

HULIFATUR ROHEMAWATI NRP. 16.03.4.1.1.00002. Analisis Kandungan Logam Berat Timbal (Pb) pada Proses Produksi Garam di Kelurahan Sumberejo Kecamatan Pakal Kota Surabaya. Dibawah bimbingan **Dr. H. Makhfud Efendy, S.Pi., M.Si.**

ABSTRAK

Kualitas garam di Kelurahan sumberejo Kecamatan Pakal Kota Surabaya ditentukan oleh sumber bahan baku. Sumber bahan baku berdekatan dengan TPA sampah Benowo yang memicu adanya pencemaran air oleh lindi yang salah satu komposisinya mengandung logam berat timbal (Pb). Penelitian ini bertujuan untuk mengetahui kadar logam berat timbal (Pb) pada air, sedimen dan garam, hubungan kadar garam (%be) dengan kadar logam berat timbal (Pb) pada air laut, pengaruh logam berat timbal (Pb) di air dan sedimen terhadap garam serta membandingkan kadar Pb pada garam dengan standar nasional garam konsumsi beryodium sesuai dengan SNI 3556:2010 tentang garam konsumsi beryodium terhadap batas kadar logam berat timbal (Pb). Pengambilan sampel diambil di Kelurahan Sumberejo Kecamatan Pakal Kota Surabaya, kemudian dilanjutkan analisa laboratorium untuk menganalisa kadar logam berat timbal (Pb) di air dan sedimen pada pintu masuk, bozem, kolam penguapan dan meja kristalisasi serta pada garam yang dihasilkan setelah itu membandingkan hasil kadar logam berat timbal (Pb) pada garam dengan SNI 3556:2010. Pengaruh logam berat timbal (Pb) di air dan sedimen terhadap garam dianalisa menggunakan software spss 20. Hasil dari penelitian menunjukkan bahwa kadar logam berat timbal (Pb) di air pada pintu masuk sebesar 0,036 mg/L, bozem sebesar 0,018 mg/L, kolam penguapan sebesar 0,037 mg/L dan meja kristalisasi sebesar 0,044 mg/L. Kadar logam berat timbal (Pb) di sedimen pada pintu masuk sebesar 2,96 mg/kg, bozem sebesar 4,17 mg/kg dan kolam penguapan sebesar 10,21 mg/kg. Kadar garam (%be) semakin meningkat maka kadar logam berat timbal (Pb) pada air juga semakin meningkat. Kadar logam berat timbal (Pb) pada garam sebesar 2,11 mg/kg dan masih dalam batas aman (<10 mg/kg) yang ditetapkan dalam SNI 3556:2010. Logam berat timbal (Pb) di air terhadap garam secara parsial berpengaruh signifikan dan kadar logam berat di sedimen secara parsial tidak berpengaruh signifikan terhadap kadar logam berat timbal (Pb) pada garam. Logam berat timbal air dan sedimen berpengaruh secara simultan sebesar 70,2% terhadap kandungan logam berat timbal garam.

Kata Kunci: *Kualitas Garam, Logam Berat Timbal, SNI 3556:2010 pada Garam*

ABSTRACT

The quality of salt in Sumberejo Sub-district, Pakal District, Surabaya City is determined by the source of raw materials. The source of raw material is close to the Benowo landfill site which triggers water pollution by leachate, one of which contains heavy lead (Pb) composition. This study aims to determine the levels of lead heavy metals (Pb) in water, sediments and salt, the relationship of salt content (°be) with lead content of heavy metals (Pb) in seawater, the influence of lead heavy metals (Pb) in water and sediments on salt and to compare the levels of Pb in salt with iodized national salt consumption standards in accordance with SNI 3556: 2010 about iodized consumption salt towards the limit of lead (Pb) heavy metal content. Sampling was taken in Sumberejo Sub-District, Pakal District, Surabaya City, then continued with laboratory analysis to analyze the levels of heavy metals lead (Pb) in water and sediments at the entrance, bozem, evaporation ponds and crystallization tables and on the salts produced afterwards comparing the results of the metal content weight of lead (Pb) in salt with SNI 3556: 2010. The influence of heavy metal lead (Pb) in water and sediment on salt was analyzed using the SPSS 20 software. The results of the study showed that the levels of lead heavy metal (Pb) in water at the entrance 0.036 mg/L, bozem 0.018 mg/L, pond evaporation 0.037 mg/L and crystallization table 0.044 mg/L. Levels of heavy metal lead (Pb) in the sediment at the entrance 2.96 mg/kg, bozem 4.17 mg/kg and pond evaporation 10.21 mg/kg. The salt content (°be) increases, the levels of lead metal (Pb) in the water also increases. The level of heavy metal lead (Pb) in salt is 2.11 mg/kg and is still within the safe limit (<10 mg/kg) specified in SNI 3556: 2010. The heavy lead (Pb) in water to salt partially has a significant effect and the heavy metal content in sediment partially does not significantly influence the lead (Pb) heavy metal content in salt. Heavy metals lead water and sediment simultaneously had a 70.2% effect on the heavy metal content of lead salt.

Key Word: *Quality of Salt, Lead Heavy Metal, SNI 3556: 2010 in Salt.*