

ABSTRAK

Filtrasi (penyaringan) adalah proses pemisahan partikel zat padat dari fluida dengan jalan melewatkan fluida tersebut melalui suatu medium penyaring. Dalam percobaan ini, proses filtrasi digunakan untuk menentukan kondisi paling optimal dalam Plate And Frame Filter dengan digunakan variabel bahan CaCO_3 konsentrasi 2%, 3%, 4%, 5% serta variabel bukaan valve sebesar $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1. Larutan dialirkan dalam medium filter dalam proses batch. Dimana di dapatkan hasil yang paling optimal dari hasil perhitungan densitas dan berat basah cake dalam filtrat yaitu pada kondisi bukaan valve $\frac{1}{4}$ dan konsentrasi CaCO_3 2%. Hasil optimal yang didapat kondisi bukaan valve $\frac{1}{4}$ dengan nilai densitas sebesar 1,007 gr/ml dan kondisi optimal pada bukaan valve $\frac{1}{4}$ dengan konsentrasi 2% yaitu berat basah cake sebesar 20,247 gram.

Kata Kunci : *Filtrasi, Plate and frame filter press, CaCO_3*

ABSTRACT

Filtration (filtering) is a process that discusses particles of solids from fluid by passing through the fluid through the search media. In this experiment, the filtration process is used to determine the most optimal conditions in Plate and Frame Filter using the variable CaCO_3 concentration of 2%, 3%, 4%, 5% and variable valve openings of $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1. Solution is flowed in media filter in a batch process. Where to get the most optimal results from the calculation of the density and wet weight of the cake in the filtrate, namely the condition of valve openings $\frac{1}{4}$ and the concentration of CaCO_3 2%. Optimal results obtained at valve opening conditions $\frac{1}{4}$ with a density value of 1.007 gr / ml and optimal conditions at valve openings konsentrasi with a concentration of 2%, namely the mass of wet cake 20,247 grams.

Keywords: *Filtration, Plate and press frame filter, CaCO_3*