
LabJack U3-LV
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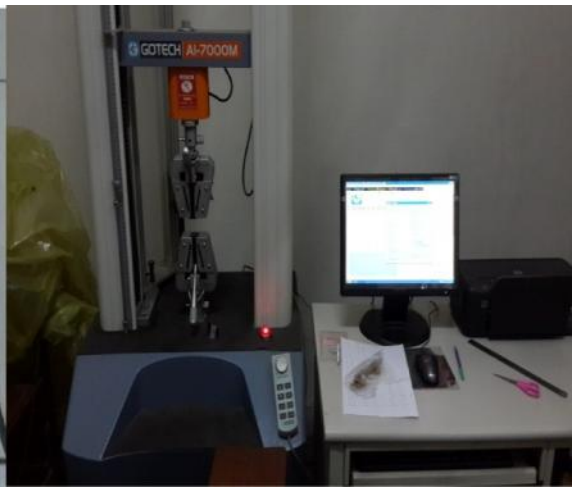
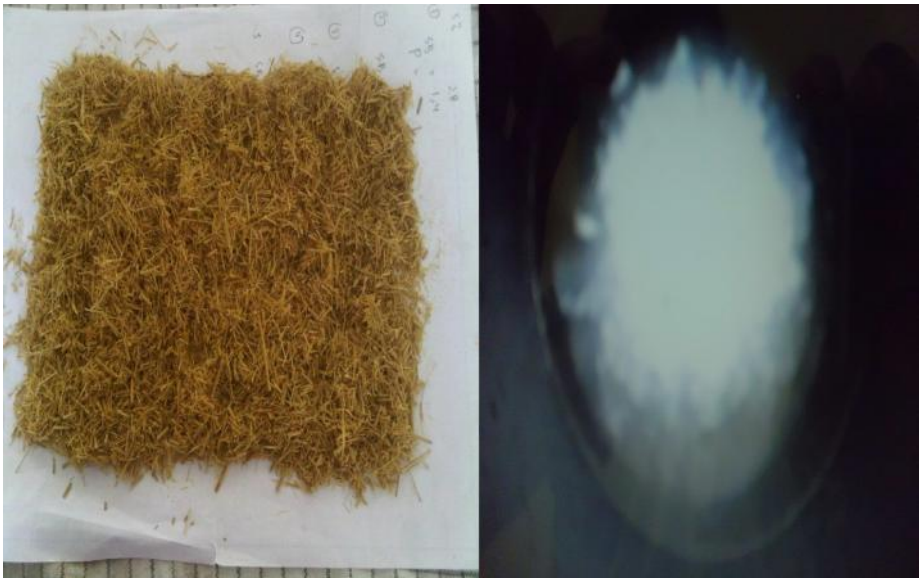
SGND
SPC
SGND
VS
FIO7
FIO6
GND
VS
FIO5
GND
VS
VS
GND
DAC0
DAC1
VS
GND
FIO0
FIO1


Total Wrap
ALUMINUM FOIL


GOTECH AI-7000M




SB 52

LAMPIRAN C

PERHITUNGAN DATA PENGUJIAN

1. Menghitung Densitas Sampel Komposit SBP

   $\rho = \frac{m}{V}$

   Dengan :

   ρ = kerapatan (gr/cm^3)

   m = massa sampel (gram)

   V = volume sampel (cm^3)

   Komposisi SB 5%

   m = 6,4 gr

   V = 6,24 cm^3

   ρ = 6,4gr / 6,24 cm^3

   ρ = 1,02 gr/cm^3

2. Menghitung Kuat Tarik sampel Komposit SBP

$\sigma = \frac{F}{Ao}$

Dengan :

σ =kekuatan tarik (N/m^2)

F = gaya tarik (N)

A_o = luas penampang awal (m^2)

Komposiai SB 5%

A_0 = 34,95 mm^2

F = 316,58 N

σ = 316,58 N / 34,95 mm^2

σ = 9,05 Nmm^2

3. Menghitung Kuat Impak sampel Komposit SBP

Is = $\frac{Es}{A}$

Dengan :

Is = Kekuatan impak (J/m^2)

Es = Energi serap (J)

A = Luas penampang (mm^2)

Komposisi SB 5%

A = 47,55 mm^2
Es = 2,60 J
Is = 2,60 J / 47,55 mm^2
Is = 54,67 kJ/m^2

4. Menghitung Koefisien Serap Bunyi (α) sampel Komposit SBP

Komposisi SB 5%

```
 % Reflection and absorption coefficients measuremenst
 clc
freq = 125;     % frequency vector (Hz)
c=343;          % speed of sound in air at 23 Celcius (m/s)
k= (2*pi*freq)/c; % wavenumber in air (m^-1)
A = 1.9808  % Amplitude at mic 1(volt)
B = 1.8703  % Amplitudo at mic 2 (volt)
x1=0.350;       % distance between the sample and the
farther microphonne
x2=0.2;         % distance between the sample and the closer
microphonne
s=0.075;        % microphone spacing(m)
p1=(A*exp(-j.*k.*x1)) + (B*exp(j.*k.*x1));
p2=(A*exp(-j.*k.*x2)) + (B*exp(j.*k.*x2));
%H21 is transfer function measured between two mics
H21=p1/p2;
% Reflection coefficient
r =(H21 - exp(-j.*k.*s))./(exp(j.*k.*s) -
H21).*exp(2.*j.*k.*x1);
% Absorption coefficient
alpha = 1 - abs(r).^2
```

A = 1.9808

B = 1.8703

alpha = 0.1061