LAMPIRAN

1. Hasil Pengamatan

1.1 Tabel 6. Hasil Volume Filtrat

Variabel		Pengamatan	Valve pengambilan filtrate (mL)		
Massa (L)	Tekanan (bar)	Waktu (menit)	I	II	III
25	3	15	4635	4425	4150
		30	4480	4180	3945
		45	4245	4075	3770
	6	15	4065	3980	3650
		30	3855	3725	3585
		45	3760	3590	3325
	9	15	3590	3375	3190
		30	3230	3080	2975
		45	3165	2910	2860

1.2 Tabel 7. Hasil Viskositas

Variabel		Pengamatan	Viskositas Filtrat (Cp)		
Massa (L)	Tekanan (bar)	Waktu (menit)	I	II	III
25	3	15	4,302	4,153	4,076
		30	3,690	3,652	3,609
		45	3,372	3,312	3,265
	6	15	4,037	3,955	3,920
		30	3,578	3,549	3,519
		45	3,191	3,169	3,122
	9	15	3,848	3,800	3,718
		30	3,496	3,473	3,425
		45	3,090	3,055	2,990

1.3 Tabel 8. Hasil Cake Basah

Variabel		Pengamatan		Berat Cake Basah (gr)	
Tekanan (bar)	Massa (L)	Waktu (menit)	I	II	III
3	25	15	67,77	64,47	53,04
		30	94,17	79,86	69,38
		45	122,98	115,25	100,73
6		15	75,49	74,36	62,73
		30	104,83	93,75	78,73
		45	127,83	119,35	113,60
9		15	83,51	71,37	63,31
		30	111,77	103,97	92,09
		45	138,77	133,56	119,78

1.4 Tabel 9. Hasil Cake Kering

Variabel		Pengamatan		Berat Cake Kering (gr)	
Tekanan (bar)	Massa (L)	Waktu (menit)	I	II	III
3	25	15	65,03	54,35	47,52
		30	82,79	73,31	63,06
		45	107,20	99,06	95,26
6		15	70,61	62,01	55,16
		30	90,92	85,03	71,47
		45	119,32	107,55	105,55
9		15	72,79	60,17	51,20
		30	96,21	91,84	78,04
		45	127,88	120,80	107,22

2. Perhitungan

- **Densitas dan Viskositas**
  - berat piknometer kosong = 16,86 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 (15 menit)

➢ **Tekanan 3 bar**

- $\rho 1 = \frac{(38{,}48 - 16{,}86)\,gr}{25\ \text{ml}}$

  $\rho 1 = 0{,}864\ \text{gr/ml}$

- $\mu 1 = \frac{4{,}98\ s \times 0{,}864\ \text{gr/ml}}{1 \times 1}$ x 1

  $\mu 1 = 4{,}302\ \text{Cp}$

- $\rho 2 = \frac{(38{,}18 - 16{,}86)gr}{25\ \text{ml}}$
  $\rho 2 = 0{,}852\ \text{gr/ml}$
- $\mu 2 = \frac{4{,}87\ s \times 0{,}852\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 2 = 4{,}153\ \text{Cp}$

- $\rho 3 = \frac{(38{,}05 - 16{,}86)gr}{25\ \text{ml}}$
  $\rho 3 = 0{,}847\ \text{gr/ml}$
- $\mu 3 = \frac{4{,}81\ s \times 0{,}847\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 3 = 4{,}076\ \text{gr/ml}$

➢ **Tekanan 6 bar**

- $\rho 1 = \frac{(37{,}93 - 16{,}86)gr}{25\ \text{ml}}$
  $\rho 1 = 0{,}842\ \text{gr/ml}$
- $\mu 1 = \frac{4{,}79\ s \times 0{,}842\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 1 = 4{,}037\ \text{gr/ml}$

- $\rho 2 = \frac{(37{,}81 - 16{,}86)gr}{25\ \text{ml}}$
  $\rho 2 = 0{,}838\ \text{gr/ml}$
- $\mu 2 = \frac{4{,}72\ s \times 0{,}838\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 2 = 3{,}955\ \text{Cp}$

- $\rho 3 = \frac{(37{,}36 - 16{,}86)gr}{25\ \text{ml}}$
  $\rho 3 = 0{,}836\ \text{gr/ml}$
- $\mu 3 = \frac{4{,}69\ s \times 0{,}836\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 3 = 3{,}920\ \text{Cp}$

➢ **Tekanan 9 bar**

- $\rho 1 = \frac{(37{,}64 - 16{,}86)gr}{25\ \text{ml}}$
  $\rho 1 = 0{,}831\ \text{gr/ml}$
- $\mu 1 = \frac{4{,}63\ s \times 0{,}831\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 1 = 3{,}848\ \text{Cp}$

- $\rho 2 = \frac{(37{,}56 - 16{,}86)gr}{25\ \text{ml}}$
  $\rho 2 = 0{,}828\ \text{gr/ml}$
- $\mu 2 = \frac{4{,}59\ s \times 0{,}828\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 2 = 3{,}800\ \text{Cp}$

- $\rho 3 = \frac{(37{,}47 - 16{,}86)gr}{25\ \text{ml}}$
  $\rho 3 = 0{,}824\ \text{gr/ml}$
- $\mu 3 = \frac{4{,}51\ s \times 0{,}824\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 3 = 3{,}718\ \text{gr/ml}$

b. Variabel 2 (30 menit)

➢ **Tekanan 3 bar**

- $\rho 1 = \frac{(37{,}41 - 16{,}86)gr}{25\ \text{ml}}$
  $\rho 1 = 0{,}822\ \text{gr/ml}$
- $\mu 1 = \frac{4{,}49\ s \times 0{,}822\text{gr/ml}}{1 \times 1}$ x 1
  $\mu 1 = 3{,}690\ \text{Cp}$

- $\rho 2 = \frac{(37{,}38 - 16{,}86)gr}{25\ \text{ml}}$
  $\rho 2 = 0{,}820\ \text{gr/ml}$
- $\mu 2 = \frac{4{,}45\ s \times 0{,}820\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 2 = 3{,}652\ \text{Cp}$

- $\rho 3 = \frac{(37{,}32 - 16{,}86)gr}{25\ \text{ml}}$
  $\rho 3 = 0{,}818\ \text{gr/ml}$
- $\mu 3 = \frac{4{,}41\ s \times 0{,}818\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 3 = 3{,}609\ \text{gr/ml}$

➢ **Tekanan 6 bar**

- $\rho 1 = \frac{(37{,}24-16{,}86)gr}{25\ \text{ml}}$
  $\rho 1 = 0{,}815\ \text{gr/ml}$
- $\mu 1 = \frac{4{,}39\ s \times 0{,}815\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 1 = 3{,}578\ \text{gr/ml}$

- $\rho 2 = \frac{(37{,}21-16{,}86)gr}{25\ \text{ml}}$
  $\rho 2 = 0{,}814\ \text{gr/ml}$
- $\mu 2 = \frac{4{,}36\ s \times 0{,}814\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 2 = 3{,}549\ \text{Cp}$

- $\rho 3 = \frac{(37{,}18-16{,}86)gr}{25\ \text{ml}}$
  $\rho 3 = 0{,}812\ \text{gr/ml}$
- $\mu 3 = \frac{4{,}33\ s \times 0{,}812\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 3 = 3{,}519\ \text{Cp}$

➢ **Tekanan 9 bar**

- $\rho 1 = \frac{(37{,}14-16{,}86)gr}{25\ \text{ml}}$
  $\rho 1 = 0{,}811\ \text{gr/ml}$
- $\mu 1 = \frac{4{,}31\ s \times 0{,}811\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 1 = 3{,}496\ \text{Cp}$

- $\rho 2 = \frac{(37{,}10-16{,}86)gr}{25\ \text{ml}}$
  $\rho 2 = 0{,}809\ \text{gr/ml}$
- $\mu 2 = \frac{4{,}29\ s \times 0{,}809\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 2 = 3{,}473\ \text{Cp}$

- $\rho 3 = \frac{(37{,}01-16{,}86)gr}{25\ \text{ml}}$
  $\rho 3 = 0{,}806\ \text{gr/ml}$
- $\mu 3 = \frac{4{,}25\ s \times 0{,}806\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 3 = 3{,}425\ \text{gr/ml}$

c. Variabel 3 (45 menit)

➢ **Tekanan 3 bar**

- $\rho 1 = \frac{(36{,}98-16{,}86)gr}{25\ \text{ml}}$
  $\rho 1 = 0{,}804\ \text{gr/ml}$
- $\mu 1 = \frac{4{,}19\ s \times 0{,}804\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 1 = 3{,}372\ \text{Cp}$

- $\rho 2 = \frac{(36{,}91-16{,}86)gr}{25\ \text{ml}}$
  $\rho 2 = 0{,}802\ \text{gr/ml}$
- $\mu 2 = \frac{4{,}13\ s \times 0{,}802\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 2 = 3{,}312\ \text{Cp}$

- $\rho 3 = \frac{(36{,}87-16{,}86)gr}{25\ \text{ml}}$
  $\rho 3 = 0{,}800\ \text{gr/ml}$
- $\mu 3 = \frac{4{,}08\ s \times 0{,}800\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 3 = 3{,}265\ \text{gr/ml}$

➢ **Tekanan 6 bar**

- $\rho 1 = \frac{(36{,}76-16{,}86)gr}{25\ \text{ml}}$
  $\rho 1 = 0{,}796\ \text{gr/ml}$
- $\mu 1 = \frac{4{,}01\ s \times 0{,}769\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 1 = 3{,}191\ \text{gr/ml}$

- $\rho 2 = \frac{(36{,}72-16{,}86)gr}{25\ \text{ml}}$
  $\rho 2 = 0{,}794\ \text{gr/ml}$
- $\mu 2 = \frac{3{,}99\ s \times 0{,}794\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 2 = 3{,}169\ \text{Cp}$

- $\rho 3 = \frac{(36{,}67-16{,}86)gr}{25\ \text{ml}}$
  $\rho 3 = 0{,}792\ \text{gr/ml}$
- $\mu 3 = \frac{4{,}94\ s \times 0{,}792\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 3 = 3{,}122\ \text{Cp}$

➢ **Tekanan 9 bar**

- $\rho 1 = \frac{(36{,}62 - 16{,}86\ )gr}{25\ \text{ml}}$
  $\rho 1 = 0{,}790\ \text{gr/ml}$
- $\mu 1 = \frac{3{,}91\ s \times 0{,}790\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 1 = 3{,}090\ \text{Cp}$

- $\rho 2 = \frac{(36{,}50 - 16{,}86\ )gr}{25\ \text{ml}}$
  $\rho 2 = 0{,}785\ \text{gr/ml}$
- $\mu 2 = \frac{3{,}89\ s \times 0{,}785\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 2 = 3{,}055\ \text{Cp}$

- $\rho 3 = \frac{(36{,}43 - 16{,}86\ )gr}{25\ \text{ml}}$
  $\rho 3 = 0{,}782\ \text{gr/ml}$
- $\mu 3 = \frac{3{,}82\ s \times 0{,}782\ \text{gr/ml}}{1 \times 1}$ x 1
  $\mu 3 = 2{,}990\ \text{gr/ml}$

- **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 (15 menit)

➢ **Tekanan 3 bar**

- Cake Basah
  - Berat basah 1 = (112,63 – 44,86)gr = 67,77 gr
  - Berat basah 2 = (108,89 – 44,42)gr = 64,47gr
  - Berat basah 3 = (96,87 – 43,83)gr = 53,04 gr
- Cake Kering
  - Berat kering 1 = (109,89 – 44,86)gr = 65,03 gr
  - Berat kering 2 = (98,77 – 44,42)gr = 54,35 gr
  - Berat kering 3 = (91,35 – 43,83)gr = 47,52 gr

➢ **Tekanan 6 bar**

- Cake Basah
  - Berat basah 1 = (120,35 – 44,86)gr = 75,49 gr
  - Berat basah 2 = (111,78– 44,42)gr = 74,36 gr
  - Berat basah 3 = (106,56 – 43,83)gr = 62,73 gr
- Cake Kering
  - Berat kering 1 = (115,47– 44,86)gr = 70,61 gr
  - Berat kering 2 = (106,43 – 44,42)gr = 62,01 gr
  - Berat kering 3 = (98,99 – 43,83)gr = 55,16 gr

➢ **Tekanan 9 bar**

- Cake Basah
  - Berat basah 1 = (128,37 – 44,86)gr = 83,51 gr
- Cake Kering
  - Berat kering 1 = (117,65 – 44,86)gr = 72,79 gr

- Berat basah 2 = (115,79 – 44,42)gr
  = 71,37 gr
- Berat kering 2 = (104,59 – 44,42)gr
  = 60,17 gr

- Berat basah 3 = (107,14 – 43,83)gr
  = 63,31 gr
- Berat kering 3 = (95,03 – 43,83)gr
  = 51,26 gr

b. Variabel 2 (30 menit)

➢ **Tekanan 3 bar**

- Cake Basah
  - Berat basah 1 = (139,03 – 44,86)gr
    = 94,17 gr
  - Berat basah 2 = (124,28 – 44,42)gr
    = 79,86 gr
  - Berat basah 3 = (113,21 – 43,83)gr
    = 69,38 gr
- Cake Kering
  - Berat kering 1 = (127,65 – 44,86)gr
    = 82,79 gr
  - Berat kering 2 = (117,73 – 44,42)gr
    = 73,31 gr
  - Berat kering 3 = (106,89 – 43,83)gr
    = 63,06 gr

➢ **Tekanan 6 bar**

- Cake Basah
  - Berat basah 1 = (149,69 – 44,86)gr
    = 104,83 gr
  - Berat basah 2 = (138,17– 44,42)gr
    = 93,75 gr
  - Berat basah 3 = (122,56 – 43,83)gr
    = 78,73 gr
- Cake Kering
  - Berat kering 1 = (135,78– 44,86)gr
    = 90,92 gr
  - Berat kering 2 = (129,45 – 44,42)gr
    = 85,03 gr
  - Berat kering 3 = (115,30 – 43,83)gr
    = 71,47 gr

➢ **Tekanan 9 bar**

- Cake Basah
  - Berat basah 1 = (156,63 – 44,86)gr
    = 111,77 gr
  - Berat basah 2 = (148,39 – 44,42)gr
    = 103,97 gr
  - Berat basah 3 = (135,92 – 43,83)gr
    = 92,09 gr
- Cake Kering
  - Berat kering 1 = (141,07 – 44,86)gr
    = 96,21 gr
  - Berat kering 2 = (136,26 – 44,42)gr
    = 91,84 gr
  - Berat kering 3 = (121,87 – 43,83)gr
    = 78,04 gr

c. Variabel 3 (45 menit)

➢ **Tekanan 3 bar**

- Cake Basah
  - Berat basah 1 = (167,84 – 44,86)gr = 122,98 gr
  - Berat basah 2 = (159,67 – 44,42)gr = 115,25 gr
  - Berat basah 3 = (144,56 – 43,83)gr = 100,73 gr
- Cake Kering
  - Berat kering 1 = (152,06 – 44,86)gr = 107,20 gr
  - Berat kering 2 = (143,48 – 44,42)gr = 99,06 gr
  - Berat kering 3 = (139,09 – 43,83)gr = 95,26 gr

➢ **Tekanan 6 bar**

- Cake Basah
  - Berat basah 1 = (172,69 – 44,86)gr = 127,83 gr
  - Berat basah 2 = (163,77– 44,42)gr = 119,35 gr
  - Berat basah 3 = (157,43 – 43,83)gr = 113,60 gr
- Cake Kering
  - Berat kering 1 = (164,18– 44,86)gr = 119,32 gr
  - Berat kering 2 = (151,97 – 44,42)gr = 107,55 gr
  - Berat kering 3 = (149,38 – 43,83)gr = 105,55 gr

➢ **Tekanan 9 bar**

- Cake Basah
  - Berat basah 1 = (183,63 – 44,86)gr = 138,77 gr
  - Berat basah 2 = (177,98 – 44,42)gr = 133,56 gr
  - Berat basah 3 = (163,61 – 43,83)gr = 119,78 gr
- Cake Kering
  - Berat kering 1 = (172,74 – 44,86)gr = 127,88 gr
  - Berat kering 2 = (165,22 – 44,42)gr = 120,80 gr
  - Berat kering 3 = (151,05 – 43,83)gr = 107,22 gr

3. Foto

Foto	Keterangan
	Slurry Tahu
	Pengukuran volume filtrat
	Cake Basah
	Cake Kering