PENGARUH KOMPOSISI ARANG AKTIF DAN AKTIVATOR ASAM SULFAT PADA PENGOLAHAN LIMBAH CAIR MINYAK SAWIT

EFFECT OF ACTIVATED CHARCOAL AND COMPOSITION ACTIVATOR ACID SULPHATE ON PALM OIL WASTE WATER TREATMENT

Sofiah[1] , Siti Zahra[2]

[1]Staf Pengajar dan [2]Alumni, Jurusan Teknik Kimia Politeknik Negeri Sriwijaya
Jalan Srijaya Negara, Bukit Besar, Palembang 30139
Sofie26juni@yahoo.com.

ABSTRACT

Purpose of this research is to exploit the shell and palm fiber become the active charcoal, by looking at the influence of the ratio mixture composition and effect of activator. this Active charcoal application as adsorbent to the liquid waste of crude palm oil. Initial treatment, shells and palm fiber dried first at a temperature of 120^0C and carbonized. charcoal mix shell and palm fiber activation chemically with a solution of H2SO4 by way of immersed in the solution for 24 hours. The best quality activated charcoal obtained from the comparison of the 75% shell, 25% palm fiber with activator H_2SO_4 that has a yield of 95.94%, 4.9% moisture content, ash content 6.13%, iodine number 916.594 mg / g. Activated charcoal mixture palm shell and palm fiber can be used as adsorbent liquid waste CPO, which is indicated by a decline in these parameters in the waste water contaminants in CPO, which is a 7.49 pH of 9, TSS of 660 ppm to 325 ppm,COD becomes 237,12 mg/L from1577.60 mg/L.

Key words: active charcoal, palm oil, adsorbent