Lampiran 1: Hasil Pengamatan

6.4 Hasil Pengamatan

6.4.7 Nilai Densitas Air dan Minyak Tanah

Tabel 10 : Nilai densitas dan massa

No	Bahan	Densitas(gr/ml)	Massa (gr)
1.	Air	0,682	6,82
2.	Minyak tanah	0,772	7,72

1.1.2 Nilai Kalor

Tabel 11 : Hasil pengamatan

No	Pengaduk (rpm)	Vol. kerosine (ml)	Vol. air (L)	Suhu Air (^{0}C)		Suhu Kerosine (^{0}C)		ΔT (^{0}C)		Nilai Kalor reaski (kcal/kg)
				T_1	T_2	T_1	T_2	ΔT_1	ΔT_2	
1	10	500	5	33	49	55	65	16	10	15.270,96
2	20	500	5	33	51	55	64	18	9	10.115,07
3.	30	500	5	33	52	55	63	19	8	5.967,17

6.5 Hasil Perhitungan Pengujian Alat

1.2.1 Densitas air dan minyak tanah

1. Densitas Air

$$\rho = \frac{\text{massa piknometer kosong} - \text{piknometer kosong}}{\text{volume piknometer}}.$$

$$\rho = \frac{\text{massa piknometer} - 12{,}67\ \text{gr}}{10\ \text{ml}}.$$

ρ=0,682 gr/ml

2. Densitas Minyak Tanah

$$\rho = \frac{\text{massa piknometer kosong} - \text{piknometer kosong}}{\text{volume piknometer}}.$$

$$\rho = \frac{\text{massa piknometer} - 12{,}67\ \text{gr}}{10\ \text{ml}}.$$

ρ=0,772 gr/ml

1.2.2 Massa Air dan Minyak Tanah

1. Massa air

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

$m = \rho \cdot V$

m = 6,82 gr = 6,82 x 10^{-3} kg

2. Massa Minyak Tanah

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

$m = \rho \cdot V$

m = 7,72 gr= 7,72 x 10^{-3} kg

1.2.3 Perhitungan Nilai Kalor

1. Nilai kalor air

$Q_{air} = m \cdot c \cdot \Delta t$

Percobaan 1: Q_{air} = 6,82 x 10^{-3} kg x 4200 J/kg^{0}C x (49-33)^0 C

= 458,30 J

$\eta = \frac{\text{kalor yang diserap air}}{\text{kalor yang dilepas minyak tanah}} \times 100\%$

Percobaan 2 : Q_{air} = 7,72 x 10^{-3} kg x 4200 J/kg^{0}C x (51-33)^0 C

= 515,59 J

$\eta = \frac{\text{kalor yang diserap air}}{\text{kalor yang dilepas minyak tanah}} \times 100\%$

Percobaan 3: Q_{air} = 6,82 x 10^{-3} kg x 4200 J/kg^{0}C x (52- 33)^0 C

= 544,24 J

[illegible]

2.Nilai kalor Minyak tanah

[illegible] Δ [illegible]

Percobaan 1 : [illegible] = 101 J/ ^{o}C x (65-55) ^{0} C

= 1.010 J

= [illegible]

Percobaan 2 : [illegible] = 101 J/ ^{o}C x (64-55) ^{0} C

= 909 J

= [illegible]

Percobaan 3: [illegible] = 101 J/ ^{o}C x (63-55) ^{0} C

= 808 J

= [illegible]

3.Nilai kalor reaksi

[illegible]

Percobaan 1: [illegible]

= 15.270,96 kcal/kg

Percobaan 2 : [illegible]

= 10.115,07 kcal/kg

Percobaab 3 : [illegible]

= 5967,171 kcal/kg

6.1.1 Trial Percobaan

Tabel 12: Trial percobaan

No	Pengaduk (rpm)	Vol. kerosine (ml)	Vol. air (L)	Suhu Air (^{0}C)		Suhu Kerosine (^{0}C)		ΔT (^{0}C)		Nilai Kalor reaski (kcal/kg)
				T_1	T_2	T_1	T_2	ΔT_1	ΔT_2	
1	10	500	5	32	47	53	64	15	11	19.418,86
2	20	500	5	32	49	53	62	17	9	11.123,07
3.	30	500	5	32	52	53	60	20	7	1.819,275

1.2.5 Perhitungan Nilai Kalor Trial Percobaan

1. Nilai kalor air

[illegible]

Percobaan 1: [illegible] ^{0}C x (47-32)^0 C

= 429,66 J

[illegible]

Percobaan 2 : [illegible] ^{0}C x (49-32)^0 C

= 486,95 J

[illegible]

Percobaan 3: [illegible] ^{0}C x (52- 32)^0 C

= 572,88J

= [illegible]

2.Nilai kalor Minyak tanah

[illegible] Δ [illegible]

Percobaan 1 : [illegible] = 101 J/^{o}C x (64-53)^{0} C

= 1.111 J

= [illegible]

Percobaan 2 : [illegible] = 101 J/^{o}C x (62-53)^{0} C

= 909 J

= [illegible]

Percobaan 3: [illegible] = 101 J/^{o}C x (60-52)^{0} C

= 707 J

= [illegible]

3.Nilai kalor reaksi

[illegible]

Percobaan 1: [illegible]

= 19.418,86 kcal/kg

Percobaan 2 : [illegible]

= 11.123,07 kcal/kg

Percobaab 3 : [illegible]

= 1.819, 275 kcal/kg

Lampiran 2: Foto- Foto Praktikum