

LAMPIRAN A

Data Penelitian

1. Hasil Data Penelitian Kadar Gula Total sirup

Tabel A.1 Data kadar gula total sirup daun binahong sebelum didiamkan

No.	Suhu (°C)	Komposisi Natrium Benzoat (%)	Kadar Gula Total (%)
1		0,035	40,6
2	55	0,045	41,6
3		0,055	42,3
4		0,035	39,6
5	50	0,045	42,8
6		0,055	42,9
7		0,035	43,0
8	45	0,045	42,9
9		0,055	43,0

2. Hasil Data Penelitian Kadar Gula Total sirup

Tabel A.2 Data kadar gula total sirup daun binahong setelah didiamkan

No.	Suhu (°C)	Komposisi Natrium Benzoat (%)	Kadar Gula Total (%)
1		0,035	42,4
2	55	0,045	42,9
3		0,055	43,3
4		0,035	40,9
5	50	0,045	42,9
6		0,055	43,8
7		0,035	42,4
8	45	0,045	42,9
9		0,055	43,3

3. Hasil Data Penelitian Aktivitas Antioksidan

Tabel A.3 Data Aktivitas antioksidansirup daun binahong sebelum didiamkan

No	Suhu (°C)	Komposisi Natrium Benzoat (%)	Absorbansi (517 nm)	Aktivitas Antioksidan (%)
1		0,035	0,43932	49,6579 %
2	55	0,045	0,50591	42,0273 %
3		0,055	0,53461	38,7385 %
4		0,035	0,51883	40,5468 %
5	50	0,045	0,55643	36,2382 %
6		0,055	0,74766	14,3250 %
7		0,035	0,54002	38,1186 %
8	45	0,045	0,74967	14,0946 %
9		0,055	0,83344	4,4956 %

4. Hasil Data Penelitian Aktivitas Antioksidan

Tabel A.4 Data Aktivitas antioksidansirup daun binahong setelah didiamkan

No	Suhu (°C)	Komposisi Natrium Benzoat (%)	Absorbansi (517 nm)	Aktivitas Antioksidan (%)
1		0,035	0,54361	38,1197
2	55	0,045	0,61086	30,0010
3		0,055	0,65452	24,9979
4		0,035	0,63501	27,2336
5	50	0,045	0,68154	21,9017
6		0,055	0,78127	10,4736

Lanjutan Tabel A.4

No	Suhu (°C)	Komposisi Natrium Benzoat (%)	Absorbansi (517 nm)	Aktivitas Antioksidan (%)
7		0,035	0,66301	24,0251
8	45	0,045	0,79425	8,9862
9		0,055	0,85621	1,8861

5. Hasil Data Viskositas Sirup

Tabel 4.5 Data viskositas sirup daun binahong sebelum didiamkan

Temperatur (°C)	Komposisi natrium benzoat (%)	Waktu Bola Turun (detik)	Berat Piknometer + Sirup (gr)	Viskositas Sirup (cp)
	0,035	12,47	66,8615	7,7506
45	0,045	13,47	67,1978	8,3555
	0,055	13,99	67,3125	8,6723
	0,035	12,84	67,0197	7,9731
50	0,045	15,40	66,9019	9,5694
	0,055	15,70	67,2516	9,7357
	0,035	13,21	66,8729	8,1235
55	0,045	15,97	67,4764	9,8901
	0,055	19,28	67,1574	11,9625

6. Hasil Data Viskositas Sirup

Tabel A.6 Data viskositas sirup daun binahong setelah didiamkan

Temperatur (°C)	Komposisi natrium benzoat (%)	Waktu Bola Turun (detik)	Berat Piknometer + Sirup (gr)	Viskositas
				Sirup (cp)
45	0,035	11,27	66,8545	7,0052
	0,045	12,43	67,1898	7,7107
	0,055	12,87	67,3134	7,9780
50	0,035	11,54	67,0291	7,1654
	0,045	12,97	67,2012	8,0452
	0,055	13,41	67,3415	8,3113
55	0,035	12,09	66,8672	7,5142
	0,045	13,19	67,5431	8,1709
	0,055	13,91	67,2432	8,6262

7. Hasil Data Uji Organoleptik

Tabel A.7. Hasil Pengamatan Uji Organoleptik Rasa pada Sirup Daun Binahong

	db	JK	KT	F hitung
Kelompok (A)	2	1.8958	0.9479	2.01
Kelompok (D)	93	43.8438	0.4714	
Total (T)	95	45.7396		

Tabel A.8 Hasil Pengamatan Uji Organoleptik Aroma pada Sirup Daun Binahong

	db	JK	KT	F hitung
Kelompok (A)	2	5.3958	2.6979	-6.58
Kelompok (D)	93	-38.1563	-0.4103	
Total (T)	95	-32.7604		

Tabel A.9 Hasil Pengamatan Uji Organoleptik Warna pada Sirup Daun Binahong

	db	JK	KT	F hitung
Kelompok (A)	2	6.3333	3.1667	6.47
Kelompok (D)	93	45.5000	0.4892	
Total (T)	95	51.8333		

LAMPIRAN B
URAIAN PERHITUNGAN

1. Perhitungan Penentuan Antioksidan

Rumus yang digunakan untuk menentukan % antioksidan :

$$\% \text{ Antioksidan} = \frac{\text{Absorbansi blanko} - \text{Absorbansi sampel}}{\text{Absorbansi blanko}} \times 100\%$$

1.1 Aktivitas antioksidan sebelum pengawetan

Absorbansi = 0,87267

a. Sampel 1 (55 °C, 0,035 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,43932}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,43335}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 49,6579 \%$$

b. Sampel 2 (55 °C, 0,045 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,50591}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,36676}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 42,0273 \%$$

c. Sampel 3 (55 °C, 0,055 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,53461}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,33806}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 38,7385 \%$$

d. Sampel 4 (50 °C, 0,035 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,51883}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,35384}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 40,5468 \%$$

e. Sampel 5 (50 °C, 0,045 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,55643}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,31624}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 36,2382 \%$$

f. Sampel 6 (50 °C, 0,055 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,74766}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,12501}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 14,3250 \%$$

g. Sampel 7 (45 °C, 0,035 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,54002}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,33265}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 38,1186 \%$$

h. Sampel 8 (45 °C, 0,045 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,74967}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,123}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 14,0946 \%$$

i. Sampel 9 (45 °C, 0,055 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,83344}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,03923}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 4,4956 \%$$

1.2 Aktivitas antioksidan setelah pengawetan

Absorbansi = 0,87267

a. Sampel 1 (55 °C, 0,035 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,54361}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,33266}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 38,1197 \%$$

b. Sampel 2 (55 °C, 0,045 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,61086}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,26181}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 30,0010 \%$$

c. Sampel 3 (55 °C, 0,055 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,65452}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,21815}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 24,9979 \%$$

d. Sampel 4 (50 °C, 0,035 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,63501}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,23766}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 27,2336 \%$$

e. Sampel 5 (50 °C, 0,045 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,68154}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,19113}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 21,9017 \%$$

f. Sampel 6 (50 °C, 0,055 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,78127}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,0914}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 10,4736 \%$$

g. Sampel 7 (45 °C, 0,035 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,66301}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,20966}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 24,0251 \%$$

h. Sampel 8 (45 °C, 0,045 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,79425}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,07842}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 8,9862 \%$$

i. Sampel 9 (45 °C, 0,055 % natrium Benzoat)

$$\% \text{ Antioksidan} = \frac{0,87267 - 0,85621}{0,87267} \times 100\%$$

$$\% \text{ Antioksidan} = \frac{0,01646}{0,87267} \times 100 \%$$

$$\% \text{ Antioksidan} = 1,8861 \%$$

2. Perhitungan Penentuan Viskositas Sirup

Diketahui :

$$\text{Berat piknometer kosong} = 37,4447 \text{ gr}$$

$$\text{Berat piknometer + Air} = 62,0073 \text{ gr}$$

$$\rho. \text{ Air} = 0,997 \text{ gr/cm}^3$$

$$V. \text{ piknometer} = \frac{B - A}{\rho. \text{ Air}}$$

$$= \frac{62,0073 \text{ gr} - 37,4447 \text{ gr}}{0,997 \text{ gr/cm}^3}$$

$$= 24,6365 \text{ cm}^3$$

2.1 Viskositas sirup sebelum pengawetan

Rumus :

- Viskositas Sirup

$$\mu = k (\rho_1 - \rho_2) t$$

a. Sampel 1 (45°C, 0,035%)

$$\text{Diketahui : } \rho_1 = 8,1 \text{ g/cm}^3$$

$$\rho_2 = \frac{(66,8615 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,1940 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,1940 \text{ g/cm}^3) (12,47 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,906 \text{ g/cm}^3) (12,47 \text{ s})$$

$$\mu = 7,7506 \text{ mPa.s}$$

$$= 7,7506 \text{ cp.}$$

b. Sampel 2 (45°C, 0,045%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(67,1978-37,4447)gr}{24,6365 \text{ cm}^3} = 1,2077 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,2077 \text{ g/cm}^3)(13,47 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,8294 \text{ g/cm}^3)(13,47 \text{ s})$$

$$\mu = 8,3555 \text{ mPa.s}$$

$$= 8,3555 \text{ cp.}$$

c. Sampel 3 (45°C, 0,055%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(67,3125-37,4447)gr}{24,6365 \text{ cm}^3} = 1,2123 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,2123 \text{ g/cm}^3)(13,99 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,8877 \text{ g/cm}^3)(13,99 \text{ s})$$

$$\mu = 8,6723 \text{ mPa.s}$$

$$= 8,6723 \text{ cp.}$$

d. Sampel 4 (50°C, 0,035%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(67,0197-37,4447)gr}{24,6365 \text{ cm}^3} = 1,20045 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,20045 \text{ g/cm}^3)(12,84 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,84114 \text{ g/cm}^3)(12,84 \text{ s})$$

$$\begin{aligned}\mu &= 7,9731 \text{ mPa.s} \\ &= 7,9731 \text{ cp.}\end{aligned}$$

e. Sampel 5 (50°C, 0,045%)

$$\text{Diketahui : } \rho_1 = 8,1 \text{ g/cm}^3$$

$$\rho_2 = \frac{(66,9019 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,1957 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,1957 \text{ g/cm}^3)(15,40 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,9043 \text{ g/cm}^3)(15,40 \text{ s})$$

$$\mu = 9,5694 \text{ mPa.s}$$

$$= 9,5694 \text{ cp.}$$

f. Sampel 6 (50°C, 0,055%)

$$\text{Diketahui : } \rho_1 = 8,1 \text{ g/cm}^3$$

$$\rho_2 = \frac{(67,2516 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,2099 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,2099 \text{ g/cm}^3)(15,70 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,8901 \text{ g/cm}^3)(15,70 \text{ s})$$

$$\mu = 9,7357 \text{ mPa.s}$$

$$= 9,7357 \text{ cp.}$$

g. Sampel 7 (55°C, 0,035%)

$$\text{Diketahui : } \rho_1 = 8,1 \text{ g/cm}^3$$

$$\rho_2 = \frac{(66,8729 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,1945 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,1945 \text{ g/cm}^3)(13,21 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,9055 \text{ g/cm}^3)(13,21 \text{ s})$$

$$\mu = 8,2135 \text{ mPa.s}$$

$$= 8,2135 \text{ cp.}$$

h. Sampel 8 (55°C, 0,045%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(67,4764 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,2189 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,2189 \text{ g/cm}^3)(15,97 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,8810 \text{ g/cm}^3)(15,97 \text{ s})$$

$$\mu = 9,8901 \text{ mPa.s}$$

$$= 9,8901 \text{ cp.}$$

i. Sampel 9 (55°C, 0,055%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(67,1574 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,2060 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,2060 \text{ g/cm}^3)(19,28 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,894 \text{ g/cm}^3)(19,28 \text{ s})$$

$$\mu = 11,9625 \text{ mPa.s}$$

$$= 11,9625 \text{ cp.}$$

2.2 Viskositas sirup setelah pengawetan

Rumus :

- Viskositas Sirup

$$\mu = k (\rho_1 - \rho_2) t$$

a. Sampel 1 (45°C, 0,035%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(66,8545 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,1935 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,1935 \text{ g/cm}^3) (11,27 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,906 \text{ g/cm}^3) (11,27 \text{ s})$$

$$\mu = 7,0052 \text{ mPa.s}$$

$$= 7,0052 \text{ cp.}$$

b. Sampel 2 (45°C, 0,045%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(67,1898 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,2073 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,2073 \text{ g/cm}^3) (12,43 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,8926 \text{ g/cm}^3) (12,43 \text{ s})$$

$$\mu = 7,7107 \text{ mPa.s}$$

$$= 7,7107 \text{ cp.}$$

c. Sampel 3 (45°C, 0,055%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(67,3134 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,2123 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,2123 \text{ g/cm}^3)(12,87 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,8877 \text{ g/cm}^3)(12,87 \text{ s})$$

$$\mu = 7,9780 \text{ mPa.s}$$

$$= 7,9780 \text{ cp.}$$

d. Sampel 4 (50°C, 0,035%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(67,0291 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,2008 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,2008 \text{ g/cm}^3)(11,54 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,8991 \text{ g/cm}^3)(11,54 \text{ s})$$

$$\mu = 7,1654 \text{ mPa.s}$$

$$= 7,9731 \text{ cp.}$$

e. Sampel 5 (50°C, 0,045%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(67,2012 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,2078 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,2078 \text{ g/cm}^3)(12,97 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,8922 \text{ g/cm}^3)(12,97 \text{ s})$$

$$\mu = 8,0452 \text{ mPa.s}$$

$$= 8,0452 \text{ cp.}$$

f. Sampel 6 (50°C, 0,055%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(67,3415 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,2135 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,2135 \text{ g/cm}^3)(13,41 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,8865 \text{ g/cm}^3)(13,41 \text{ s})$$

$$\mu = 8,3113 \text{ mPa.s}$$

$$= 8,3113 \text{ cp.}$$

g. Sampel 7 (55°C, 0,035%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(66,8672 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,1942 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,1942 \text{ g/cm}^3)(12,09 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,9058 \text{ g/cm}^3)(12,09 \text{ s})$$

$$\mu = 7,5142 \text{ mPa.s}$$

$$= 7,5142 \text{ cp.}$$

h. Sampel 8 (55°C, 0,045%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(67,5431 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,2169 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,2169 \text{ g/cm}^3)(13,19 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,8831 \text{ g/cm}^3)(13,19 \text{ s})$$

$$\begin{aligned}\mu &= 8,1709 \text{ mPa.s} \\ &= 8,1709 \text{ cp.}\end{aligned}$$

i. Sampel 9 (55°C, 0,055%)

Diketahui : $\rho_1 = 8,1 \text{ g/cm}^3$

$$\rho_2 = \frac{(67,2434 - 37,4447) \text{ gr}}{24,6365 \text{ cm}^3} = 1,2095 \text{ g/cm}^3$$

$$k = 0,09 \text{ mPa.s cm}^3/\text{gr.s}$$

- Viskositas Sirup

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (8,1 \text{ g/cm}^3 - 1,2095 \text{ g/cm}^3)(13,91 \text{ s})$$

$$\mu = (0,09 \text{ mPa.s cm}^3/\text{gr.s}) (6,8905 \text{ g/cm}^3)(13,91 \text{ s})$$

$$\mu = 8,6262 \text{ mPa.s}$$

$$= 8,6262 \text{ cp.}$$

LAMPIRAN C

Dokumentasi



Daun Binahong yang Masih Segar



Menimbang Daun Binahong
Sebanyak 200gr



Gula



Blender



Daun Binahong yang Telah di *Blender*



Persiapan Pemasakan Sirup dengan
Vakum Evaporator



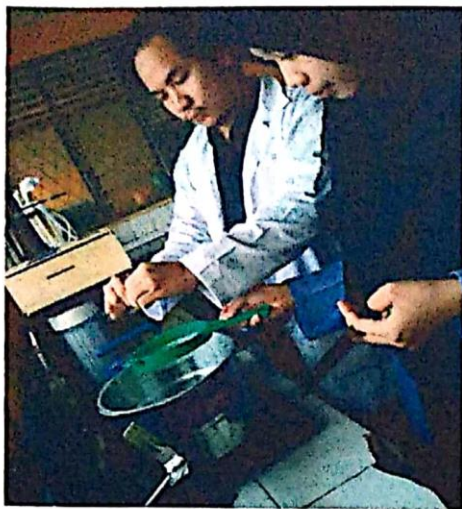
Persiapan Sampel untuk
Uji Antioksidan



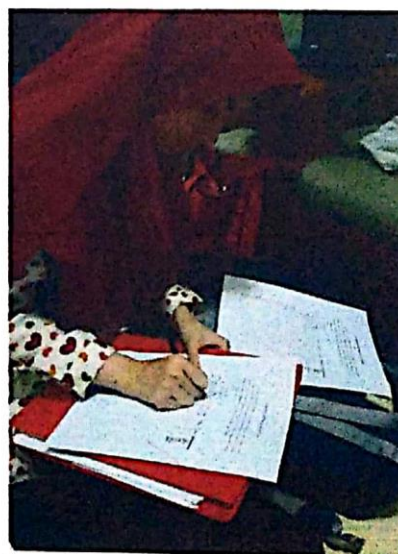
Sampel Sirup Temperatur 45°C
yang Akan di Uji



Uji Antioksidan dengan
Spektrofotometri UV-VIS



Penambahan Jeruk Kunci



Uji Organoleptik kepada
Para Dosen, Staff dan Politeknik Negeri Sriwijaya

