





LAMPIRAN

Lampiran 1. Dokumentasi

| | |
|---|---|
|  A collection of laboratory reagents and bottles used for preparing MS medium, including white and red caps, and various glass bottles containing liquids. |  Three yellow packets of agar, each featuring a globe and Chinese characters, used for solidifying the medium. |
| <p>Bahan pembuatan media Murashige & Skoog (MS)</p> | <p>Agar untuk membuat media padat</p> |
|  A person in a white lab coat and pink hijab is pouring liquid from a beaker into a larger container in a laboratory setting. |  A hand is stirring a mixture in a glass beaker placed on a red magnetic stirrer. |
| <p>Pembuatan Media MS</p> | |
|  A hand is placing a glass bottle into a large metal autoclave filled with water. |  A large metal autoclave filled with many glass bottles, ready for sterilization. |
| <p>Sterilisasi media, alat, dan air steril.</p> | |

| | |
|---|---|
|  |  |
| <p>Proses sterilisasi eksplan</p> | <p>Proses penanaman eksplan</p> |
|  |  |
| <p>Wrapping botol kultur setelah ditanami eksplan</p> | <p>Eksplan biji sente varigata konsentrasi BAP5 + NAA 0,5ppm</p> |

Lampiran 2. SPSS

2.1 Jumlah Tunas

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ONEWAY J.Tunas BY Konsentrasi
/STATISTICS DESCRIPTIVES HOMOGENEITY
/PLOT MEANS
/MISSING ANALYSIS
/POSTHOC=TUKEY ALPHA(0.05) .

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Oneway**Descriptives**

J.Tunas

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------------|-----------|--------------------|-------------------|--------------------|-------------------------------------|----------------|-------------|-------------|
| | | | | | Lower Bound | Upper Bound | | |
| B5N 0 | 4 | 3.750 0 | .50000 | .2500 0 | 2.9544 | 4.5456 | 3.00 | 4.00 |
| B5N 0,5 | 4 | 5.500 0 | .57735 | .2886 8 | 4.5813 | 6.4187 | 5.00 | 6.00 |
| B5N 1 | 4 | 4.250 0 | .50000 | .2500 0 | 3.4544 | 5.0456 | 4.00 | 5.00 |
| B5N 2 | 4 | 4.250 0 | .50000 | .2500 0 | 3.4544 | 5.0456 | 4.00 | 5.00 |
| Total | 16 | 4.437 5 | .81394 | .2034 9 | 4.0038 | 4.8712 | 3.00 | 6.00 |

Test of Homogeneity of Variances

| | | Levene Statistic | df1 | df2 | Sig. |
|---------|---------------|---------------------|-----|-----|------|
| J.Tunas | Based on Mean | .333 | 3 | 12 | .802 |

| | | | | |
|--------------------------------------|------|---|-------|------|
| Based on Median | .333 | 3 | 12 | .802 |
| Based on Median and with adjusted df | .333 | 3 | 9.000 | .802 |
| Based on trimmed mean | .333 | 3 | 12 | .802 |

ANOVA

J.Tunas

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 6.688 | 3 | 2.229 | 8.231 | .003 |
| Within Groups | 3.250 | 12 | .271 | | |
| Total | 9.938 | 15 | | | |

Homogeneous Subsets

J.Tunas

Tukey HSD^a

| Konsentrasi | N | Subset for alpha = 0.05 | |
|-------------|---|-------------------------|--------|
| | | 1 | 2 |
| B5N0 | 4 | 3.7500 | |
| B5N1 | 4 | 4.2500 | |
| B5N2 | 4 | 4.2500 | |
| B5N0,5 | 4 | | 5.5000 |
| Sig. | | .546 | 1.000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4.000.

2.2 Tinggi Tunas

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ONEWAY T.Tunas BY Konsentrasi
/STATISTICS DESCRIPTIVES HOMOGENEITY
/PLOT MEANS
/MISSING ANALYSIS
/POSTHOC=TUKEY ALPHA(0.05) .

```

Oneway

Descriptives

T.Tunas

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|------------|----|------------|-------------------|---------------|-------------------------------------|----------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| B5N 0 | 6 | 2.733 3 | .48442 | .1977 7 | 2.2250 | 3.2417 | 2.30 | 3.40 |
| B5N 0,5 | 6 | 2.383 3 | .27869 | .1137 7 | 2.0909 | 2.6758 | 2.00 | 2.80 |
| B5N 1 | 6 | 1.483 3 | .29269 | .1194 9 | 1.1762 | 1.7905 | 1.20 | 2.00 |
| B5N 2 | 6 | .6333 | .10328 | .0421 6 | .5249 | .7417 | .50 | .80 |
| Total | 24 | 1.808 3 | .88657 | .1809 7 | 1.4340 | 2.1827 | .50 | 3.40 |

Test of Homogeneity of Variances

| | | Levene Statistic | df1 | df2 | Sig. |
|---------|-----------------|---------------------|-----|-----|------|
| T.Tunas | Based on Mean | 4.640 | 3 | 20 | .013 |
| | Based on Median | 1.200 | 3 | 20 | .335 |

| | | | | |
|---|-------|---|-------|------|
| Based on Median and with adjusted df | 1.200 | 3 | 9.534 | .361 |
| Based on trimmed mean | 4.380 | 3 | 20 | .016 |

ANOVA

T.Tunas

| | Sum of Squares | df | Mean Square | F | Sig. |
|-------------------|-------------------|----|----------------|--------|------|
| Between Groups | 16.035 | 3 | 5.345 | 52.316 | .000 |
| Within Groups | 2.043 | 20 | .102 | | |
| Total | 18.078 | 23 | | | |

Homogeneous Subsets

T.Tunas

Tukey HSD^a

| Konsentrasi | N | Subset for alpha = 0.05 | | |
|-------------|---|-------------------------|--------|--------|
| | | 1 | 2 | 3 |
| B5N2 | 6 | .6333 | | |
| B5N1 | 6 | | 1.4833 | |
| B5N0,5 | 6 | | | 2.3833 |
| B5N0 | 6 | | | 2.7333 |
| Sig. | | 1.000 | 1.000 | .261 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

2.3 Jumlah Akar

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ONEWAY J.Akar BY Konsentrasi
  /STATISTICS DESCRIPTIVES HOMOGENEITY
  /PLOT MEANS
  /MISSING ANALYSIS
  /POSTHOC=TUKEY ALPHA(0.05) .

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Oneway

Descriptives

J.Akar

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|------------|----|------------|-------------------|---------------|-------------------------------------|----------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| B5N 0 | 3 | 2.333 3 | .57735 | .3333 3 | .8991 | 3.7676 | 2.00 | 3.00 |
| B5N 0,5 | 3 | 3.333 3 | .57735 | .3333 3 | 1.8991 | 4.7676 | 3.00 | 4.00 |
| B5N 1 | 3 | 4.333 3 | .57735 | .3333 3 | 2.8991 | 5.7676 | 4.00 | 5.00 |
| B5N 2 | 3 | 5.666 7 | .57735 | .3333 3 | 4.2324 | 7.1009 | 5.00 | 6.00 |
| Total | 12 | 3.916 7 | 1.37895 | .3980 7 | 3.0405 | 4.7928 | 2.00 | 6.00 |

Test of Homogeneity of Variances

| | | Levene Statistic | df1 | df2 | Sig. |
|--------|-----------------|---------------------|-----|-----|-------|
| J.Akar | Based on Mean | .000 | 3 | 8 | 1.000 |
| | Based on Median | .000 | 3 | 8 | 1.000 |

| | | | | |
|--------------------------------------|------|---|-------|-------|
| Based on Median and with adjusted df | .000 | 3 | 8.000 | 1.000 |
| Based on trimmed mean | .000 | 3 | 8 | 1.000 |

ANOVA

J.Akar

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 18.250 | 3 | 6.083 | 18.250 | .001 |
| Within Groups | 2.667 | 8 | .333 | | |
| Total | 20.917 | 11 | | | |

Homogeneous Subsets

J.Akar

Tukey HSD^a

| Konsentrasi | N | Subset for alpha = 0.05 | | |
|-------------|---|-------------------------|--------|--------|
| | | 1 | 2 | 3 |
| B5N0 | 3 | 2.3333 | | |
| B5N0,5 | 3 | 3.3333 | 3.3333 | |
| B5N1 | 3 | | 4.3333 | 4.3333 |
| B5N2 | 3 | | | 5.6667 |
| Sig. | | .225 | .225 | .085 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

2.4 Panjang Akar

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ONEWAY P.Akar BY Konsentrasi
  /STATISTICS DESCRIPTIVES HOMOGENEITY
  /PLOT MEANS
  /MISSING ANALYSIS
  /POSTHOC= TUKEY ALPHA(0.05) .

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Oneway

Descriptives

P.Akar

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|------------|----|-------|-------------------|---------------|-------------------------------------|----------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| B5N 0 | 5 | .9400 | .08944 | .0400 0 | .8289 | 1.0511 | .80 | 1.00 |
| B5N 0,5 | 5 | .8200 | .08367 | .0374 2 | .7161 | .9239 | .70 | .90 |
| B5N 1 | 5 | .6000 | .10000 | .0447 2 | .4758 | .7242 | .50 | .70 |
| B5N 2 | 5 | .5200 | .04472 | .0200 0 | .4645 | .5755 | .50 | .60 |
| Total | 20 | .7200 | .18806 | .0420 5 | .6320 | .8080 | .50 | 1.00 |

Test of Homogeneity of Variances

| | | Levene Statistic | df1 | df2 | Sig. |
|--------|-----------------|---------------------|-----|-----|------|
| P.Akar | Based on Mean | 1.447 | 3 | 16 | .266 |
| | Based on Median | .844 | 3 | 16 | .489 |

| | | | | |
|---|-------|---|--------|------|
| Based on Median and with adjusted df | .844 | 3 | 11.111 | .497 |
| Based on trimmed mean | 1.494 | 3 | 16 | .254 |

ANOVA

P.Akar

| | Sum of Squares | df | Mean Square | F | Sig. |
|-------------------|-------------------|----|----------------|--------|------|
| Between Groups | .564 | 3 | .188 | 27.852 | .000 |
| Within Groups | .108 | 16 | .007 | | |
| Total | .672 | 19 | | | |

Homogeneous Subsets

P.Akar

Tukey HSD^a

| Konzentrasi | N | Subset for alpha = 0.05 | |
|-------------|---|-------------------------|-------|
| | | 1 | 2 |
| B5N2 | 5 | .5200 | |
| B5N1 | 5 | .6000 | |
| B5N0,5 | 5 | | .8200 |
| B5N0 | 5 | | .9400 |
| Sig. | | .438 | .137 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

2.5 Pangaruh Subkultur

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ONEWAY J.Tunas BY Subkultur
  /STATISTICS DESCRIPTIVES HOMOGENEITY
  /PLOT MEANS
  /MISSING ANALYSIS
  /POSTHOC=TUKEY ALPHA(0.05) .

```

Oneway

Descriptives

J.Tunas

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minim um | Maxim um |
|-----------|----|-------|-------------------|---------------|-------------------------------------|----------------|-------------|-------------|
| | | | | | Lower Bound | Upper Bound | | |
| 0 | 7 | 4.428 | .97590 | .3688 | 3.5260 | 5.3311 | 3.00 | 6.00 |
| I | 7 | 7.428 | .97590 | .3688 | 6.5260 | 8.3311 | 6.00 | 9.00 |
| II | 7 | 12.42 | 1.39728 | .5281 | 11.1363 | 13.7208 | 11.00 | 15.00 |
| Tot al | 21 | 8.095 | 3.54831 | .7743 | 6.4801 | 9.7104 | 3.00 | 15.00 |

Test of Homogeneity of Variances

| | | Levene Statistic | df1 | df2 | Sig. |
|---------|---|---------------------|-----|--------|------|
| J.Tunas | Based on Mean | .501 | 2 | 18 | .614 |
| | Based on Median | .267 | 2 | 18 | .769 |
| | Based on Median and with adjusted df | .267 | 2 | 16.667 | .769 |

| | | | | |
|-----------------------|------|---|----|------|
| Based on trimmed mean | .461 | 2 | 18 | .638 |
|-----------------------|------|---|----|------|

ANOVA

J.Tunas

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 228.667 | 2 | 114.333 | 88.926 | .000 |
| Within Groups | 23.143 | 18 | 1.286 | | |
| Total | 251.810 | 20 | | | |

Homogeneous Subsets

J.Tunas

Tukey HSD^a

| Subkultur | N | Subset for alpha = 0.05 | | |
|-----------|---|-------------------------|--------|---------|
| | | 1 | 2 | 3 |
| 0 | 7 | 4.4286 | | |
| I | 7 | | 7.4286 | |
| II | 7 | | | 12.4286 |
| Sig. | | 1.000 | 1.000 | 1.000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 7.000.

Lampiran 3. Tabel rerata optimasi hormon BAP dan NAA

Data Jumlah tunas (tunas/ eksplan)

| Hormon | | Ulangan | | | | Rerata | Sdev |
|---------|-------|---------|---|---|---|--------|-------|
| BAP:NAA | 5:0 | 4 | 3 | 4 | 4 | 3.75 | 0.500 |
| BAP:NAA | 5:0.5 | 5 | 6 | 6 | 5 | 5.5 | 0.577 |
| BAP:NAA | 5:1 | 4 | 4 | 5 | 4 | 4.25 | 0.500 |
| BAP:NAA | 5:2 | 4 | 4 | 5 | 4 | 4.25 | 0.500 |

Data Tinggi Tunas (cm)

| Hormon | | Ulangan | | | | | | Rerata | Sdev |
|---------|-------|---------|-----|-----|-----|-----|-----|--------|------|
| BAP:NAA | 5:0 | 3.3 | 3.4 | 2.4 | 2.5 | 2.5 | 2.3 | 2.73 | 0.48 |
| BAP:NAA | 5:0.5 | 2.5 | 2.3 | 2.2 | 2 | 2.5 | 2.8 | 2.38 | 0.28 |
| BAP:NAA | 5:1 | 2 | 1.5 | 1.5 | 1.5 | 1.2 | 1.2 | 1.48 | 0.29 |
| BAP:NAA | 5:2 | 0.8 | 0.6 | 0.6 | 0.7 | 0.5 | 0.6 | 0.63 | 0.10 |

Data Jumlah akar (akar/ eksplan)

| Hormon | | Ulangan | | | Rerata | Sdev |
|---------|-------|---------|---|---|--------|------|
| BAP:NAA | 5:0 | 2 | 2 | 3 | 2.33 | 0.6 |
| BAP:NAA | 5:0.5 | 3 | 4 | 3 | 3.33 | 0.6 |
| BAP:NAA | 5:1 | 4 | 4 | 5 | 4.33 | 0.6 |
| BAP:NAA | 5:2 | 6 | 6 | 5 | 5.67 | 0.6 |

Data Panjang akar (cm)

| Hormon | | Ulangan | | | | | Rerata | Sdev |
|---------|-------|---------|-----|-----|-----|-----|--------|-------|
| BAP:NAA | 5:0 | 1 | 1 | 0.8 | 0.9 | 1 | 0.94 | 0.089 |
| BAP:NAA | 5:0.5 | 0.8 | 0.9 | 0.9 | 0.8 | 0.7 | 0.82 | 0.084 |
| BAP:NAA | 5:1 | 0.5 | 0.6 | 0.7 | 0.5 | 0.7 | 0.6 | 0.1 |
| BAP:NAA | 5:2 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.52 | 0.045 |

Lampiran 4. Tabel rerata optimasi Jumlah Subkultur

Data Subkultur Jumlah Tunas (tunas/ eksplan)

| Subkultur | Ulangan | | | | | | | Rerata | Sdev |
|-----------|---------|----|----|----|----|----|----|--------|------|
| 0 | 3 | 4 | 6 | 4 | 5 | 5 | 4 | 4.43 | 0.98 |
| 1 | 7 | 8 | 9 | 6 | 8 | 7 | 7 | 7.43 | 0.98 |
| 2 | 12 | 13 | 11 | 12 | 15 | 11 | 12 | 12.29 | 1.38 |
| 3 | 12 | 13 | 11 | 12 | 15 | 11 | 12 | 12.29 | 1.38 |



FORM SKBIO.05

BUKTI BIMBINGAN SKRIPSI

Nama : Eka Nur Indah Sari Sartono Putri
NIM : 192500012
Judul Skripsi : Pengaruh Konsentrasi BAP dan NAA serta Jumlah Subkultur terhadap Multiplikasi Tunas Tanaman Sente Varigata (*Alocasia macrorrhiza*)
Dosen Pembimbing : Dr. Arif Yachya, S.Si., M.Si

| No | Tanggal | Materi Bimbingan | Pembimbing |
|----|------------|---------------------------------------|------------|
| 1. | 05-06-2023 | Bimbingan BAB 5 | |
| 2. | 12-06-2023 | Bimbingan Revisi BAB 5 | |
| 3. | 19-06-2023 | Bimbingan BAB 5 dan BAB 6 | |
| 4. | 26-06-2023 | Bimbingan Revisi BAB 5 dan BAB 6 | |
| 5. | 04-07-2023 | Bimbingan BAB 7 | |
| 6. | 10-07-2023 | Bimbingan revisi BAB 5, 6 dan 7 | |
| 7. | 14-07-2023 | Bimbingan BAB 1-7 | |
| 8. | 03-08-2023 | Bimbingan revisi hasil sidang skripsi | |

Mengetahui

Dekan FST,

Dra. Chahri Kusuma Binawati, M.Si
NIP. 196304081992022001

Dosen Pembimbing,

Dr. Arif Yachya, S.Si., M.Si.
NPP. 1302652/DY



FORM SKBIO.09

PERSETUJUAN PERBAIKAN SKRIPSI

Dosen Pembimbing dan Penguji dibawah ini telah menyetujui atas perbaikan naskah skripsi yang dilakukan oleh:

Nama : Eka Nur Indah Sari Sartono Putri
NIM : 12500012
Prodi : Biologi
Judul : Pengaruh Konsentrasi BAP dan NAA serta Jumlah Subkultur terhadap Multiplikasi Tunas Tanaman Sente Varigata (*Alocasia macrorrhiza*)

DOSEN PEMBIMBING

| No | Nama | Tanda tangan | Tanggal Persetujuan |
|----|----------------------------------|--------------|---------------------|
| 1. | Dr. Arif Yachya., S.Si., M.Si | | 09/08 2023 |

DOSEN PENGUJI

| No | Nama | Tanda tangan | Tanggal Persetujuan |
|----|----------------------|--------------|---------------------|
| 1. | Dra. Ngadiani, M.Kes | | 09/08 2023 |

***Catatan:**

Naskah skripsi dapat digandakan dan dijilid, apabila mahasiswa yang bersangkutan telah mendapat persetujuan dari dosen pembimbing dan dosen penguji.