

Lampiran 1. Data hasil Perhitungan Vitamin C, Kadar CO₂, Kadar Air, Kadar Warna (L,a,b), Kapsaisin

Data Kadar vitamin C dengan lama penyimpanan 2, 4, 6, 8 hari

| Perlakuan | Ulangan | | | Total | Rata-rata |
|-----------|---------|--------|--------|---------|-----------|
| | I | II | III | | |
| C1L1 | 55.24 | 59.12 | 61.34 | 175.7 | 58.57 |
| C1L2 | 49.03 | 51.78 | 48.26 | 149.07 | 49.69 |
| C1L3 | 45.42 | 46.34 | 48.01 | 139.77 | 46.59 |
| C1L4 | 40.48 | 45.03 | 43.24 | 128.75 | 42.92 |
| C2L1 | 63.12 | 65.98 | 69.38 | 198.48 | 66.16 |
| C2L2 | 59.67 | 57.50 | 56.26 | 173.43 | 57.81 |
| C2L3 | 53.92 | 49.02 | 44.42 | 147.36 | 49.12 |
| C2L4 | 43.34 | 40.10 | 41.67 | 125.11 | 41.70 |
| Total | 410.22 | 414.87 | 412.58 | 1237.67 | |

Data Kadar CO₂ dengan lama penyimpanan 2, 4, 6, 8 hari

| Perlakuan | Ulangan | | | Total | Rata-rata |
|-----------|---------|---------|--------|----------|-----------|
| | I | II | III | | |
| C1L1 | 642.28 | 664.46 | 662.62 | 1969.36 | 656.4533 |
| C1L2 | 600.97 | 612.37 | 607.68 | 1821.02 | 607.0067 |
| C1L3 | 575.72 | 560.98 | 593.76 | 1730.46 | 576.82 |
| C1L4 | 514.58 | 522.43 | 542.87 | 1579.88 | 526.6267 |
| C2L1 | 560.79 | 564.41 | 565.04 | 1690.24 | 563.4133 |
| C2L2 | 524.07 | 516.09 | 510.87 | 1551.03 | 517.01 |
| C2L3 | 499.48 | 483.21 | 480.38 | 1463.07 | 487.69 |
| C2L4 | 442.82 | 440.32 | 451.38 | 1334.52 | 444.84 |
| Total | 4360.71 | 4364.27 | 4414.6 | 13139.58 | |

Data Kadar air dengan lama penyimpanan 2, 4, 6, 8 hari

| Perlakuan | Ulangan | | | Total | Rata-rata |
|-----------|---------|--------|--------|--------|-----------|
| | I | II | III | | |
| C1L1 | 29.30 | 30.24 | 34.28 | 93.82 | 31.27 |
| C1L2 | 26.12 | 26.36 | 24.08 | 76.56 | 25.52 |
| C1L3 | 24.48 | 23.54 | 24.23 | 72.25 | 24.08 |
| C1L4 | 21.23 | 23.63 | 19.63 | 64.49 | 21.59 |
| C2L1 | 36.23 | 34.43 | 37.46 | 108.12 | 36.04 |
| C2L2 | 28.65 | 30.28 | 29.82 | 88.75 | 29.58 |
| C2L3 | 24.56 | 25.87 | 25.75 | 76.18 | 25.39 |
| C2L4 | 21.32 | 23.24 | 23.03 | 67.6 | 22.53 |
| Total | 211.89 | 217.59 | 218.29 | 647.77 | |

Warna L (Lightness atau tingkat kecerahan)

| Perlakuan | Ulangan | | | Total | Rata-rata |
|-----------|---------|--------|-------|---------|-----------|
| | I | II | III | | |
| C1L1 | 44.3 | 46.73 | 51.1 | 142.13 | 47.3767 |
| C1L2 | 49.6 | 51.2 | 49.9 | 150.7 | 50.2333 |
| C1L3 | 52.6 | 53.2 | 58.6 | 164.4 | 54.8 |
| C1L4 | 65.8 | 70.1 | 76.7 | 212.6 | 70.8667 |
| C2L1 | 44.9 | 47.9 | 52.2 | 145 | 48.3333 |
| C2L2 | 49.3 | 51.8 | 49.8 | 150.9 | 50.3 |
| C2L3 | 51.3 | 52.3 | 56.1 | 159.7 | 53.2333 |
| C2L4 | 51.9 | 62.9 | 58.1 | 172.9 | 57.6333 |
| Total | 409.7 | 436.13 | 452.5 | 1298.33 | |

Warna a (Koordinat kromatis)

| Perlakuan | Ulangan | | | Total | Rata-rata |
|-----------|---------|------|------|-------|-----------|
| | I | II | III | | |
| C1L1 | 5.7 | 5.4 | 4.4 | 15.5 | 5.16667 |
| C1L2 | 7.8 | 5.4 | 6.2 | 19.4 | 6.46667 |
| C1L3 | 8 | 8.9 | 8.4 | 25.3 | 8.43333 |
| C1L4 | 9.3 | 8 | 9.3 | 26.6 | 8.86667 |
| C2L1 | 5.4 | 4.4 | 5 | 14.8 | 4.93333 |
| C2L2 | 6.8 | 6.2 | 6 | 19 | 6.33333 |
| C2L3 | 6.2 | 7.5 | 6.1 | 19.8 | 6.6 |
| C2L4 | 8.1 | 6 | 7.8 | 21.9 | 7.3 |
| Total | 57.3 | 51.8 | 53.2 | 162.3 | |

Warna b (Koordinat kromatis)

| Perlakuan | Ulangan | | | Total | Rata-rata |
|-----------|---------|------|------|-------|-----------|
| | I | II | III | | |
| C1L1 | 9.3 | 9.9 | 8.5 | 27.7 | 9.23333 |
| C1L2 | 10.3 | 10.4 | 10.7 | 31.4 | 10.4667 |
| C1L3 | 11.8 | 11.3 | 12.5 | 35.6 | 11.8667 |
| C1L4 | 12.3 | 12. | 13.2 | 38.4 | 12.8 |
| C2L1 | 7.5 | 6.6 | 6.1 | 20.2 | 6.73333 |
| C2L2 | 7.3 | 7.6 | 6.2 | 21.1 | 7.03333 |
| C2L3 | 8.4 | 8.6 | 7.8 | 24.8 | 8.26667 |
| C2L4 | 8.9 | 9.4 | 9.5 | 27.8 | 9.26667 |
| Total | 75.8 | 76.7 | 74.5 | 227 | |

Kadar Kapsaisin

| Perlakuan | Ulangan | | | Total | Rata-rata |
|-----------|---------|---------|---------|---------|-----------|
| | I | II | III | | |
| C1L1 | 424.25 | 469.46 | 547.81 | 1441.52 | 480.507 |
| C1L2 | 452.43 | 409.83 | 410.24 | 1272.5 | 424.167 |
| C1L3 | 396.34 | 354.69 | 301.42 | 1052.45 | 350.817 |
| C1L4 | 376.43 | 369.45 | 310.26 | 1056.14 | 352.047 |
| C2L1 | 554.25 | 648.12 | 524.81 | 1727.18 | 575.727 |
| C2L2 | 425.24 | 484.83 | 502.28 | 1412.35 | 470.783 |
| C2L3 | 452.43 | 427.63 | 400.38 | 1280.44 | 426.813 |
| C2L4 | 401.26 | 452.82 | 396.19 | 1250.27 | 416.757 |
| Total | 3482.63 | 3616.83 | 3393.39 | 10492.9 | |

Lampiran 2 Perhitungan Analisis Variansi (ANOVA)

VITAMIN C Oneway

Descriptives

Data

| | N | Mean | Std. Deviation | Std. Error | 5% Confidence Interval for Mean | | Minimum | Maximum |
|-----------|----|---------|----------------|------------|---------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | tidak dibungk | 6 | | |
| dibungkus | 6 | 53.7500 | 4.72670 | 1.92967 | 48.7896 | 58.7104 | 48.26 | 59.67 |
| 3.00 | 6 | 47.8550 | 3.41143 | 1.39271 | 44.2749 | 51.4351 | 44.42 | 53.92 |
| 4.00 | 6 | 42.3100 | 1.89562 | .77388 | 40.3207 | 44.2993 | 40.10 | 45.03 |
| Total | 24 | 51.5696 | 8.43863 | 1.72253 | 48.0063 | 55.1329 | 40.10 | 69.38 |

ANOVA

Data

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 1324.784 | 3 | 441.595 | 28.212 | .000 |
| Within Groups | 313.059 | 20 | 15.653 | | |
| Total | 1637.843 | 23 | | | |

Post Hoc Tests Homogeneous Subsets

Data

Duncan^a

| Perlak | N | Subset for alpha = .05 | | | |
|--------|---|------------------------|---------|---------|---------|
| | | 1 | 2 | 3 | 4 |
| 8 hari | 6 | 42.3100 | | | |
| 6 hari | 6 | | 47.8550 | | |
| 4 hari | 6 | | | 53.7500 | |
| 2 hari | 6 | | | | 62.3633 |
| Sig. | | 1.000 | 1.000 | 1.000 | 1.000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

RESPIRASI

Oneway

Descriptives

Data

| | N | Mean | Std. Deviation | Std. Error | 5% Confidence Interval for Mean | | Minimum | Maximum |
|-----------|----|----------|----------------|------------|---------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | tidak dibungk | 6 | | |
| dibungkus | 6 | 712.0083 | 213.68208 | 87.23534 | 487.7627 | 936.2539 | 510.87 | 912.37 |
| 3.00 | 6 | 682.2550 | 213.48762 | 87.15596 | 458.2135 | 906.2965 | 480.38 | 893.76 |
| 4.00 | 6 | 635.8100 | 209.26817 | 85.43337 | 416.1965 | 855.4235 | 440.32 | 842.87 |
| Total | 24 | 697.5017 | 203.88231 | 41.61730 | 611.4097 | 783.5936 | 440.32 | 964.46 |

ANOVA

Data

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|------|------|
| Between Groups | 48878.87 | 3 | 16292.958 | .359 | .783 |
| Within Groups | 907185.0 | 20 | 45359.251 | | |
| Total | 956063.9 | 23 | | | |

Post Hoc Tests

Homogeneous Subsets

Data

Duncan^a

| Perlak | N | Subset for alpha = . 05 |
|--------|---|-------------------------------|
| | | 1 |
| 8 hari | 6 | 635.8100 |
| 6 hari | 6 | 682.2550 |
| 4 hari | 6 | 712.0083 |
| 2 hari | 6 | 759.9333 |
| Sig. | | .367 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

KADAR AIR

Oneway

Descriptives

Data

| | N | Mean | Std. Deviation | Std. Error | 5% Confidence Interval for Mean | | Minimum | Maximum |
|---------------|----|---------|----------------|------------|---------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| tidak dibungk | 6 | 22.0150 | 1.54577 | .63106 | 20.3928 | 23.6372 | 19.63 | 23.63 |
| dibungkus | 6 | 24.7383 | .90522 | .36955 | 23.7884 | 25.6883 | 23.54 | 25.87 |
| 3.00 | 6 | 27.5517 | 2.42147 | .98856 | 25.0105 | 30.0928 | 24.08 | 30.28 |
| 4.00 | 6 | 33.6567 | 3.24740 | 1.32575 | 30.2487 | 37.0646 | 29.30 | 37.46 |
| Total | 24 | 26.9904 | 4.87038 | .99416 | 24.9338 | 29.0470 | 19.63 | 37.46 |

ANOVA

Data

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 447.483 | 3 | 149.161 | 30.413 | .000 |
| Within Groups | 98.090 | 20 | 4.904 | | |
| Total | 545.573 | 23 | | | |

Post Hoc Tests

Homogeneous Subsets

Data

Duncan^a

| Perlak | N | Subset for alpha = .05 | | | |
|--------|---|------------------------|---------|---------|---------|
| | | 1 | 2 | 3 | 4 |
| 8 hari | 6 | 22.0150 | | | |
| 6 hari | 6 | | 24.7383 | | |
| 4 hari | 6 | | | 27.5517 | |
| 2 hari | 6 | | | | 33.6567 |
| Sig. | | 1.000 | 1.000 | 1.000 | 1.000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

Tingkat Kecerahan (L)

Oneway

Descriptives

Data

| | N | Mean | Std. Deviation | Std. Error | % Confidence Interval for Mean | | Minimum | Maximum |
|-----------------|----|---------|----------------|------------|--------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | | | | |
| tidak dibungkus | 6 | 47.8550 | 3.22635 | 1.31715 | 44.4692 | 51.2408 | 44.30 | 52.20 |
| dibungkus | 6 | 50.2667 | .99532 | .40634 | 49.2221 | 51.3112 | 49.30 | 51.80 |
| 3.00 | 6 | 54.0167 | 2.76942 | 1.13061 | 51.1103 | 56.9230 | 51.30 | 58.60 |
| 4.00 | 6 | 64.2500 | 8.76122 | 3.57675 | 55.0557 | 73.4443 | 51.90 | 76.70 |
| Total | 24 | 54.0971 | 7.85600 | 1.60360 | 50.7798 | 57.4144 | 44.30 | 76.70 |

ANOVA

Data

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 940.343 | 3 | 313.448 | 13.084 | .000 |
| Within Groups | 479.143 | 20 | 23.957 | | |
| Total | 1419.487 | 23 | | | |

Post Hoc Tests

Homogeneous Subsets

Data

Duncan^a

| Perlak | N | Subset for alpha = .05 | |
|--------|---|------------------------|---------|
| | | 1 | 2 |
| 2 hari | 6 | 47.8550 | |
| 4 hari | 6 | 50.2667 | |
| 6 hari | 6 | 54.0167 | |
| 8 hari | 6 | | 64.2500 |
| Sig. | | .051 | 1.000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

Warna Koordinat Kromatits (a)

Oneway

Descriptives

Data

| | N | Mean | Std. Deviation | Std. Error | 5% Confidence Interval for Mean | | Minimum | Maximum |
|-----------|----|--------|----------------|------------|---------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | tidak dibungkus | 6 | | |
| dibungkus | 6 | 6.4000 | .81976 | .33466 | 5.5397 | 7.2603 | 5.40 | 7.80 |
| 3.00 | 6 | 7.5167 | 1.15484 | .47146 | 6.3047 | 8.7286 | 6.10 | 8.90 |
| 4.00 | 6 | 8.0833 | 1.21559 | .49626 | 6.8076 | 9.3590 | 6.00 | 9.30 |
| Total | 24 | 6.7625 | 1.49195 | .30454 | 6.1325 | 7.3925 | 4.40 | 9.30 |

ANOVA

Data

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 32.265 | 3 | 10.755 | 11.362 | .000 |
| Within Groups | 18.932 | 20 | .947 | | |
| Total | 51.196 | 23 | | | |

Post Hoc Tests

Homogeneous Subsets

Data

Duncan^a

| Perlak | N | Subset for alpha = .05 | | |
|---------|---|------------------------|--------|--------|
| | | 1 | 2 | 3 |
| T2 hari | 6 | 5.0500 | | |
| 4 hari | 6 | | 6.4000 | |
| 6 hari | 6 | | 7.5167 | 7.5167 |
| 8 hari | 6 | | | 8.0833 |
| Sig. | | 1.000 | .061 | .325 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

Warna Koordinat Kromatits (b)

Oneway

Descriptives

Data

| | N | Mean | Std. Deviation | Std. Error | 5% Confidence Interval for Mean | | Minimum | Maximum |
|---------------|----|---------|----------------|------------|---------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| tidak dibungk | 6 | 7.9833 | 1.50787 | .61558 | 6.4009 | 9.5657 | 6.10 | 9.90 |
| dibungkus | 6 | 8.7500 | 1.94191 | .79278 | 6.7121 | 10.7879 | 6.20 | 10.70 |
| 3.00 | 6 | 10.0667 | 2.02550 | .82691 | 7.9410 | 12.1923 | 7.80 | 12.50 |
| 4.00 | 6 | 11.0333 | 1.96740 | .80319 | 8.9687 | 13.0980 | 8.90 | 13.20 |
| Total | 24 | 9.4583 | 2.11884 | .43251 | 8.5636 | 10.3530 | 6.10 | 13.20 |

ANOVA

Data

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 33.168 | 3 | 11.056 | 3.155 | .047 |
| Within Groups | 70.090 | 20 | 3.505 | | |
| Total | 103.258 | 23 | | | |

Post Hoc Tests

Homogeneous Subsets

Data

Duncan^a

| Perlak | N | Subset for alpha = .05 | |
|--------|---|------------------------|---------|
| | | 1 | 2 |
| 2 hari | 6 | 7.9833 | |
| 4 hari | 6 | 8.7500 | 8.7500 |
| 6 hari | 6 | | 10.0667 |
| 8 hari | 6 | | 11.0333 |
| Sig. | | .082 | .058 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

Kapsaisin

Oneway

Descriptives

Data

| | N | Mean | Std. Deviation | Std. Error | 5% Confidence Interval for Mean | | Minimum | Maximum |
|-----------|----|----------|----------------|------------|---------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | tidak dibungk | 6 | | |
| dibungkus | 6 | 447.4750 | 39.29764 | 16.04319 | 406.2347 | 488.7153 | 409.83 | 502.28 |
| 3.00 | 6 | 388.8150 | 53.93746 | 22.01988 | 332.2111 | 445.4189 | 301.42 | 452.43 |
| 4.00 | 6 | 384.4017 | 46.66545 | 19.05109 | 335.4293 | 433.3741 | 310.26 | 452.82 |
| Total | 24 | 437.2021 | 79.08955 | 16.14409 | 403.8055 | 470.5987 | 301.42 | 648.12 |

ANOVA

Data

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 81001.13 | 3 | 27000.376 | 8.590 | .001 |
| Within Groups | 62867.50 | 20 | 3143.375 | | |
| Total | 143868.6 | 23 | | | |

Post Hoc Tests

Homogeneous Subsets

Data

Duncan^a

| Perlak | N | Subset for alpha = .05 | |
|--------|---|------------------------|----------|
| | | 1 | 2 |
| 8 hari | 6 | 384.4017 | |
| 6 hari | 6 | 388.8150 | |
| 4 hari | 6 | 447.4750 | |
| 2 hari | 6 | | 528.1167 |
| Sig. | | .079 | 1.000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

Lampiran 3. Gambar Alat dan Bahan



Alat Titiasi Vitamin C



Desikator Pendinginan bahan setelah di Oven



Oven Untuk Analisis Kadar Air



Perakitan Untuk Perhitungan Laju Respirasi



Pemisahan Filtrat analisis vitamin C



Rotari Evaporator Untuk Pemekatan Ekstrak Isolasi kapsaisin