM D 3174-12, ISO 562-2010, ASTM D 3172-12, ASTM D 5373-14, ASTM D 5373-14, ASTM D 3176-09, ASTM D 5373-14 and ASTM D 4239-14. For the food samples, test results for proximate analysis, respectively for 86,8%, 15,7%, 65,5% and 9,6%. Meanwhile, for the ultimate analysis successively obtained yield was 36,07%, 5,73%, 39,85%, 2,42% and 0,23%. In plastic samples, test results obtained for proximate analysis, respectively for 12,3%, 0,1%, 96,7% and 2,2%. Meanwhile, for the ultimate analysis, respectively for 77,56%, 12,7%, 9,6%, 0%, and 0,02%. The utilization of solid waste that can be applied such as recycling, dry anaerobic digestion, animal feed, conversion into energy, and the use of integrated transport services.