

**PEMBUATAN DAN KARAKTERISASI ARANG AKTIF DARI KULIT BUAH MANGGIS (*Garcinia mangostana L.*) UNTUK MENGADSORPSI LOGAM Fe (II) DAN Pb (II) PADA AIR SUMUR GALI DENGAN METODE SPEKTROFOTOMETER SERAPAN ATOM (SSA)**

**ABSTRAK**

Telah dilakukan penelitian tentang pembuatan dan karakterisasi arang/carbon aktif dari kulit buah manggis untuk mengadsorpsi logam Fe (II) dan Pb (II) pada air sumur gali yang terdapat di daerah Medan Tembung Percut Sei Tuan. Arang/carbon aktif didapat dengan proses pembakaran kulit manggis pada temperatur 600<sup>0</sup>C selama 1 jam dalam Furnace/Tanur. Aktivasi arang/carbon aktif dilakukan dengan cara perendaman pada HCl 2 N selama 24 jam. Analisis pengujian Arang/carbon aktif dengan menggunakan alat SEM EDX, FTIR, serta analisis karakterisasi : persen rendemen, kadar air, kadar abu, kadar zat menguap, kadar karbon terikat dan daya serap jodium dilakukan berdasarkan SNI No 06-3730-1995. Pengujian daya adsorpsi arang/carbon aktif terhadap logam Fe (II) dan Pb (II) di uji dengan alat SSA. Hasil daya adsorpsi arang/carbon aktif dalam penelitian ini adalah untuk logam Fe (II) sebesar 0,36 mg/L dan Pb (II) 0,003 mg/L.

**Kata Kunci :** Air Sumur, Kulit Manggis, Arang Aktif, Logam Fe (II), Pb (II), SSA.



**MANUFACTURE AND CHARACTERIZATION OF ACTIVE CHARCOAL FROM MANGOSTEEN (*Garcinia mangostana* L.) SKIN FOR ADOPTING METALS OF Fe (II) AND Pb (II) IN WATER WELL DUGGING WITH ATOMIC ABSORPTION SPECTROSCOPY (SSA) METHODS**

**ABSTRACT**

Research has been conducted on the manufacture and characterization of activated carbon / carbon from mangosteen rind to adsorb Fe (II) and Pb (II) metals in dug well water in the Medan Tembung Percut Sei Tuan area. Charcoal / activated carbon is obtained by the process of burning mangosteen peel at a temperature of 600<sup>0</sup>C for 1 hour in a Furnace / Furnace. Activation of charcoal / activated carbon is done by soaking on HCl 2 N for 24 hours. Analysis of testing of activated carbon / carbon using SEM EDX, FTIR, and characterization analysis: percent yield, water content, ash content, vapor content, bound carbon content and iodine absorption were carried out based on SNI No 06-3730-1995. The testing of the adsorption power of activated carbon / carbon to Fe (II) and Pb (II) metal was tested using SSA. The results of the adsorption power of activated carbon / carbon in this study were for Fe (II) metal at 0.36 mg / L and Pb (II) 0.003 mg / L.

**Keywords :** Well water, mangosteen peel, activated charcoal, Fe(II), Pb(II), SSA.

