


L
A
M
P
I
R
A
N

Lampiran 1. Hasil determinasi herba seledri (*Apium graveolens* L.)



UNIVERSITAS SETIA BUDI

UPT-LABORATORIUM

Jl. Letjen Sutoyo, Mojosongo-Solo 57127 Telp. 0271-852518, Fax. 0271-853275

Nomor : 84/DET/UPT-LAB/26.09.2020
Hal : Hasil determinasi tumbuhan
Lamp. : -

Nama Pemesan : Devi Nopita Sari
NIM : 23175148A
Alamat : Program Studi S1 Farmasi, Universitas Setia Budi, Surakarta
Nama sampel : Seledri/*Apium graveolens* L.

HASIL DETERMINASI TUMBUHAN

Klasifikasi

Kingdom : Plantae
Super Divisi : Spermatophyta
Divisi : Magnoliophyta
Kelas : Magnoliopsida
Ordo : Apiales
Famili : Apiaceae
Genus : *Apium*
Species : *Apium graveolens* L.

Hasil Determinasi menurut C.A. Backer & R.C. Bakhuizen van den Brink Jr. (1963) :
1b – 2b – 3b – 4b – 12b – 13b – 14b – 17b – 18b – 19b – 20b – 21b – 22b – 23b – 24b – 25b
– 26b – 27a – 28b – 29b – 30b – 31a – 32a – 33c – 631a. familia 148. Apiaceae. 1b – 18b –
19b – 20a – 21a. 10. *Apium. Apium graveolens* L.

Deskripsi:

- Habitus** : Semak, anual atau bienial.
- Akar** : Akar tunggang.
- Batang** : Batang tidak berkayu, beralur, bersegi, beralur, beruas, bercabang banyak. Berbau spesifik.
- Daun** : Daun majemuk menyirip ganjil, anak daun 3 – 7 helai, panjang tangkai anak daun 2 – 7,5 cm, helaian daun tipis dan rapuh, pangkal dan ujung runcing, tepi beringgit, panjang 2 – 7,1 cm, lebar 2,1 – 4,9 cm, hijau, beraroma spesifik.
- Bunga** : Bunga majemuk, bentuk payung, terdiri 6 – 25 bunga, terminal, panjang 2 cm, petala putih kehijauan atau putih kekuningan, panjang 0,5 – 0,75 mm.
- Buah** : Buah kotak, berbentuk kerucut, panjang 1 – 1,5 cm, hijau kekuningan.

Kepala UPT-LAB

Universitas Setia Budi



Asik Gunawan, Amdk

Surakarta, 26 September 2020

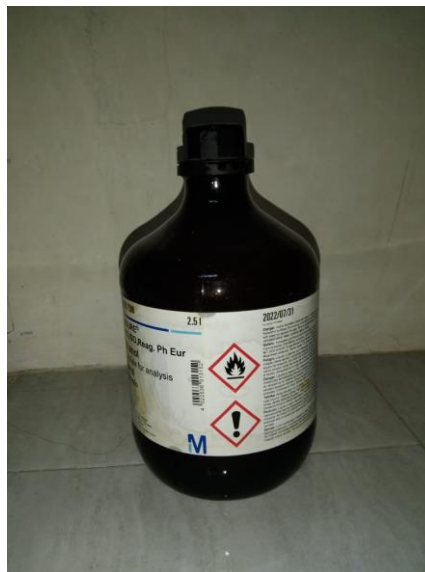
Penanggung jawab

Determinasi Tumbuhan

Dra. Dewi Sulistyawati. M.Sc.

Lampiran 2. Alat-alat penelitian

Timbangan analitik



Botol maserasi



Rotary evaporator



Oven

Lampiran 3. Tanaman herba seledri

Herba seledri



Serbuk herba seledri



Ekstrak herba seledri

Lampiran 4. Perhitungan rendemen simplisia dan serbuk herba seledri

Perhitungan rendemen simplisia kering herba seledri

| Sampel | Bobot basah (g) | Bobot kering (g) | Rendemen (%) |
|---------------|-----------------|------------------|--------------|
| Herba seledri | 12.000 | 3.000 | 25 |

$$\begin{aligned} \text{Rendemen simplisia kering herba seledri} &= \frac{\text{Bobot kering}}{\text{Bobot basah}} \times 100\% \\ &= \frac{3.000}{12.000} \times 100\% = 25\% \end{aligned}$$

Perhitungan rendemen serbuk terhadap berat kering herba seledri

| Sampel | Bobot kering (g) | Bobot serbuk (g) | Rendemen (%) |
|---------------|------------------|------------------|--------------|
| Herba seledri | 3.000 | 2.600 | 86,67 |

$$\begin{aligned} \text{Rendemen serbuk terhadap berat kering} &= \frac{\text{Bobot serbuk}}{\text{Bobot kering}} \times 100\% \\ &= \frac{2.600}{3.000} \times 100\% = 86,67\% \end{aligned}$$

Lampiran 5. Perhitungan kadar air serbuk herba seledri

| Replikasi | Berat serbuk (g) | Volume air (ml) | Kadar air (%) |
|-----------|------------------|-----------------|---------------|
| 1 | 20 | 1,1 | 5,5 |
| 2 | 20 | 1,0 | 5,0 |
| 3 | 20 | 1,0 | 5,0 |
| Rata-rata | | 1,067 | 5,17 |

$$\text{Kadar air serbuk} = \frac{\text{Volume air (ml)}}{\text{Berat serbuk (g)}} \times 100\%$$

$$1. \text{ Kadar air serbuk} = \frac{1,1 \text{ ml}}{20 \text{ g}} \times 100\% = 5,5\%$$

$$2. \text{ Kadar air serbuk} = \frac{1,0 \text{ ml}}{20 \text{ g}} \times 100\% = 5,0\%$$

$$3. \text{ Kadar air serbuk} = \frac{1,0 \text{ ml}}{20 \text{ g}} \times 100\% = 5,0\%$$

$$\text{Rata-rata kadar air} = \frac{5,5\% + 5,0\% + 5,0\%}{3} = 5,17\%$$

Lampiran 6. Perhitungan rendemen dan kadar air ekstrak herba seledri

Perhitungan rendemen ekstrak herba seledri

| Sampel | Bobot serbuk (g) | Bobot ekstrak (g) | Rendemen (%) |
|---------------|------------------|-------------------|--------------|
| Herba seledri | 1.500 | 545 | 36,33% |

$$\begin{aligned} \text{Rendemen ekstrak} &= \frac{\text{Bobot ekstrak (g)}}{\text{Bobot serbuk (g)}} \times 100\% \\ &= \frac{545 \text{ g}}{1.500 \text{ g}} \times 100\% = 36,33\% \end{aligned}$$

Perhitungan kadar air ekstrak herba seledri

| Replikasi | Bobot ekstrak awal (g) | Bobot ekstrak akhir (g) | Kadar air (%) |
|-----------|------------------------|-------------------------|---------------|
| 1 | 10,672 | 9,812 | 8,06 |
| 2 | 10,183 | 9,302 | 8,65 |
| 3 | 10,427 | 9,596 | 7,97 |
| | Rata-rata | | 8,23 |

Kadar air

$$\frac{\text{Bobot sebelum pengeringan} - \text{bobot setelah pengeringan (g)}}{\text{Bobot sebelum pengeringan (g)}} \times 100\%$$

$$1. \text{ Kadar air} = \frac{10,672 \text{ g} - 9,812 \text{ g}}{10,672 \text{ g}} \times 100\% = 8,06\%$$

$$2. \text{ Kadar air} = \frac{10,183 \text{ g} - 9,302 \text{ g}}{10,183 \text{ g}} \times 100\% = 8,65\%$$

$$3. \text{ Kadar air} = \frac{10,427 \text{ g} - 9,596 \text{ g}}{10,427 \text{ g}} \times 100\% = 7,97\%$$

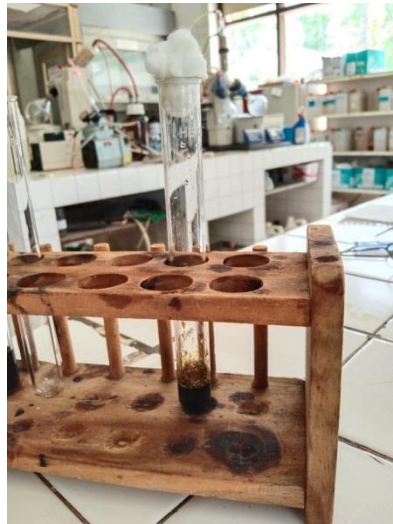
$$\text{Rata-rata kadar air} = \frac{8,06\% + 8,65\% + 7,97\%}{3} = 8,23\%$$

Lampiran 7. Hasil uji bebas etanol dan identifikasi kandungan kimia ekstrak herba seledri

Hasil uji bebas etanol

Ekstrak etanol herba seledri + CH_3COOH + H_2SO_4 kemudian dipanaskan

Hasil = Positif tidak tercium bau ester

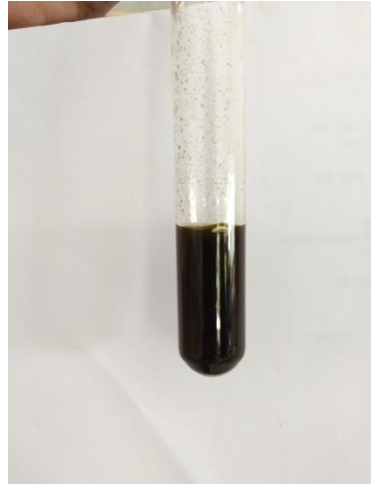


Hasil identifikasi kandungan kimia ekstrak herba seledri

Uji flavonoid = Terbentuk warna jingga pada lapisan amil alkohol



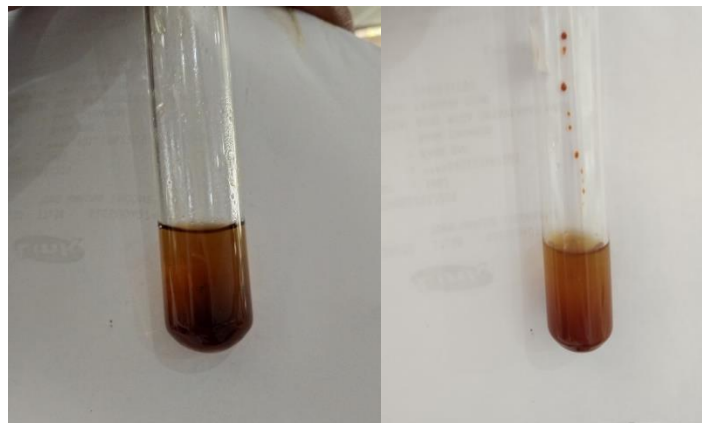
Tanin = Terbentuk warna hijau kehitaman



Saponin = Terbentuk buih yang stabil



Alkaloid = Terbentuk endapan coklat kehitaman dengan *Baochardat* LP dan
Terbentuk endapan jingga kecoklatan dengan *Dragendroff* LP.



Lampiran 8. Hasil sediaan sabun cair ekstrak herba seledri

Keterangan :

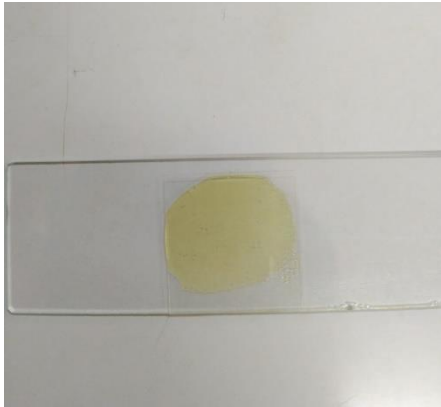
- K(-) (basis) = Formula sabun cair ekstrak herba seledri konsentrasi 0%
F2 = Formula sabun cair ekstrak herba seledri konsentrasi 2%
F3 = Formula sabun cair ekstrak herba seledri konsentrasi 4%
F4 = Formula sabun cair ekstrak herba seledri konsentrasi 8%



Kontrol positif

Lampiran 9. Hasil uji stabilitas sediaan sabun cair ekstrak herba seledri

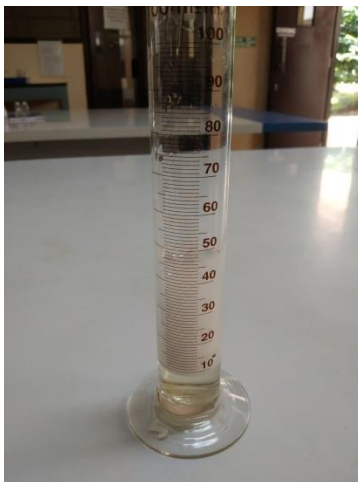


Lampiran 10. Uji mutu fisik sabun cair ekstrak herba seledri

Uji homogenitas



Uji pH



Uji tinggi busa



Uji berat jenis



Uji viskositas

Lampiran 11. Hasil uji hedonik

Format Formulir Uji Kesukaan (Tes Hedonik)

Tes Hedonik

Pilihlah sabun cair yang anda sangat suka sampai tidak suka berdasarkan kriteria tekstur, warna, dan aroma dari sabun cair.

| No | Nama | Umur | Formula | | |
|----|-------------|------|---------|---|---|
| | | | 1 | 2 | 3 |
| 1 | Mellinia | 20 | 4 | 4 | 4 |
| 2 | Rega | 22 | 3 | 3 | 2 |
| 3 | Bahana | 20 | 4 | 4 | 3 |
| 4 | Aelia | 22 | 4 | 4 | 3 |
| 5 | Riesky | 21 | 4 | 3 | 3 |
| 6 | Anita | 23 | 4 | 3 | 4 |
| 7 | Dwi astari | 21 | 4 | 4 | 4 |
| 8 | Rissa | 20 | 3 | 3 | 3 |
| 9 | Ita novita | 21 | 4 | 4 | 3 |
| 10 | Puspita | 21 | 4 | 4 | 4 |
| 11 | Melinda Ayu | 21 | 4 | 3 | 3 |
| 12 | Melinda | 21 | 3 | 3 | 4 |
| 13 | Versi | 20 | 3 | 4 | 3 |
| 14 | Linda | 20 | 4 | 4 | 3 |
| 15 | Monika | 21 | 4 | 3 | 3 |

Keterangan

Sangat suka : 4

Suka : 3

Kurang suka : 2

Tidak suka : 1

Formula 1 : sediaan sabun cair ekstrak herba seledri konsentrasi 2%

Formula 2 : sediaan sabun cair ekstrak herba seledri konsentrasi 4%

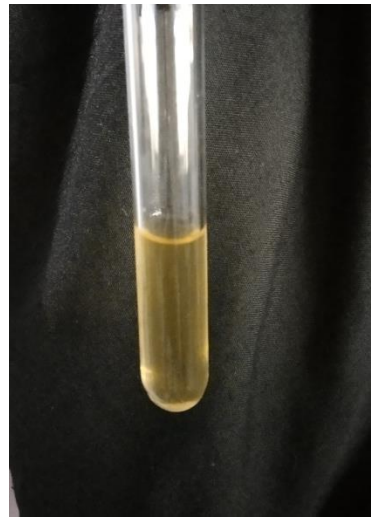
Formula 3 : sediaan sabun cair ekstrak herba seledri konsentrasi 8%

Lampiran 12. Hasil peremajaan dan suspensi bakteri *Staphylococcus aureus*



Peremajaan

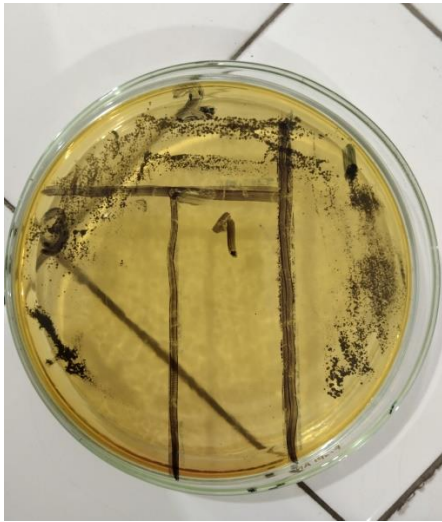
bakteri *Staphylococcus aureus*



suspensi

bakteri *Staphylococcus aureus*

Lampiran 13. Hasil identifikasi bakteri *Staphylococcus aureus*



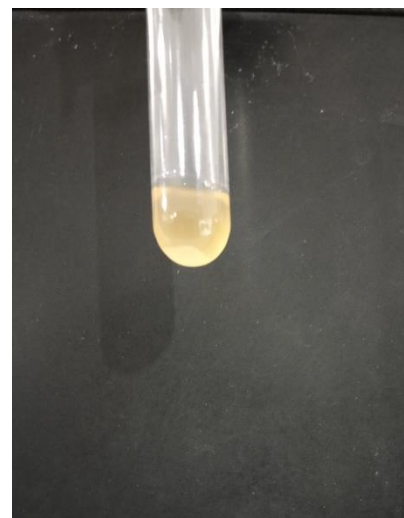
Uji isolasi



Uji pewarnaan gram



Uji katalase



Uji koagulase

Lampiran 14. Hasil uji aktivitas antibakteri sabun cair ekstrak herba seledri**Replikasi 1****Replikasi 2****Replikasi 3**

Lampiran 15. Data hasil analisis statistik uji tinggi busa sabun cair ekstrak herba seledri

Hasil uji tinggi busa sabun cair ekstrak herba seledri

| Formula | Replikasi | Tinggi busa (cm) | | |
|---------|-----------|------------------|-----------|------|
| | | Tinggi busa | Rata-rata | SD |
| K(-) | 1 | 5,9 | 6,07 | 0,15 |
| | 2 | 6,1 | | |
| | 3 | 6,2 | | |
| F1 | 1 | 6,5 | 6,53 | 0.15 |
| | 2 | 6,7 | | |
| | 3 | 6,4 | | |
| F2 | 1 | 7 | 6,97 | 0.15 |
| | 2 | 7,1 | | |
| | 3 | 6,8 | | |
| F3 | 1 | 7,6 | 7,43 | 0.15 |
| | 2 | 7,4 | | |
| | 3 | 7,3 | | |

Keterangan:

K(-) = Formula sabun cair ekstrak herba seledri konsentrasi 0%

F1 = Formula sabun cair ekstrak herba seledri konsentrasi 2%

F2 = Formula sabun cair ekstrak herba seledri konsentrasi 4%

F3 = Formula sabun cair ekstrak herba seledri konsentrasi 8%

Tests of Normality

| | kelompok | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|-------------|----------|---------------------------------|----|------|--------------|----|------|
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| tinggi_busa | negatif | ,253 | 3 | . | ,964 | 3 | ,637 |
| | 2% | ,253 | 3 | . | ,964 | 3 | ,637 |
| | 4% | ,253 | 3 | . | ,964 | 3 | ,637 |
| | 8% | ,253 | 3 | . | ,964 | 3 | ,637 |

a. Lilliefors Significance Correction

Descriptives

tinggi_busa

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|-------|----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | negatif | 3 | | |
| 2% | 3 | 6,5333 | ,15275 | ,08819 | 6,1539 | 6,9128 | 6,40 | 6,70 |
| 4% | 3 | 6,9667 | ,15275 | ,08819 | 6,5872 | 7,3461 | 6,80 | 7,10 |
| 8% | 3 | 7,4333 | ,15275 | ,08819 | 7,0539 | 7,8128 | 7,30 | 7,60 |
| Total | 12 | 6,7500 | ,54523 | ,15739 | 6,4036 | 7,0964 | 5,90 | 7,60 |

Test of Homogeneity of Variances

tinggi_busa

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|-------|
| ,000 | 3 | 8 | 1,000 |

ANOVA

tinggi_busa

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 3,083 | 3 | 1,028 | 44,048 | ,000 |
| Within Groups | ,187 | 8 | ,023 | | |
| Total | 3,270 | 11 | | | |

Post Hoc Tests

Multiple Comparisons

Dependent Variable: tinggi_busa

Tukey HSD

| (I) kelompok | (J) kelompok | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------|--------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| negatif | 2% | -,46667* | ,12472 | ,024 | -,8661 | -,0673 |
| | 4% | -,90000* | ,12472 | ,000 | -1,2994 | -,5006 |
| | 8% | -1,36667* | ,12472 | ,000 | -1,7661 | -,9673 |
| 2% | negatif | ,46667* | ,12472 | ,024 | ,0673 | ,8661 |
| | 4% | -,43333* | ,12472 | ,034 | -,8327 | -,0339 |
| | 8% | -,90000* | ,12472 | ,000 | -1,2994 | -,5006 |
| 4% | negatif | ,90000* | ,12472 | ,000 | ,5006 | 1,2994 |
| | 2% | ,43333* | ,12472 | ,034 | ,0339 | ,8327 |
| | 8% | -,46667* | ,12472 | ,024 | -,8661 | -,0673 |
| 8% | negatif | 1,36667* | ,12472 | ,000 | ,9673 | 1,7661 |
| | 2% | ,90000* | ,12472 | ,000 | ,5006 | 1,2994 |
| | 4% | ,46667* | ,12472 | ,024 | ,0673 | ,8661 |

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

tinggi_busa

Tukey HSD^a

| kelompok | N | Subset for alpha = 0.05 | | | |
|----------|---|-------------------------|--------|--------|--------|
| | | 1 | 2 | 3 | 4 |
| negatif | 3 | 6,0667 | | | |
| 2% | 3 | | 6,5333 | | |
| 4% | 3 | | | 6,9667 | |
| 8% | 3 | | | | 7,4333 |
| Sig. | | 1,000 | 1,000 | 1,000 | 1,000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Lampiran 16. Data hasil analisis statistik uji berat jenis sabun cair ekstrak herba seledri

Rumus berat jenis :

$$\frac{(\text{berat piknometer+sediaan})-\text{piknometer kosong}}{(\text{berat piknometer+akuades})-\text{piknometer kosong}}$$

Hasil uji berat jenis sabun cair ekstrak herba seledri

| Formula | Replikasi | Berat jenis (g/ml) | | |
|---------|-----------|--------------------|-----------|-------|
| | | Berat jenis | Rata-rata | SD |
| K(-) | 1 | 1,022 | 1,022 | 0,001 |
| | 2 | 1,023 | | |
| | 3 | 1,021 | | |
| F1 | 1 | 1,030 | 1,031 | 0,002 |
| | 2 | 1,033 | | |
| | 3 | 1,031 | | |
| F2 | 1 | 1,039 | 1,037 | 0,003 |
| | 2 | 1,034 | | |
| | 3 | 1,037 | | |
| F3 | 1 | 1,042 | 1,044 | 0,003 |
| | 2 | 1,047 | | |
| | 3 | 1,044 | | |

Keterangan:

K(-) = Formula sabun cair ekstrak herba seledri konsentrasi 0%

F1 = Formula sabun cair ekstrak herba seledri konsentrasi 2%

F2 = Formula sabun cair ekstrak herba seledri konsentrasi 4%

F3 = Formula sabun cair ekstrak herba seledri konsentrasi 8%

Tests of Normality

| | kelompok | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|-------------|----------|---------------------------------|----|------|--------------|----|-------|
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| berat_jenis | negatif | ,175 | 3 | . | 1,000 | 3 | 1,000 |
| | 2% | ,253 | 3 | . | ,964 | 3 | ,637 |
| | 4% | ,219 | 3 | . | ,987 | 3 | ,780 |
| | 8% | ,219 | 3 | . | ,987 | 3 | ,780 |

a. Lilliefors Significance Correction

Descriptives

berat_jenis

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|-------|----|---------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | negatif | 3 | | |
| 2% | 3 | 1,03133 | ,001528 | ,000882 | 1,02754 | 1,03513 | 1,030 | 1,033 |
| 4% | 3 | 1,03667 | ,002517 | ,001453 | 1,03042 | 1,04292 | 1,034 | 1,039 |
| 8% | 3 | 1,04433 | ,002517 | ,001453 | 1,03808 | 1,05058 | 1,042 | 1,047 |
| Total | 12 | 1,03358 | ,008660 | ,002500 | 1,02808 | 1,03909 | 1,021 | 1,047 |

Test of Homogeneity of Variances

berat_jenis

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| ,889 | 3 | 8 | ,487 |

ANOVA

berat_jenis

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | ,001 | 3 | ,000 | 66,076 | ,000 |
| Within Groups | ,000 | 8 | ,000 | | |
| Total | ,001 | 11 | | | |

Post Hoc Tests

Multiple Comparisons

Dependent Variable: berat_jenis

Tukey HSD

| (I) kelompok | (J) kelompok | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------|--------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| negatif | 2% | -,009333* | ,001633 | ,002 | -,01456 | -,00410 |
| | 4% | -,014667* | ,001633 | ,000 | -,01990 | -,00944 |
| | 8% | -,022333* | ,001633 | ,000 | -,02756 | -,01710 |
| 2% | negatif | ,009333* | ,001633 | ,002 | ,00410 | ,01456 |
| | 4% | -,005333* | ,001633 | ,046 | -,01056 | -,00010 |
| | 8% | -,013000* | ,001633 | ,000 | -,01823 | -,00777 |
| 4% | negatif | ,014667* | ,001633 | ,000 | ,00944 | ,01990 |
| | 2% | ,005333* | ,001633 | ,046 | ,00010 | ,01056 |
| | 8% | -,007667* | ,001633 | ,007 | -,01290 | -,00244 |
| 8% | negatif | ,022333* | ,001633 | ,000 | ,01710 | ,02756 |
| | 2% | ,013000* | ,001633 | ,000 | ,00777 | ,01823 |
| | 4% | ,007667* | ,001633 | ,007 | ,00244 | ,01290 |

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

berat_jenis

Tukey HSD^a

| kelompok | N | Subset for alpha = 0.05 | | | |
|----------|---|-------------------------|---------|---------|---------|
| | | 1 | 2 | 3 | 4 |
| negatif | 3 | 1,02200 | | | |
| 2% | 3 | | 1,03133 | | |
| 4% | 3 | | | 1,03667 | |
| 8% | 3 | | | | 1,04433 |
| Sig. | | 1,000 | 1,000 | 1,000 | 1,000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Lampiran 17. Data hasil analisis statistik viskositas sabun cair ekstrak herba seledri

Hasil uji viskositas sabun cair ekstrak herba seledri

| Formula | Replikasi | viskositas (dpa.S) | | |
|---------|-----------|--------------------|-----------|------|
| | | viskositas | Rata-rata | SD |
| K(-) | 1 | 9 | 8,50 | 1,50 |
| | 2 | 8 | | |
| | 3 | 8,5 | | |
| F1 | 1 | 13 | 12,0 | 1,00 |
| | 2 | 11 | | |
| | 3 | 12 | | |
| F2 | 1 | 16 | 15,0 | 1,00 |
| | 2 | 15 | | |
| | 3 | 14 | | |
| F3 | 1 | 19 | 19,33 | 1,53 |
| | 2 | 18 | | |
| | 3 | 21 | | |

Keterangan:

K(-) = Formula sabun cair ekstrak herba seledri konsentrasi 0%

F1 = Formula sabun cair ekstrak herba seledri konsentrasi 2%

F2 = Formula sabun cair ekstrak herba seledri konsentrasi 4%

F3 = Formula sabun cair ekstrak herba seledri konsentrasi 8%

Tests of Normality

| | kelompok | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|------------|----------|---------------------------------|----|------|--------------|----|-------|
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| viskositas | negatif | ,175 | 3 | . | 1,000 | 3 | 1,000 |
| | 2% | ,175 | 3 | . | 1,000 | 3 | 1,000 |
| | 4% | ,175 | 3 | . | 1,000 | 3 | 1,000 |
| | 8% | ,253 | 3 | . | ,964 | 3 | ,637 |

a. Lilliefors Significance Correction

Descriptives

viskositas

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|-------|----|---------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | negatif | 3 | | |
| 2% | 3 | 12,0000 | 1,00000 | ,57735 | 9,5159 | 14,4841 | 11,00 | 13,00 |
| 4% | 3 | 15,0000 | 1,00000 | ,57735 | 12,5159 | 17,4841 | 14,00 | 16,00 |
| 8% | 3 | 19,3333 | 1,52753 | ,88192 | 15,5388 | 23,1279 | 18,00 | 21,00 |
| Total | 12 | 13,7083 | 4,25579 | 1,22854 | 11,0043 | 16,4123 | 8,00 | 21,00 |

Test of Homogeneity of Variances

viskositas

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| ,992 | 3 | 8 | ,444 |

ANOVA

viskositas

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 190,062 | 3 | 63,354 | 55,291 | ,000 |
| Within Groups | 9,167 | 8 | 1,146 | | |
| Total | 199,229 | 11 | | | |

Post Hoc Tests

Multiple Comparisons

Dependent Variable: viskositas

Tukey HSD

| (I) kelompok | (J) kelompok | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------|--------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| negatif | 2% | -3,50000* | ,87401 | ,017 | -6,2989 | -,7011 |
| | 4% | -6,50000* | ,87401 | ,000 | -9,2989 | -3,7011 |
| | 8% | -10,83333* | ,87401 | ,000 | -13,6322 | -8,0345 |
| 2% | negatif | 3,50000* | ,87401 | ,017 | ,7011 | 6,2989 |
| | 4% | -3,00000* | ,87401 | ,036 | -5,7989 | -,2011 |
| | 8% | -7,33333* | ,87401 | ,000 | -10,1322 | -4,5345 |
| 4% | negatif | 6,50000* | ,87401 | ,000 | 3,7011 | 9,2989 |
| | 2% | 3,00000* | ,87401 | ,036 | ,2011 | 5,7989 |
| | 8% | -4,33333* | ,87401 | ,005 | -7,1322 | -1,5345 |
| 8% | negatif | 10,83333* | ,87401 | ,000 | 8,0345 | 13,6322 |
| | 2% | 7,33333* | ,87401 | ,000 | 4,5345 | 10,1322 |
| | 4% | 4,33333* | ,87401 | ,005 | 1,5345 | 7,1322 |

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

viskositas

Tukey HSD^a

| kelompok | N | Subset for alpha = 0.05 | | | |
|----------|---|-------------------------|---------|---------|---------|
| | | 1 | 2 | 3 | 4 |
| negatif | 3 | 8,5000 | | | |
| 2% | 3 | | 12,0000 | | |
| 4% | 3 | | | 15,0000 | |
| 8% | 3 | | | | 19,3333 |
| Sig. | | 1,000 | 1,000 | 1,000 | 1,000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Lampiran 18. Data hasil analisis statistik uji stabilitas tinggi busa sabun cair ekstrak herba seledri

Hasil uji tinggi busa sabun cair ekstrak herba seledri

| Formula | Replikasi | Tinggi busa (cm) | | | | | |
|---------|-----------|---------------------|-----------|------|---------------------|-----------|------|
| | | Sebelum freeze thaw | Rata-rata | SD | Sesudah freeze thaw | Rata-rata | SD |
| K(-) | 1 | 5,9 | 6,07 | 0,15 | 6 | 6,13 | 0,12 |
| | 2 | 6,1 | | | 6,2 | | |
| | 3 | 6,2 | | | 6,2 | | |
| F1 | 1 | 6,5 | 6,53 | 0,15 | 6,5 | 6,63 | 0,12 |
| | 2 | 6,7 | | | 6,7 | | |
| | 3 | 6,4 | | | 6,7 | | |
| F2 | 1 | 7 | 6,97 | 0,15 | 7 | 7,13 | 0,15 |
| | 2 | 7,1 | | | 7,1 | | |
| | 3 | 6,8 | | | 7,3 | | |
| F3 | 1 | 7,6 | 7,43 | 0,15 | 7,6 | 7,50 | 0,10 |
| | 2 | 7,4 | | | 7,4 | | |
| | 3 | 7,3 | | | 7,5 | | |

Keterangan:

K(-) = Formula sabun cair ekstrak herba seledri konsentrasi 0%

F1 = Formula sabun cair ekstrak herba seledri konsentrasi 2%

F2 = Formula sabun cair ekstrak herba seledri konsentrasi 4%

F3 = Formula sabun cair ekstrak herba seledri konsentrasi 8%

Tests of Normality

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|---------|---------------------------------|----|-------|--------------|----|------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| sebelum | ,093 | 12 | ,200* | ,970 | 12 | ,916 |
| sesudah | ,132 | 12 | ,200* | ,939 | 12 | ,484 |

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

| | | Levene | | | |
|-------------|--------------------------------------|-----------|-----|--------|------|
| | | Statistic | df1 | df2 | Sig. |
| tinggi_busa | Based on Mean | ,024 | 1 | 22 | ,879 |
| | Based on Median | ,024 | 1 | 22 | ,879 |
| | Based on Median and with adjusted df | ,024 | 1 | 21,810 | ,879 |
| | Based on trimmed mean | ,024 | 1 | 22 | ,879 |

Paired Samples Statistics

| | | Mean | N | Std. Deviation | Std. Error Mean |
|--------|---------|--------|----|----------------|-----------------|
| Pair 1 | sebelum | 6,7500 | 12 | ,54523 | ,15739 |
| | sesudah | 6,8500 | 12 | ,54855 | ,15835 |

Paired Samples Correlations

| | | N | Correlation | Sig. |
|--------|-------------------|----|-------------|------|
| Pair 1 | sebelum & sesudah | 12 | ,957 | ,000 |

Paired Samples Test

| | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|--------|-------------------|--------------------|----------------|-----------------|---|--------|--------|----|-----------------|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | sebelum - sesudah | -,1000 | ,15954 | ,04606 | -,20137 | ,00137 | -2,171 | 11 | ,053 |

Lampiran 19. Data hasil analisis statistik uji stabilitas berat jenis sabun cair ekstrak herba seledri

Rumus berat jenis :

$$\frac{(\text{berat piknometer+sediaan})-\text{piknometer kosong}}{(\text{berat piknometer+akuades})-\text{piknometer kosong}}$$

Hasil uji berat jenis sabun cair ekstrak etanol herba seledri

| Formula | Replikasi | Berat jenis (g/ml) | |
|---------|-----------|---------------------|---------------------|
| | | Sebelum freeze thaw | Sesudah freeze thaw |
| K(-) | 1 | 1,022 | 1,022 |
| | 2 | 1,023 | 1,023 |
| | 3 | 1,021 | 1,024 |
| | Rata-rata | 1,022 | 1,023 |
| | SD | 0,001 | 0,001 |
| F1 | 1 | 1,030 | 1,035 |
| | 2 | 1,033 | 1,033 |
| | 3 | 1,031 | 1,031 |
| | Rata-rata | 1,031 | 1,033 |
| | SD | 0,002 | 0,002 |
| F2 | 1 | 1,039 | 1,039 |
| | 2 | 1,034 | 1,040 |
| | 3 | 1,037 | 1,037 |
| | Rata-rata | 1,037 | 1,039 |
| | SD | 0,003 | 0,002 |
| F3 | 1 | 1,042 | 1,045 |
| | 2 | 1,047 | 1,047 |
| | 3 | 1,044 | 1,044 |
| | Rata-rata | 1,044 | 1,045 |
| | SD | 0,003 | 0,002 |

Keterangan:

- K(-) = Formula sabun cair ekstrak herba seledri konsentrasi 0%
 F1 = Formula sabun cair ekstrak herba seledri konsentrasi 2%
 F2 = Formula sabun cair ekstrak herba seledri konsentrasi 4%
 F3 = Formula sabun cair ekstrak herba seledri konsentrasi 8%

Tests of Normality

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|---------|---------------------------------|----|-------------------|--------------|----|------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| sebelum | ,139 | 12 | ,200 [*] | ,952 | 12 | ,664 |
| sesudah | ,148 | 12 | ,200 [*] | ,934 | 12 | ,422 |

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

| | | Levene Statistic | df1 | df2 | Sig. |
|----|--------------------------------------|------------------|-----|--------|------|
| BJ | Based on Mean | ,002 | 1 | 22 | ,966 |
| | Based on Median | ,002 | 1 | 22 | ,966 |
| | Based on Median and with adjusted df | ,002 | 1 | 21,999 | ,966 |
| | Based on trimmed mean | ,002 | 1 | 22 | ,966 |

Paired Samples Statistics

| | | Mean | N | Std. Deviation | Std. Error Mean |
|--------|---------|---------|----|----------------|-----------------|
| Pair 1 | sebelum | 1,03358 | 12 | ,008660 | ,002500 |
| | sesudah | 1,03500 | 12 | ,008655 | ,002498 |

Paired Samples Correlations

| | | N | Correlation | Sig. |
|--------|-------------------|----|-------------|------|
| Pair 1 | sebelum & sesudah | 12 | ,967 | ,000 |

Paired Samples Test

| | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|--------|-------------------|--------------------|----------------|-----------------|---|---------|--------|----|-----------------|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | sebelum - sesudah | -,001417 | ,002234 | ,000645 | -,002836 | ,000003 | -2,196 | 11 | ,050 |

Lampiran 20. Data hasil analisis statistik uji stabilitas viskositas sabun cair ekstrak herba seledri

Hasil uji viskositas sabun cair ekstrak herba seledri

| Formula | Replikasi | Viskositas (dpa. S) | |
|---------|-----------|---------------------|---------------------|
| | | Sebelum freeze thaw | Sesudah freeze thaw |
| K(-) | 1 | 9 | 9 |
| | 2 | 8 | 10 |
| | 3 | 8,5 | 8,5 |
| | Rata-rata | 8,5 | 9,17 |
| | SD | 0,50 | 0,76 |
| F1 | 1 | 13 | 13 |
| | 2 | 11 | 15 |
| | 3 | 12 | 12 |
| | Rata-rata | 12,0 | 13,33 |
| | SD | 1,00 | 1,53 |
| F2 | 1 | 16 | 16 |
| | 2 | 15 | 15 |
| | 3 | 14 | 18 |
| | Rata-rata | 15,0 | 16,33 |
| | SD | 1,00 | 1,53 |
| F3 | 1 | 19 | 19 |
| | 2 | 18 | 20 |
| | 3 | 21 | 21 |
| | Rata-rata | 19,33 | 20 |
| | SD | 1,53 | 1,00 |

Keterangan:

K(-) = Formula sabun cair ekstrak herba seledri konsentrasi 0%

F1 = Formula sabun cair ekstrak herba seledri konsentrasi 2%

F2 = Formula sabun cair ekstrak herba seledri konsentrasi 4%

F3 = Formula sabun cair ekstrak herba seledri konsentrasi 8%

Tests of Normality

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|---------|---------------------------------|----|-------------------|--------------|----|------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| sebelum | ,116 | 12 | ,200 [*] | ,959 | 12 | ,767 |
| sesudah | ,114 | 12 | ,200 [*] | ,948 | 12 | ,601 |

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

| | | Levene | | | |
|------------|--------------------------------------|-----------|-----|--------|------|
| | | Statistic | df1 | df2 | Sig. |
| viskositas | Based on Mean | ,489 | 1 | 22 | ,492 |
| | Based on Median | ,462 | 1 | 22 | ,504 |
| | Based on Median and with adjusted df | ,462 | 1 | 21,437 | ,504 |
| | Based on trimmed mean | ,501 | 1 | 22 | ,486 |

Paired Samples Statistics

| | | Mean | N | Std. Deviation | Std. Error Mean |
|--------|---------|---------|----|----------------|-----------------|
| Pair 1 | sebelum | 13,7083 | 12 | 4,25579 | 1,22854 |
| | sesudah | 14,7083 | 12 | 4,28771 | 1,23776 |

Paired Samples Correlations

| | | N | Correlation | Sig. |
|--------|-------------------|----|-------------|------|
| Pair 1 | sebelum & sesudah | 12 | ,930 | ,000 |

Paired Samples Test

| | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|--------|-------------------|--------------------|----------------|-----------------|---|--------|--------|----|-----------------|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | sebelum - sesudah | -1,00000 | 1,59545 | ,46057 | -2,01370 | ,01370 | -2,171 | 11 | ,053 |

Lampiran 21. Data hasil analisis statistik uji hedonik sabun cair ekstrak herba seledri

| Uji hedonik | | | |
|--------------|-----------|-----------|-----------|
| No | F1 | F2 | F3 |
| 1 | 4 | 4 | 4 |
| 2 | 3 | 3 | 2 |
| 3 | 4 | 4 | 3 |
| 4 | 4 | 4 | 3 |
| 5 | 4 | 3 | 3 |
| 6 | 4 | 3 | 4 |
| 7 | 4 | 4 | 4 |
| 8 | 3 | 3 | 3 |
| 9 | 4 | 4 | 3 |
| 10 | 4 | 4 | 4 |
| 11 | 4 | 3 | 3 |
| 12 | 3 | 3 | 4 |
| 13 | 3 | 4 | 3 |
| 14 | 4 | 4 | 3 |
| 15 | 4 | 3 | 3 |
| Rata-rata±SD | 3,73±0,46 | 3,53±0,52 | 3,27±0,59 |

Keterangan:

- F1 = Formula sabun cair ekstrak herba seledri konsentrasi 2%
 F2 = Formula sabun cair ekstrak herba seledri konsentrasi 4%
 F3 = Formula sabun cair ekstrak herba seledri konsentrasi 8%
 4 = Sangat suka
 3 = Suka
 2 = Kurang suka
 1 = Tidak suka

Between-Subjects Factors

| | | Value Label | N |
|----------|----|-------------|----|
| kelompok | 1 | 2% | 15 |
| | 2 | 4% | 15 |
| | 3 | 8% | 15 |
| panelis | 1 | | 3 |
| | 2 | | 3 |
| | 3 | | 3 |
| | 4 | | 3 |
| | 5 | | 3 |
| | 6 | | 3 |
| | 7 | | 3 |
| | 8 | | 3 |
| | 9 | | 3 |
| | 10 | | 3 |
| | 11 | | 3 |
| | 12 | | 3 |
| | 13 | | 3 |
| | 14 | | 3 |
| | 15 | | 3 |

Tests of Between-Subjects Effects

Dependent Variable: hedonik

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-----------------|-------------------------|----|-------------|----------|------|
| Corrected Model | 7,556 ^a | 16 | ,472 | 2,324 | ,025 |
| Intercept | 554,756 | 1 | 554,756 | 2730,437 | ,000 |
| Kelompok | 1,644 | 2 | ,822 | 4,047 | ,029 |
| Panelis | 5,911 | 14 | ,422 | 2,078 | ,048 |
| Error | 5,689 | 28 | ,203 | | |
| Total | 568,000 | 45 | | | |
| Corrected Total | 13,244 | 44 | | | |

a. R Squared = ,570 (Adjusted R Squared = ,325)

Post Hoc Tests

hedonik

Duncan^{a,b}

| kelompok | N | Subset | |
|----------|----|--------|--------|
| | | 1 | 2 |
| 8% | 15 | 3,2667 | |
| 4% | 15 | 3,5333 | 3,5333 |
| 2% | 15 | | 3,7333 |
| Sig. | | ,116 | ,234 |

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = ,203.

a. Uses Harmonic Mean Sample Size = 15,000.

b. Alpha = ,05.

Lampiran 22. Data hasil analisis uji aktivitas antibakteri sabun cair ekstrak herba seledri

| Diameter daya hambat (mm) | | | | |
|---------------------------|-------------|-------------|-------------|--------------|
| Sampel | Replikasi 1 | Replikasi 2 | Replikasi 3 | Rata-rata±SD |
| K(-) | 6,33 | 7 | 8,67 | 7,33±1,21 |
| F1 | 18,67 | 16,33 | 19,67 | 18,22±1,71 |
| F2 | 23,33 | 25 | 24,67 | 24,33±0,88 |
| F3 | 27 | 26,33 | 28,67 | 27,33±1,21 |
| K(+) | 16,67 | 16 | 18,67 | 17,11±1,39 |

| Diameter daya hambat (mm) | | | | |
|---------------------------|-------------|-------------|-------------|--------------|
| Sampel | Replikasi 1 | Replikasi 2 | Replikasi 3 | Rata-rata±SD |
| K(-) | 0 | 0 | 0 | 0±0,00 |
| F1 | 12,34 | 9,33 | 11 | 10,89±1,51 |
| F2 | 17 | 18 | 16 | 17±1,00 |
| F3 | 20,67 | 19,33 | 20 | 20±0,67 |
| K(+) | 16,67 | 16 | 18,67 | 17,11±1,39 |

Keterangan:

K(-) = Formula sabun cair ekstrak herba seledri konsentrasi 0%

F1 = Formula sabun cair ekstrak herba seledri konsentrasi 2%

F2 = Formula sabun cair ekstrak herba seledri konsentrasi 4%

F3 = Formula sabun cair ekstrak herba seledri konsentrasi 8%

K(+) = Sediaan paten merek X

Tests of Normality^a

| | kelompok | Kolmogorov-Smirnov ^b | | | Shapiro-Wilk | | |
|-------------|----------|---------------------------------|----|------|--------------|----|-------|
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| daya_hambat | 2% | ,196 | 3 | . | ,996 | 3 | ,879 |
| | 4% | ,175 | 3 | . | 1,000 | 3 | 1,000 |
| | 8% | ,175 | 3 | . | 1,000 | 3 | 1,000 |
| | positif | ,292 | 3 | . | ,924 | 3 | ,465 |

a. daya_hambat is constant when kelompok = negatif. It has been omitted.

b. Lilliefors Significance Correction

Descriptives

daya_hambat

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---------|----|---------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | negatif | 3 | | |
| 2% | 3 | 10,8900 | 1,50801 | ,87065 | 7,1439 | 14,6361 | 9,33 | 12,34 |
| 4% | 3 | 17,0000 | 1,00000 | ,57735 | 14,5159 | 19,4841 | 16,00 | 18,00 |
| 8% | 3 | 20,0000 | ,67000 | ,38682 | 18,3356 | 21,6644 | 19,33 | 20,67 |
| positif | 3 | 17,1133 | 1,38911 | ,80200 | 13,6626 | 20,5641 | 16,00 | 18,67 |
| Total | 15 | 13,0007 | 7,45185 | 1,92406 | 8,8740 | 17,1274 | ,00 | 20,67 |

Test of Homogeneity of Variances

daya_hambat

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 1,982 | 4 | 10 | ,173 |

ANOVA

daya_hambat

| | Sum of Squares | Df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|---------|------|
| Between Groups | 766,115 | 4 | 191,529 | 169,415 | ,000 |
| Within Groups | 11,305 | 10 | 1,131 | | |
| Total | 777,420 | 14 | | | |

Post Hoc Tests

Multiple Comparisons

Dependent Variable: daya_hambat
Tukey HSD

| (I) kelompok | (J) kelompok | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------|--------------|-----------------------|------------|-------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| negatif | 2% | -10,89000 | ,86815 | ,000 | -13,7472 | -8,0328 |
| | 4% | -17,00000 | ,86815 | ,000 | -19,8572 | -14,1428 |
| | 8% | -20,00000 | ,86815 | ,000 | -22,8572 | -17,1428 |
| | positif | -17,11333 | ,86815 | ,000 | -19,9705 | -14,2562 |
| 2% | negatif | 10,89000 | ,86815 | ,000 | 8,0328 | 13,7472 |
| | 4% | -6,11000 | ,86815 | ,000 | -8,9672 | -3,2528 |
| | 8% | -9,11000 | ,86815 | ,000 | -11,9672 | -6,2528 |
| | positif | -6,22333 | ,86815 | ,000 | -9,0805 | -3,3662 |
| 4% | negatif | 17,00000 | ,86815 | ,000 | 14,1428 | 19,8572 |
| | 2% | 6,11000 | ,86815 | ,000 | 3,2528 | 8,9672 |
| | 8% | -3,00000 | ,86815 | ,039 | -5,8572 | -,1428 |
| | positif | -,11333 | ,86815 | 1,000 | -2,9705 | 2,7438 |
| 8% | negatif | 20,00000 | ,86815 | ,000 | 17,1428 | 22,8572 |
| | 2% | 9,11000 | ,86815 | ,000 | 6,2528 | 11,9672 |
| | 4% | 3,00000 | ,86815 | ,039 | ,1428 | 5,8572 |
| | positif | 2,88667 | ,86815 | ,047 | ,0295 | 5,7438 |
| positif | negatif | 17,11333 | ,86815 | ,000 | 14,2562 | 19,9705 |
| | 2% | 6,22333 | ,86815 | ,000 | 3,3662 | 9,0805 |
| | 4% | ,11333 | ,86815 | 1,000 | -2,7438 | 2,9705 |
| | 8% | -2,88667 | ,86815 | ,047 | -5,7438 | -,0295 |

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

daya_hambat

Tukey HSD^a

| kelompok | N | Subset for alpha = 0.05 | | | |
|----------|---|-------------------------|---------|---------|---------|
| | | 1 | 2 | 3 | 4 |
| negatif | 3 | ,0000 | | | |
| 2% | 3 | | 10,8900 | | |
| 4% | 3 | | | 17,0000 | |
| positif | 3 | | | 17,1133 | |
| 8% | 3 | | | | 20,0000 |
| Sig. | | 1,000 | 1,000 | 1,000 | 1,000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.