

PEMBUATAN GARAM INDUSTRI DARI GARAM RAKYAT

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INTISARI

Telah dilakukan pembuatan garam industri dari garam rakyat. Tujuan penelitian ini adalah mempelajari pengaruh konsentrasi terhadap waktu mulai pembentukan kristal garam dan hasil rendemen garam.

Pemurnian garam rakyat dilakukan dengan rekristalisasi. Dalam penelitian ini digunakan garam krosok yang dijual di Yogyakarta. Konsentrasi garam krosok yang digunakan untuk pembuatan garam industri divariasi 0,2; 0,3; 0,4; 0,5; dan 0,6 g/mL. Kadar NaCl dihitung melalui titrasi argentometri metode Volhard. Kadar logam Ca, Mg, Pb, Cu dan Na ditentukan menggunakan AAS. Uji kristalinitas garam dilakukan dengan difraksi sinar X (XRD).

Hasil penelitian menunjukkan semakin besar konsentrasi garam maka semakin cepat waktu mulai pembentukan kristal. Rendemen garam tertinggi yaitu 80,7% pada konsentrasi 0,3 g/mL. Kadar NaCl sebesar 98,87%. Garam hasil rekristalisasi belum memenuhi standar mutu garam menurut SNI 01-4435-2000 untuk garam industri. Konsentrasi logam Pb pada garam industri tidak memenuhi standaryang SNI. Garam hasil rekristalisasi memiliki derajat kristalinitas yang lebih tinggi daripada garam krosok.

Kata kunci : NaCl, Garam Krosok, Garam industri, rekristalisasi

PREPARATION OF INDUSTRY SALT FROM TRADITIONAL SALT

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ABSTRACT

Preparation of industrial salt from traditional salt has been performed. The purpose of this research was to study the effect of the traditional concentration to the formation of salt crystals and to the percent yield of the salt.

Purification of traditional salt is carried out by recrystallization. In this study used traditional salt sold in Yogyakarta. Concentration of the traditional salt used in preparation of the industrial salt were varied 0.2; 0.3; 0.4; 0.5; and 0.6 g/mL. NaCl concentration is determined by argentometry titration using Volhard method. Impurity levels of Ca, Mg, Pb, Cu, and Na are analyzed by AAS. Crystallinity salt were studied by X-ray diffraction (XRD).

The results showed that the higher concentration, the shorter the time needed for crystal formation. The highest yield of salt percentage 80.7% in found at a concentration of 0.3 g/mL. NaCl concentration is 98.87%. Salt recrystallization results does not meet the quality standards according to SNI 01-4435-2000 salt for industrial salt. Pb concentration in the industrial salt does not meet the standard according to SNI. The industrial salt formed has a higher degree of crystallinity than traditional salt .

Keywords: NaCl, traditional salt, industrial salt, recrystallization