LAMPIRAN

1. Tabel Hasil Pengamatan

Tabel 5. Hasil Volume Filtrat

Variable		Pengamatan		Valve I (Liter)	Valve II (Liter)	Valve III (Liter)
Massa (gram)	H_2O (Liter)	Tekanan (kg/cm_2)	Waktu (menit)			
1500	30	70	30	4,654	4,239	3,162
			45	4,776	4,505	3,974
		80	30	4,723	4,408	3,221
			45	5,052	4,554	4,118
		90	30	4,925	4,457	4,163
			45	5,787	5,316	4,271

Tabel 6. Hasil Viskositas

Variable		pengamatan		Viskositas Filtrat (Cp)		
Massa (gram)	H_2O (Liter)	Tekanan (kg/cm_2)	Waktu (menit)	Valve I	Valve II	Valve III
1500	30	70	30	1,110	1,109	1,105
			45	1,101	1,091	1,085
		80	30	1,054	1,044	1,036
			45	1,034	1,031	1,026
		90	30	1,009	1,007	1,004
			45	1,003	1,002	1,001

Tabel 7. Hasil Cake Basah

Variable		pengamatan		Berat Cake Basah (gram)		
Massa (gram)	**H_2O (Liter)**	**Tekanan (kg/cm_2)**	**Waktu (menit)**	**Plate I**	**Plate II**	**Plate III**
1500	30	70	30	54,47	53,07	47,49
			45	57,43	55,86	55,67
		80	30	55,46	54,06	48,48
			45	58,42	56,85	56,66
		90	30	60,70	59,08	57,17
			45	61,70	60,08	58,17

Tabel 8. Hasil Cake Kering

Variable		pengamatan		Berat Cake Kering (gram)		
Massa (gram)	**H_2O (Liter)**	**Tekanan (kg/cm_2)**	**Waktu (menit)**	**Plate I**	**Plate II**	**Plate III**
1500	30	70	30	43,38	42,07	40,83
			45	45,62	44,76	43,99
		80	30	44,38	43,07	41,83
			45	46,62	45,76	44,99
		90	30	49,81	47,44	46,88
			45	50,81	48,44	47,88

2. Perhitungan

- **Densitas dan Viskositas**
  - berat piknometer kosong = 26,69 gr
  - volume piknometer = 25 ml
  - $\rho = \frac{berat\ piknometer\ isi - berat\ piknometer\ kosong}{volume\ piknometer}$
  - $\mu x = \frac{tx \times \rho x}{t0 \times \rho 0}\ x\ \mu 0$

a. Variabel 1 (70 kg/cm^2)

➢ **Waktu 30 menit**

- $\rho 1 = \frac{54{,}44 - 26{,}69 \ gr}{25 \text{ ml}}$

  $\rho 1 = 1{,}110 \text{ gr/ml}$

- $\mu 1 = \frac{6{,}26 \ s \times 1{,}110 \text{ gr/ml}}{1 \times 1}$ x 1

  $\mu 1 = 6{,}949 \text{ Cp}$

- $\rho 2 = \frac{54{,}42 - 26{,}69 \ gr}{25 \text{ ml}}$

  $\rho 2 = 1{,}109 \text{ gr/ml}$

- $\mu 2 = \frac{6{,}15 \ s \times 1{,}109 \text{ gr/ml}}{1 \times 1}$ x 1

  $\mu 2 = 6{,}822 \text{ Cp}$

- $\rho 3 = \frac{54{,}32 - 26{,}69 \ gr}{25 \text{ ml}}$

  $\rho 3 = 1{,}105 \text{ gr/ml}$

- $\mu 3 = \frac{6{,}09 \ s \times 1{,}105 \text{ gr/ml}}{1 \times 1}$ x 1

  $\mu 3 = 6{,}731 \text{ gr/ml}$

➢ **Waktu 45 menit**

- $\rho 1 = \frac{54{,}22 - 26{,}69 \ gr}{25 \text{ ml}}$

  $\rho 1 = 1{,}101 \text{ gr/ml}$

- $\mu 1 = \frac{6{,}07 \ s \times 1{,}101 \text{ gr/ml}}{1 \times 1}$ x 1

  $\mu 1 = 6{,}684 \text{ gr/ml}$

- $\rho 2 = \frac{53{,}96 - 26{,}69 \ gr}{25 \text{ ml}}$

  $\rho 2 = 1{,}091 \text{ gr/ml}$

- $\mu 2 = \frac{6 \ s \times 1{,}091 \text{ gr/ml}}{1 \times 1}$ x 1

  $\mu 2 = 6{,}545 \text{ Cp}$

- $\rho 3 = \frac{53{,}87 - 26{,}69 \ gr}{25 \text{ ml}}$

  $\rho 3 = 1{,}085 \text{ gr/ml}$

- $\mu 3 = \frac{5{,}97 \ s \times 1{,}085 \text{ gr/ml}}{1 \times 1}$ x 1

  $\mu 3 = 6{,}475 \text{ Cp}$

b. Variabel 2 (80 kg/cm^2)

➢ **Waktu 30 Menit**

- $\rho 1 = \frac{53{,}05 - 26{,}69 \ gr}{25 \text{ ml}}$

  $\rho 1 = 1{,}054 \text{ gr/ml}$

- $\mu 1 = \frac{5{,}77 \ s \times 1{,}054 \text{gr/ml}}{1 \times 1}$ x 1

  $\mu 1 = 6{,}084 \text{ Cp}$

- $\rho 2 = \frac{52{,}79 - 26{,}69 \ gr}{25 \text{ ml}}$

  $\rho 2 = 1{,}044 \text{ gr/ml}$

- $\mu 2 = \frac{5{,}73 \ s \times 1{,}044 \text{ gr/ml}}{1 \times 1}$ x 1

  $\mu 2 = 5{,}982 \text{ Cp}$

- $\rho 3 = \frac{52{,}59 - 26{,}69 \ gr}{25 \text{ ml}}$

  $\rho 3 = 1{,}036 \text{ gr/ml}$

- $\mu 3 = \frac{5{,}69 \ s \times 1{,}036 \text{ gr/ml}}{1 \times 1}$ x 1

  $\mu 3 = 5{,}895 \text{ gr/ml}$

➢ **Waktu 45 menit**

- $\rho 1 = \frac{52{,}55 - 26{,}69 \ gr}{25 \text{ ml}}$

  $\rho 1 = 1{,}034 \text{ gr/ml}$

- $\mu 1 = \frac{5{,}67 \ s \times 1{,}034 \text{ gr/ml}}{1 \times 1}$ x 1

  $\mu 1 = 5{,}865 \text{ gr/ml}$

- $\rho 2 = \frac{52{,}47 - 26{,}69 \ gr}{25 \text{ ml}}$

  $\rho 2 = 1{,}031 \text{ gr/ml}$

- $\mu 2 = \frac{5{,}64 \ s \times 1{,}031 \text{ gr/ml}}{1 \times 1}$ x 1

  $\mu 2 = 5{,}816 \text{ Cp}$

- $\rho 3 = \frac{52{,}35 - 26{,}69 \ gr}{25 \text{ ml}}$
  $\rho 3 = 1{,}026 \text{ gr/ml}$
- $\mu 3 = \frac{5{,}61 \ s \times 1{,}026 \text{ gr/ml}}{1 \times 1}$ x 1
  $\mu 3 = 5{,}758 \text{ Cp}$

Variabel 2 (90 kg/cm^2)

➢ **Waktu 30 menit**

- $\rho 1 = \frac{51{,}92 - 26{,}69 \ gr}{25 \text{ ml}}$
  $\rho 1 = 1{,}009 \text{ gr/ml}$
- $\mu 1 = \frac{5{,}47 \ s \times 1{,}009 \text{ gr/ml}}{1 \times 1}$ x 1
  $\mu 1 = 5{,}520 \text{ Cp}$

- $\rho 2 = \frac{51{,}86 - 26{,}69 \ gr}{25 \text{ ml}}$
  $\rho 2 = 1{,}007 \text{ gr/ml}$
- $\mu 2 = \frac{5{,}41 \ s \times 1{,}007 \text{ gr/ml}}{1 \times 1}$ x 1
  $\mu 2 = 5{,}447 \text{ Cp}$

- $\rho 3 = \frac{51{,}79 - 26{,}69 \ gr}{25 \text{ ml}}$
  $\rho 3 = 1{,}004 \text{ gr/ml}$
- $\mu 3 = \frac{5{,}36 \ s \times 1{,}004 \text{ gr/ml}}{1 \times 1}$ x 1
  $\mu 3 = 5{,}381 \text{ gr/ml}$

➢ **Waktu 45 menit**

- $\rho 1 = \frac{51{,}76 - 26{,}69 \ gr}{25 \text{ ml}}$
  $\rho 1 = 1{,}003 \text{ gr/ml}$
- $\mu 1 = \frac{5{,}29 \ s \times 1{,}003 \text{ gr/ml}}{1 \times 1}$ x 1
  $\mu 1 = 5{,}305 \text{ gr/ml}$

- $\rho 2 = \frac{51{,}74 - 26{,}69 \ gr}{25 \text{ ml}}$
  $\rho 2 = 1{,}002 \text{ gr/ml}$
- $\mu 2 = \frac{5{,}27 \ s \times 1{,}002 \text{ gr/ml}}{1 \times 1}$ x 1
  $\mu 2 = 5{,}281 \text{ Cp}$

- $\rho 3 = \frac{51{,}72 - 26{,}69 \ gr}{25 \text{ ml}}$
  $\rho 3 = 1{,}001 \text{ gr/ml}$
- $\mu 3 = \frac{5{,}22 \ s \times 1{,}001 \text{ gr/ml}}{1 \times 1}$ x 1
  $\mu 3 = 5{,}226 \text{ Cp}$

- **Cake Basah dan Cake Kering**
  - $Berat\ Basah = \ Berat\ cawan\ porselin + Cake\ basah \ - Berat\ cawan\ porselin\ kosong$
  - $Berat\ Kering = \ Berat\ cawan\ porselin + Cake\ kering \ - Berat\ cawan\ porselin\ kosong$

a. Variabel 1 (70 kg/cm^2)

➢ **Waktu 30 menit**

- Cake Basah
  - Berat basah 1 = (98,85 – 44,38)gr
    = 54,47 gr
  - Berat basah 2 = (97,76 – 44,69)gr
    = 53,07 gr
  - Berat basah 3 = (92,25 – 44,76)gr
    = 47,49 gr
- Cake Kering
  - Berat kering 1 = (87,76 – 44,38)gr
    = 43,38 gr
  - Berat kering 2 = (86,76 – 44,69)gr
    = 42,07 gr
  - Berat kering 3 = (85,59 – 44,76)gr
    = 40,83 gr

➢ **Waktu 45 menit**

- Cake Basah
  - Berat basah 1 = (101,81 – 44,38)gr
    = 57,43 gr
  - Berat basah 2 = (100,55– 44,69)gr
    = 55,86
  - Berat basah 3 = (100,43 – 44,76)gr
    = 55,67 gr
- Cake Kering
  - Berat kering 1 = (90– 44,38)gr
    = 45,62 gr
  - Berat kering 2 = (89,45 – 44,69)gr
    = 44,76 gr
  - Berat kering 3 = (88,75 – 44,76)gr
    = 43,99 gr

b. Variabel 2 (80 kg/cm^2)

➢ **Waktu 30 menit**

- Cake Basah
  - Berat basah 1 = (99,84 – 44,38)gr
    = 55,46 gr
  - Berat basah 2 = (98,75 – 44,69)gr
    = 54,06 gr
  - Berat basah 3 = (93,24 – 44,76)gr
    = 48,48 gr
- Cake Kering
  - Berat kering 1 = (88,76 – 44,38)gr
    = 44,38 gr
  - Berat kering 2 = (87,76 – 44,69)gr
    = 43,07 gr
  - Berat kering 3 = (86,59 – 44,76)gr
    = 41,83gr

➢ **Waktu 45 menit**

- Cake Basah
  - Berat basah 1 = (102,8 – 44,38)gr
    = 58,42 gr
  - Berat basah 2 = (101,54–44,69)gr
    = 56,85gr
  - Berat basah 3 = (101,42–44,76)gr
    = 56,66 gr
- Cake Kering
  - Berat kering 1 = (91– 44,38)gr
    = 46,62 gr
  - Berat kering 2 = (90,45 – 44,69)gr
    = 45,76 gr
  - Berat kering 3 = (89,75 – 44,76)gr
    = 44,99 gr

c. Variabel 3 (90 kg/cm^2)

➢ **Waktu 30 menit**

- Cake Basah
  - Berat basah 1 = (105,08–44,38)gr
    = 60,7 gr
  - Berat basah 2 = (103,77–44,69)gr
    = 59,08 gr
- Cake Kering
  - Berat kering 1 = (94,19 – 44,38)gr
    = 49,81 gr
  - Berat kering 2 = (92,13 – 44,69)gr
    = 47,44 gr

- Berat basah 3 = (101,93–44,76)gr
  = 57,17 gr
- Berat kering 3 = (91,64 – 44,76)gr
  = 46,88gr

➢ **Waktu 45 menit**

- Cake Basah
  - Berat basah 1 = (106,08–44,38)gr
    = 61,7 gr
  - Berat basah 2 = (104,77–44,69)gr
    = 60,08gr
  - Berat basah 3 = (102,93–44,76)gr
    = 58,17 gr
- Cake Kering
  - Berat kering 1 = (95,19– 44,38)gr
    = 50,81 gr
  - Berat kering 2 = (93,13 – 44,69)gr
    = 48,44 gr
  - Berat kering 3 = (92,64 – 44,76)gr
    = 47,88gr

3. Foto

Foto	Keterangan
	Bahan Kopi Luwak
	Volume filtrat
 	Menghitung Densitas dan Viskositas
	Cake Basah
	Cake Kering