LAMPIRAN

Lampiran Tabel

Tabel 5. Tabel Pengamatan Absorbansi Sampel Perbandingan 1:1

Sampel	Suhu (^{0} C)	Absorbansi (620 nm)	Konsentrasi Lycopene yang terekstrak (mg/100gr)	Persentase Kadar Lycopene (%)
1	30	0,098	0,088	0,088
2	40	0,105	0,202	0,202
3	50	0,128	0,577	0,577
4	60	0,131	0,626	0,626
5	70	0,133	0,659	0,659

Tabel 6. Tabel Pengamatan Absorbansi Sampel Perbandingan 1:2

Sampel	Suhu (^{0} C)	Absorbansi (620 nm)	konsentrasi Lycopene yang terekstrak (mg/100gr)	Persentase Kadar Lycopene (%)
1	30	0,099	0,104	0,051
2	40	0,120	0,447	0,223
3	50	0,126	0,545	0,271
4	60	0,147	0,887	0,442
5	70	0,148	0,903	0,450

Tabel 7. Tabel Pengamatan Absorbansi Sampel Perbandingan 1:3

Sampel	Suhu (^{0} C)	Absorbansi (620 nm)	konsentrasi Lycopene yang terekstrak (mg/100gr)	Persentase Kadar Lycopene (%)
1	30	0,117	0,398	0,132
2	40	0,125	0,528	0,175
3	50	0,137	0,724	0,241
4	60	0,139	0,756	0,251
5	70	0,146	0,871	0,290

Tabel 8. Tabel Pengamatan Absorbansi Sampel Perbandingan 1:4

Sampel	Suhu (^{0} **C)**	Absorbansi (620 nm)	Konsentrasi Lycopene yang terekstrak (mg/100gr)	Persentase Kadar Lycopene (%)
1	30	0,119	0,430	0,107
2	40	0,126	0,544	0,136
3	50	0,143	0,822	0,205
4	60	0,144	0,838	0,209
5	70	0,149	0,920	0,230

Tabel 9. Tabel Pengamatan Absorbansi Sampel Perbandingan 1:5

Sampel	Suhu (^{0} **C)**	Absorbansi (620 nm)	Konsentrasi Lycopene yang terekstrak (mg/100gr)	Persentase Kadar Lycopene (%)
1	30	0,125	0,528	0,105
2	40	0,126	0,544	0,108
3	50	0,118	0,414	0,082
4	60	0,104	0,185	0,036
5	70	0,095	0,039	0,007

Lampiran Perhitungan

Perhitungan Konsentrasi total Lycopene yang terekstrak (mg/L)

Perbandingan F/S (1:1)

- **Temperatur 30 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,098) - 0.0926}{0.0613}$$

= 0,088 mg/100gr

Kadar lycopene yg terekstrak = 0,088 mg/100gr

- **Temperatur 40 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,105) - 0.0926}{0.0613}$$

= 0,202 mg/100gr

Kadar lycopene yg terekstrak = 0,202 mg/100gr

- **Temperatur 50 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,128) - 0.0926}{0.0613}$$

= 0,577 mg/100gr

Kadar lycopene yg terekstrak = 0,577 mg/100gr

- **Temperatur 60 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,131) - 0.0926}{0.0613}$$

= 0,626 mg/100gr

Kadar lycopene yg terekstrak = 0,626 mg/100gr

- **Temperatur 70 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,133) - 0.0926}{0.0613}$$

= 0,659 mg/100gr

Kadar lycopene yg terekstrak = 0,659 mg/100gr

Perbandingan F/S (1:2)

- **Temperatur 30 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,099) - 0.0926}{0.0613}$$

= 0,104 mg/100gr

Kadar lycopene yg terekstrak = 0,104 mg/100gr

- **Temperatur 40 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,120) - 0.0926}{0.0613}$$

= 0,447 mg/100gr

Kadar lycopene yg terekstrak = 0,447 mg/100gr

- **Temperatur 50 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$= \frac{(0,126) - 0.0926}{0.0613}$

= 0,545 mg/100gr

Kadar lycopene yg terekstrak = 0,545 mg/100gr

- **Temperatur 60 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$x = \frac{y - 0.0926}{0.0613}$

$= \frac{(0,147) - 0.0926}{0.0613}$

= 0,887 mg/100gr

Kadar lycopene yg terekstrak = 0,887 mg/100gr

- **Temperatur 70 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$x = y - \frac{0.0926}{0.0613}$

$= \frac{(0,148) - 0.0926}{0.0613}$

= 0,903 mg/100gr

Kadar lycopene yg terekstrak = 0,903 mg/100gr

Perbandingan F/S (1:3)

- **Temperatur 30 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$x = y - \frac{0.0926}{0.0613}$

$= \frac{(0,117) - 0.0926}{0.0613}$

= 0,398 mg/100gr

Kadar lycopene yg terekstrak = 0,398 mg/100gr

- **Temperatur 40 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$x = y - \frac{0.0926}{0.0613}$

$= \frac{(0,125) - 0.0926}{0.0613}$

= 0,528 mg/100gr

Kadar lycopene yg terekstrak = 0,528 mg/100gr

- **Temperatur 50 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$x = y - \frac{0.0926}{0.0613}$

$= \frac{(0,137) - 0.0926}{0.0613}$

= 0,724 mg/100gr

Kadar lycopene yg terekstrak = 0,724 mg/100gr

- **Temperatur 60 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0{,}139) - 0.0926}{0.0613}$$

= 0,756 mg/100gr

Kadar lycopene yg terekstrak = 0,756 mg/100gr

- **Temperatur 70 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0{,}146) - 0.0926}{0.0613}$$

= 0,871 mg/100gr

Kadar lycopene yg terekstrak = 0,871 mg/100gr

Perbandingan F/S (1:4)

- **Temperatur 30 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0{,}119) - 0.0926}{0.0613}$$

= 0,430 mg/100gr

Kadar lycopene yg terekstrak = 0,430 mg/100gr

- **Temperatur 40 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0{,}126) - 0.0926}{0.0613}$$

= 0,528 mg/100gr

Kadar lycopene yg terekstrak = 0,528 mg/100gr

- **Temperatur 50 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0{,}143) - 0.0926}{0.0613}$$

= 0,822 mg/100gr

Kadar lycopene yg terekstrak = 0,822 mg/100gr

- **Temperatur 60 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,144) - 0.0926}{0.0613}$$

= 0,838 mg/100gr

Kadar lycopene yg terekstrak = 0,838 mg/100gr

- **Temperatur 70 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,149) - 0.0926}{0.0613}$$

= 0,920 mg/100gr

Kadar lycopene yg terekstrak = 0,920 mg/100gr

Perbandingan F/S (1:5)

- **Temperatur 30 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,125) - 0.0926}{0.0613}$$

= 0,528 mg/100gr

Kadar lycopene yg terekstrak = 0,528 mg/100gr

- **Temperatur 40 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,126) - 0.0926}{0.0613}$$

= 0,544 mg/100gr

Kadar lycopene yg terekstrak = 0,544 mg/100gr

- **Temperatur 50 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,118) - 0.0926}{0.0613}$$

= 0,414 mg/100gr

Kadar lycopene yg terekstrak = 0,414 mg/100gr

- **Temperatur 60 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,104) - 0.0926}{0.0613}$$

= 0,185 mg/100gr

Kadar lycopene yg terekstrak = 0,185 mg/100gr

- **Temperatur 70 ºC**

Kadar lycopene = y = 0.0613x + 0.0926

$$x = y - \frac{0.0926}{0.0613}$$

$$= \frac{(0,095) - 0.0926}{0.0613}$$

= 0,039 mg/100gr

Kadar lycopene yg terekstrak = 0,039 mg/100gr

Perhitungan Kadar Sampel

$$Kadar\ (\%) = \frac{fp\ x\ ppm\ sampel}{mg\ sampel} x\ 100\%$$

- Perbandingan F/S (1:1)
  - T = 30 ºC

    $\frac{1\ x\ 0,088}{100} x\ 100\% =\ 0,088\ \%$
  - T = 40 ºC

    $\frac{1\ x\ 0,202}{100} x\ 100\% =\ 0,202\ \%$
  - T = 50 ºC

    $\frac{1\ x\ 0,577}{100} x\ 100\% =\ 0,577\ \%$
  - T = 60 ºC

    $\frac{1\ x\ 0,626}{100} x\ 100\% =\ 0,626\ \%$
  - T = 70 ºC

    $\frac{1\ x\ 0,659}{100} x\ 100\% =\ 0,659\ \%$

- Perbandingan F/S (1:2)
  - T = 30 ºC

    $\frac{0,499\ x\ 0,104}{100} x\ 100\% =\ 0,051\ \%$
  - T = 40 ºC

    $\frac{0,499\ x\ 0,447}{100} x\ 100\% =\ 0,223\ \%$

- T = 50 ºC

$$\frac{0{,}499\ x\ 0{,}545}{100} x\ 100\% =\ 0{,}271\ \%$$

- T = 60 ºC

$$\frac{0{,}499\ x\ 0{,}887}{100} x\ 100\% =\ 0{,}442\ \%$$

- T = 70 ºC

$$\frac{0{,}499\ x\ 0{,}903}{100} x\ 100\% =\ 0{,}450\ \%$$

- Perbandingan F/S (1:3)
  - T = 30 ºC

$$\frac{0{,}333\ x\ 0{,}398}{100} x\ 100\% =\ 0{,}132\ \%$$

  - T = 40 ºC

$$\frac{0{,}333\ x\ 0{,}528}{100} x\ 100\% =\ 0{,}175\ \%$$

  - T = 50 ºC

$$\frac{0{,}333\ x\ 0{,}724}{100} x\ 100\% =\ 0{,}241\ \%$$

  - T = 60 ºC

$$\frac{0{,}333\ x\ 0{,}756}{100} x\ 100\% =\ 0{,}251\ \%$$

  - T = 70 ºC

$$\frac{0{,}333\ x\ 0{,}871}{100} x\ 100\% =\ 0{,}290\ \%$$

- Perbandingan F/S (1:4)
  - T = 30 ºC

$$\frac{0{,}25\ x\ 0{,}430}{100} x\ 100\% =\ 0{,}107\ \%$$

  - T = 40 ºC

$$\frac{0{,}25\ x\ 0{,}544}{100} x\ 100\% =\ 0{,}136\ \%$$

- T = 50 ºC

$$\frac{0{,}25\ x\ 0{,}822}{100} x\ 100\% =\ 0{,}205\ \%$$

- T = 60 ºC

$$\frac{0{,}25\ x\ 0{,}838}{100} x\ 100\% =\ 0{,}209\ \%$$

- T = 70 ºC

$$\frac{0{,}25\ x\ 0{,}920}{100} x\ 100\% =\ 0{,}230\ \%$$

- Perbandingan F/S (1:5)
  - T = 30 ºC

$$\frac{0{,}199\ x\ 0{,}528}{100} x\ 100\% =\ 0{,}105\ \%$$

  - T = 40 ºC

$$\frac{0{,}199\ x\ 0{,}544}{100} x\ 100\% =\ 0{,}108\ \%$$

  - T = 50 ºC

$$\frac{0{,}199\ x\ 0{,}414}{100} x\ 100\% =\ 0{,}082\ \%$$

  - T = 60 ºC

$$\frac{0{,}199\ x\ 0{,}185}{100} x\ 100\% =\ 0{,}036\ \%$$

  - T = 70 ºC

$$\frac{0{,}199\ x\ 0{,}039}{100} x\ 100\% =\ 0{,}007\ \%$$

Perhitungan %Kesalahan

1. F/S 1:1

   y = 0.1566x - 0.0394

   Konsentrasi Lycopene rata-rata = (0,088 + 0,202+ 0,577+ 0,626+ 0,659) / 5
   = 0.4304 mg/100gr

   Absorbansi rata-rata = (0,119+ 0,126+ 0,143+ 0,144+ 0,149) / 5
   = 0.136

   y = 0.1566(0.4304) - 0.0394

   y = 0,028

   %Kesalahan rata-rata = ((0,028– 0.136) / 0,028) x 100 % = 42,57%

2. F/S 1:2

   y = 0.2038x - 0.0342

   Konsentrasi Lycopene rata-rata = (0,104+ 0,447+ 0,545+ 0,887+ 0,903) / 5
   = 0,577 mg/100gr

   Absorbansi rata-rata = (0,099+ 0,120+ 0,126+ 0,147+ 0,148) / 5
   = 0,128

   y = 0.2038(0.577) - 0.0342

   y = 0,083

   %Kesalahan rata-rata = ((0,083– 0.128) / 0,083) x 100 % = 37%

3. F/S 1:3

   y = 0.1174x + 0.3032

   Konsentrasi Lycopene rata-rata = (0,398+ 0,528+ 0,724+ 0,756+ 0,871) / 5
   = 0,655 mg/100gr

   Absorbansi rata-rata = (0,117+ 0,125+ 0,137+ 0,139+ 0,146) / 5
   = 0,132

   y = 0.1174(0,655)+ 0.3032

   y = 0,380

   %Kesalahan rata-rata = ((0,380– 0,132) / 0,380) x 100 % = 45,2%

4. F/S 1:4

y = 0.1274x + 0.3286

Konsentrasi Lycopene rata-rata = (0,430+ 0,544+ 0,822+ 0,838+ 0,920) / 5
= 0,710 mg/100gr

Absorbansi rata-rata = (0,119+ 0,126+ 0,143+ 0,144+ 0,149) / 5
= 0,136

y = 0.1274(0,710) + 0.3286

y = 0,419

%Kesalahan rata-rata = ((0,419– 0,136) / 0,419) x 100 % = 46,9%

5. F/S 1:5

y = -0.1337x + 0.7431

Konsentrasi Lycopene rata-rata = (0,528+ 0,544+ 0,414+ 0,185+ 0,039) / 5
= 0,342 mg/100gr

Absorbansi rata-rata = (0,125+ 0,126+ 0,118+ 0,104+ 0,095) / 5
= 0,113

y = -0.1337(0,342) + 0.7431

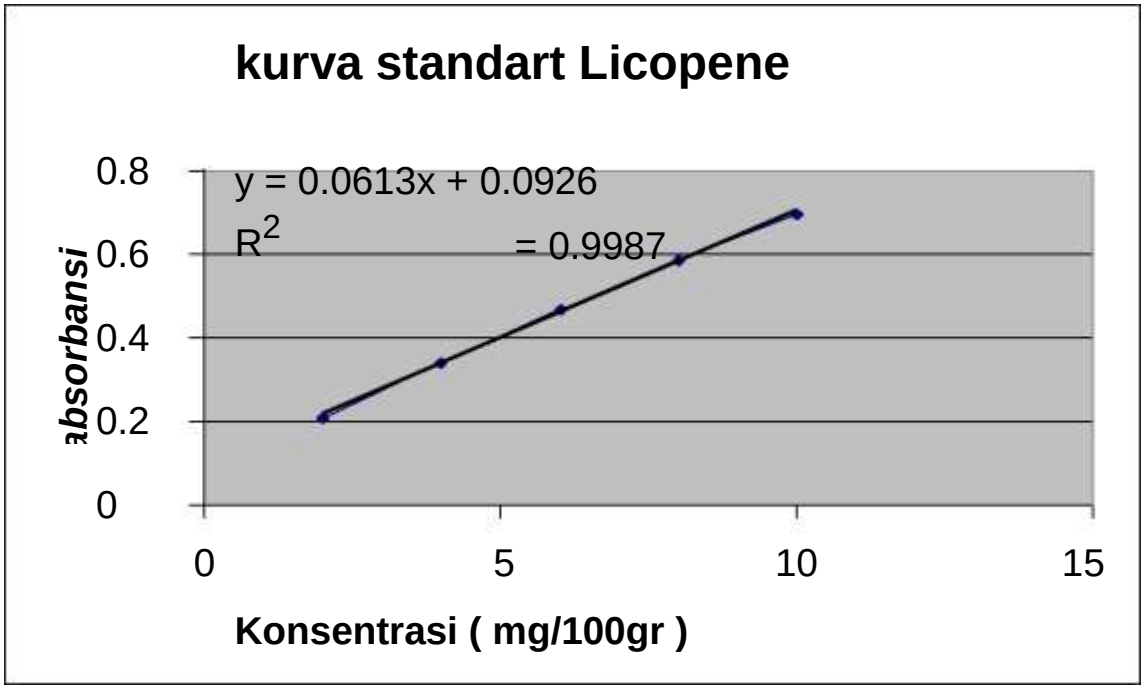
y = 0,697

%Kesalahan rata-rata = ((0,697– 0,113) / 0,697) x 100 % = 7,26%

Kurva Standart Lycopene

Deret Standart dan absorban/pada 620 nm :

x	2	4	6	8	10
y	0.2084	0.3411	0.467	0.5888	0.698



Lampiran Gambar

Keterangan	Daftar Gambar
Larutan Sample F/S 1:1 yang diamati	
Larutan Sample F/S 1:2 yang diamati	
Larutan Sample F/S 1:3 yang diamati	
Larutan Sample F/S 1:4 yang diamati	
Larutan Sample F/S 1:5 yang diamati	

Larutan Blanko	
Gambar Spektrofotometer visibel