

**LAMPIRAN B**  
**DATA PERHITUNGAN**

**B.1. Menghitung Kadar Air Gula Semut yang Dihasilkan**

Pada kondisi pH 5 suhu 90°C

Berat Sample (  $W_1$  ) = 2,5001 gram

Berat Sample Setelah di Oven ( $W_2$ ) = 2,3738 gram

$$\% \text{ kadar air} = \frac{(W_1 - W_2)}{W_1} \times 100 \%$$

$$\begin{aligned} \% \text{ kadar air} &= \frac{(2,5001 \text{ gram} - 2,3738 \text{ gram})}{2,5001 \text{ gram}} \times 100 \% \\ &= 5,0157 \% \end{aligned}$$

**Tabel B.1.** Hasil Perhitungan Analisis Kadar Air

<b>Tpenguapan (°C )</b>	<b>pH</b>	<b>Berat Sample (gr)</b>	<b>Berat Sample Setelah di Oven (gr)</b>	<b>Kadar Air (%)</b>
90	5	2,5001	2,3738	5,0157
	6	2,5001	2,3739	4,8208
	7	2,5004	2,3699	5,2195
97	5	2,5002	2,3935	4,2678
	6	2,5001	2,4096	3,6197
	7	2,5003	2,4140	3,4511
103	5	2,5001	2,4340	2,6445
	6	2,5002	2,4277	2,9005
	7	2,5004	2,4342	2,6456
110	5	2,5001	2,4394	2,4266
	6	2,5001	2,4446	2,2215
	7	2,5005	2,4441	2,2256

**B.2. Analisis Kadar Abu**

Pada kondisi pH 5 suhu 90°C

Berat sample = 2,5002 gram

Berat abu = 0,0331 gram

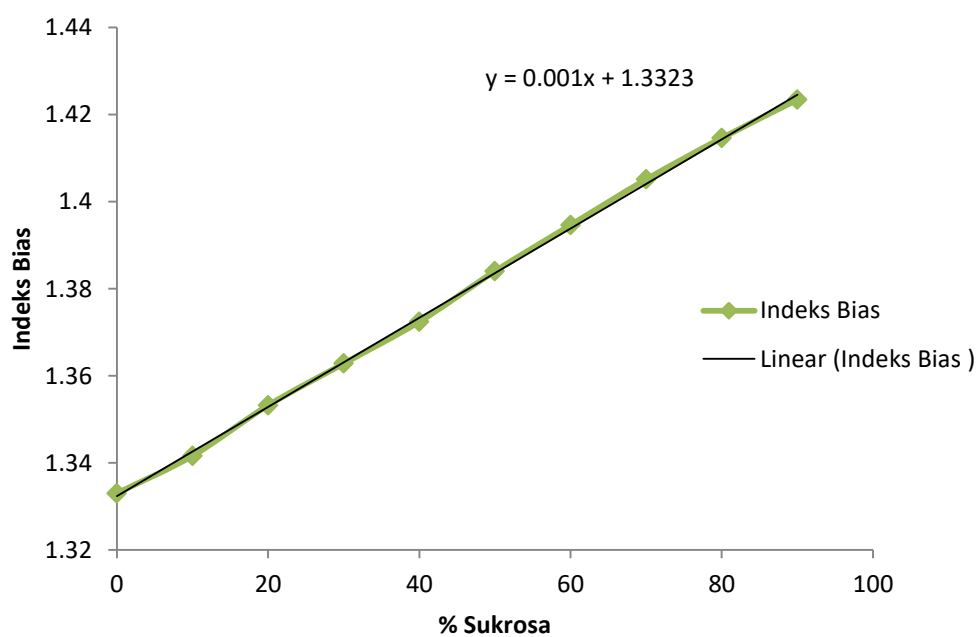
$$\% \text{ kadar abu} = \frac{\text{berat abu}}{\text{berat sample}} \times 100 \%$$

$$\begin{aligned} \% \text{ kadar abu} &= \frac{0,0331 \text{ gram}}{2,5002 \text{ gram}} \times 100\% \\ &= 1,3238 \% \end{aligned}$$

**Tabel B.2.** Hasil Perhitungan Analisis Kadar Abu

Tpenguapan (°C )	pH	Berat Sample (gr)	Berat Abu (gr)	Kadar Abu (%)
90	5	2,5002	0,0331	1,3238
	6	2,5002	0,0441	1,7644
	7	2,5001	0,0494	1,9744
97	5	2,5004	0,0352	1,4079
	6	2,5001	0,0306	1,2245
	7	2,5002	0,0483	1,9302
103	5	2,5003	0,0373	1,4933
	6	2,5005	0,0453	1,8113
	7	2,5002	0,0512	2,0462
110	5	2,5004	0,0353	1,4111
	6	2,5004	0,0476	1,9027
	7	2,5001	0,0532	2,1274

### B.3. Analisis Kadar Sukrosa



**Gambar B.1.** Kurva Baku Standar Sukrosa

Pada kondisi pH 5 suhu 90°C

$$y = 0,001x + 1,332$$

$$1,4098 = 0,001x + 1,332$$

$$x = \frac{1,4098 - 1,332}{0,001}$$

$$x = 77,8\%$$

**Tabel B.3.** Hasil Perhitungan Analisis Kadar Sukrosa

<b>Tpenguapan (°C)</b>	<b>pH</b>	<b>Indeks Bias</b>	<b>Kadar Sukrosa (%)</b>
90	5	1,4098	77,8
	6	1,4116	79,55
	7	1,4125	80,46
97	5	1,4102	78,2
	6	1,4122	80,19
	7	1,4129	80,89
103	5	1,4101	78,07
	6	1,4128	80,82
	7	1,4135	81,54
110	5	1,4104	78,37
	6	1,4123	80,33
	7	1,4141	82,07

#### **B.4. Menghitung % yield Produk Gula Semut yang Dihasilkan**

Pada kondisi pH 5 suhu 90°C

$$\% \text{ Yield} = \frac{\text{Berat Produk yang Dihasilkan}}{\text{Berat Bahan Baku}} \times 100\%$$

$$= \frac{189,42 \text{ gram}}{1500 \text{ gram}} \times 100\%$$

$$= 12,6280 \%$$

**Tabel B.4.** Hasil Perhitungan % Yield Produk

Tpenguapan (°C)	pH	Berat Bengkuang (gr)	Berat Gula Semut (gr)	% Yield (%)
90	5	1500	189,42	12,6280
	6	1500	188,7	12,5800
	7	1500	187,54	12,5027
97	5	1500	183,57	12,2380
	6	1500	182,66	12,1773
	7	1500	183,28	12,2187
103	5	1500	180,54	12,0360
	6	1500	179,28	11,9520
	7	1500	180,41	12,0273
110	5	1500	178,75	11,9167
	6	1500	175,24	11,6827
	7	1500	170,82	11,3880

**B.5. Menghitung % Ekstrak Bengkuang**

Pada kondisi pH 5 suhu 90°C

$$\begin{aligned}
 \% \text{ Ekstrak} &= \frac{\text{Berat Nira}}{\text{Berat Bahan Baku}} \times 100\% \\
 &= \frac{1000,3 \text{ gram}}{1500 \text{ gram}} \times 100\% \\
 &= 66,6867 \%
 \end{aligned}$$

**Tabel B.5.** Hasil Perhitungan % Ekstrak Bengkuang

Tpenguapan (°C)	pH	Berat Bengkuang (gr)	Berat Nira (gr)	% Ekstrak (%)
90	5	1500	1000,3	66,6867
	6	1500	1000,4	66,6933
	7	1500	1000,4	66,6933
97	5	1500	1000,8	66,6867
	6	1500	1000,1	66,7067
	7	1500	1000,4	66,6800
103	5	1500	1000,4	66,7200
	6	1500	1000,8	66,6733
	7	1500	1000,5	66,6933
110	5	1500	1000,4	66,6693
	6	1500	1000,8	66,7200
	7	1500	1000,5	66,7000

