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Lampiran

Lampiran 1. Analisis Unsur Nitrogen

Penentuan Kadar Nitrogen Total Tanah dengan Kjedahl

Alat - alat :

1. Timbangan analitik
2. Labu didih 250 ml
3. Erlenmeyer 100 ml
4. Buret 10 ml atau 5 ml
5. Gelas ukur 25 ml

Bahan - bahan khemikalia :

1. Asam sulfat pekat 98%
2. Selenium
3. Asam Borat 1%

   Dilarutkan 10 gram Asam Borat (H_3BO_3) dengan 1 liter (1000 ml) aquadest

4. Natrium Hidroksida (NaOH) 40 %

   Dilarutkan 400 gram NaOH dalam gelas piala 500 ml dengan aquadest, setelah dingin tambah aquadest sampai 1 liter dalam labu takar

5. Penunjuk Conway

   Dilarutkan 0,1 gram metil red dan 0,15 gram bromcresol green dengan 200 ml etanol 96%

6. H_2SO_4 0.05 N

   Diambil 1,38 ml H_2SO_4 pekat, kemudian dijadikan 1000 ml dengan aquadest

Cara Kerja :

Destruksi

1. Timbang 0.2 – 0.5 gr sampel tanah ukuran 0.5 mm, dimasukkan ke dalam labu didih
2. Ditambahkan 1 gram selenium dan 3 ml asam sulfat pekat
3. Di destruksi hingga suhu 350 °C (sekitar 3 – 4 jam), destruksi selesai apabila keluar uap putih dan didapat ekstrak jernih (sekitar 4 jam)
4. Setelah dingin ekstrak diencerkan dengan aquadest hingga 50 ml
5. Kocok sampai homogen, biarkan semalam agar partikel mengendap.

Destilasi

1. Pindahkan labu didih ke dalam alat destilasi.
2. Disiapkan erlenmeyer yang berisi 10 ml asam borat 1% dan ditambah 3 tetes indikator conway (sebagai penampung NH3 yang dibebaskan). Kemudian dihubungkan dengan alat destilasi.
3. Dengan gelas ukur tambah NaOH 40% sebanyak 10 ml ke dalam labu didih tadi dan secepatnya ditutup.
4. Destilasi hingga volume penampung mencapai 50 -75 ml (berwarna hijau).
5. Destilat dititrasi dengan H2SO4 0.05N hingga warna merah muda.
6. Catat Volume titrasi dan Volume blanko.

Perhitungan :

Kadar Nitrogen (%) = ((Vol titrasi – Vol blanko) x N x 14 x 100))/ (mg sampel x fk)

= ((Vol titrasi – Vol blanko) x 0.05 x 14 x 100))/ (500 mg x fk)

Keterangan :

N = Normalitas larutan baku H2SO4 (0.05N)

14 = Berat atom N

Fk = faktor koreksi kadar air = 100/(100 + % kadar air)

Lampiran 2. Analisis Unsur Fosfor

Tahap pengamatan

a. Sediakan alat dan bahan yang akan digunakan.

b. Timbang teliti 0.5000 g contoh kompos yang telah dihaluskan, kemudian dimasukkan ke dalam labu Digestion/ lab-u Kjeldahl.

c. Tambahkan 5 ml HNO3 dan 0.5 HclO4 kocok-kocok dan biarkan semalam.

d. Panaskan pada Block Digestormulai dengan suhu 100oC, setelah uap kuning habis suhu dinaikkan hingga 200oC.

e. Destruksi diakhiri bila sudah keluar uap putih dan cairan dalam labu tersisa sekitar 0.5 ml.

f. Dinginkan dan encerkan dengan H2O, kemudian volume ditepatkan menjadi 50 ml, kocok hingga homogen, biarkan semalam atau disaring dengan kertas saring W-41 agar didapat ekstrak jernih (ekstrak A).

Pengukuran P

1) Pipet 1 ml ekstrak B lalu masukkan ke dalam tabung kimia volume 20 ml (dipipet sebelum pengukuran K dan Na), begitupun masing-masing deret standar P (standar campuran III).

2) Sebanyak 9 ml pereaksi pembangkit warna ditambahkan ke dalam setiap sampel dan standar, kemudian dikocok menggunakan Vortex Mixer hingga homogen.

3) Larutan dibiarkan selama 15-25 menit sebelum diukur menggunakan Spektrofotometer pada panjang gelombang 693 nm, dan hasil absorbansi dicatat

Lampiran 3. Analisis Unsur Kalium

Penetapan kalium sebagai K_2O dapat dilakukan dengan metode titimetri, di mana kalium bereaksi dengan sodium tetrafenilborat dalam suasana basa lemah, membentuk endapan kalium tetrafenilborat yang dititrasi dengan benzalkonium klorida. Proses ini memerlukan beberapa pereaksi, seperti larutan ammonium oksalat, formaldehida, NaOH, indikator fenolftalein, sodium tetrafenilborat, benzalkonium klorida, dan indikator titan kuning. Selain titimetri, penetapan kalium juga dapat dilakukan menggunakan flame fotometer atau Spektrofotometer Serapan Atom (SSA/AAS).

Lampiran 4. Analisis Ph

Alat-alat

- Botol kocok 100 ml
- Gelas ukur 50 ml
- Mesin kocok
- Labu semprot 500ml
- pH meter

Pereaksi

- larutan buffer pH 7,0 dan 4,0

Cara kerja

- Ditimbang 10,00 g contoj pupuk organik halus
- Masukkan ke dalam botol kocok

- Tambah 50 ml air bebas ion
- Kocok dengan mesin kocok selama 30 menit
- Suspensi tanah diukur menggunakan pH meter yang telah dikalibrasi menggunakan larutan buffer pH 7,0 dan pH 4,0.

Lampiran 5. Analisis Suhu

Alat-alat

- Termometer

Cara kerja

Masukkan ujung termometer kedalam kompos.

LAMPIRAN

```
EXAMINE VARIABLES=Kalium Suhu pH
  /PLOT NPPLOT
  /STATISTICS DESCRIPTIVES
  /CINTERVAL 95
  /MISSING LISTWISE
  /NOTOTAL.
```

Explore

Notes

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	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
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Case Processing Summary

	Cases					
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	N	Percent	N	Percent	N	Percent
Kalium	24	100.0%	0	0.0%	24	100.0%
Suhu	24	100.0%	0	0.0%	24	100.0%
pH	24	100.0%	0	0.0%	24	100.0%

Descriptives

			Statistic	Std. Error
Kalium	Mean		3.9783	.46809
	95% Confidence Interval for Mean	Lower Bound	3.0100	
		Upper Bound	4.9467	
	5% Trimmed Mean		3.8462	
	Median		3.5400	

	Variance		5.259	
	Std. Deviation		2.29317	
	Minimum		.86	
	Maximum		9.48	
	Range		8.62	
	Interquartile Range		3.24	
	Skewness		1.031	.472
	Kurtosis		.877	.918
Suhu	Mean		26.8542	.04972
	95% Confidence Interval for Mean	Lower Bound	26.7513	
		Upper Bound	26.9570	
	5% Trimmed Mean		26.8403	
	Median		26.7500	
	Variance		.059	
	Std. Deviation		.24358	
	Minimum		26.50	

	Maximum		27.50	
	Range		1.00	
	Interquartile Range		.25	
	Skewness		.563	.472
	Kurtosis		.841	.918
pH	Mean		7.2294	.01763
	95% Confidence Interval for Mean	Lower Bound	7.1929	
		Upper Bound	7.2659	
	5% Trimmed Mean		7.2243	
	Median		7.2100	
	Variance		.007	
	Std. Deviation		.08639	
	Minimum		7.12	
	Maximum		7.44	
	Range		.32	
	Interquartile Range		.11	

	Skewness	.982	.472
	Kurtosis	.543	.918

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Kalium	.175	24	.056	.897	24	.018
Suhu	.207	24	.009	.881	24	.009
pH	.164	24	.095	.900	24	.022

a. Lilliefors Significance Correction

```
EXAMINE VARIABLES=Nitrogen Fosfor Warna
  /PLOT NPPLOT
  /STATISTICS DESCRIPTIVES
  /CINTERVAL 95
```

/MISSING LISTWISE

/NOTOTAL.

Explore

Notes

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	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
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Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Nitrogen	12	50.0%	12	50.0%	24	100.0%
Fosfor	12	50.0%	12	50.0%	24	100.0%
Warna	12	50.0%	12	50.0%	24	100.0%

Descriptives

			Statistic	Std. Error
Nitrogen	Mean		.4359	.02167
	95% Confidence Interval for Mean	Lower Bound	.3882	
		Upper Bound	.4836	
	5% Trimmed Mean		.4350	
	Median		.4317	

	Variance		.006	
	Std. Deviation		.07508	
	Minimum		.31	
	Maximum		.58	
	Range		.28	
	Interquartile Range		.11	
	Skewness		.185	.637
	Kurtosis		.211	1.232
Fosfor	Mean		5.6083	1.15067
	95% Confidence Interval for Mean	Lower Bound	3.0757	
		Upper Bound	8.1409	
	5% Trimmed Mean		4.9938	
	Median		4.4883	
	Variance		15.888	
	Std. Deviation		3.98602	
	Minimum		4.04	

	Maximum		18.24	
	Range		14.20	
	Interquartile Range		.42	
	Skewness		3.438	.637
	Kurtosis		11.870	1.232
Warna	Mean		1.83	.167
	95% Confidence Interval for Mean	Lower Bound	1.47	
		Upper Bound	2.20	
	5% Trimmed Mean		1.81	
	Median		2.00	
	Variance		.333	
	Std. Deviation		.577	
	Minimum		1	
	Maximum		3	
	Range		2	
	Interquartile Range		1	

	Skewness	-.063	.637
	Kurtosis	.655	1.232

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Nitrogen	.100	12	.200*	.994	12	1.000
Fosfor	.480	12	.000	.387	12	.000
Warna	.364	12	.000	.753	12	.003

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

a. Lilliefors Significance Correction

```
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  /INTERCEPT=INCLUDE
```

```
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  /CRITERIA=ALPHA(.05)

  /DESIGN=A B A*B.



UNIANOVA Kalium BY UrutSampel

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  /INTERCEPT=INCLUDE

  /POSTHOC=UrutSampel(DUNCAN)

  /PRINT DESCRIPTIVE HOMOGENEITY

  /CRITERIA=ALPHA(.05)

  /DESIGN=UrutSampel.
```

```
UNIANOVA Kalium BY A B
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  /INTERCEPT=INCLUDE
  /POSTHOC=A B(DUNCAN)
  /PRINT DESCRIPTIVE HOMOGENEITY
  /CRITERIA=ALPHA(.05)
  /DESIGN=A B A*B.
```

Univariate Analysis of Variance

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA Kalium BY A B /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /POSTHOC=A B(DUNCAN) /PRINT DESCRIPTIVE HOMOGENEITY /CRITERIA=ALPHA(.05) /DESIGN=A B A*B.
Resources	Processor Time	00:00:00,02

Elapsed Time	00:00:00,03	

Between-Subjects Factors

		Value Label	N
A	1	A0	6
	2	A1	6
	3	A2	6
	4	A3	6
B	1	B1	8
	2	B2	8
	3	B3	8

Descriptive Statistics

Dependent Variable: Kalium

A	B	Mean	Std. Deviation	N
A0	B1	2.3900	.02828	2
	B2	2.5650	.04950	2
	B3	.8750	.02121	2
	Total	1.9433	.83166	6
A1	B1	5.7650	.04950	2
	B2	9.4500	.04243	2
	B3	4.3250	.03536	2
	Total	6.5133	2.36437	6
A2	B1	4.1700	.04243	2
	B2	2.9200	.02828	2
	B3	2.1650	.03536	2
	Total	3.0850	.90615	6
A3	B1	4.7500	.04243	2

	B2	2.1900	.02828	2
	B3	6.1750	.00707	2
	Total	4.3717	1.80623	6
Total	B1	4.2688	1.31075	8
	B2	4.2812	3.20226	8
	B3	3.3850	2.16846	8
	Total	3.9783	2.29317	24

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
Kalium	Based on Mean	775955821957893200000000000.000	11	12	.000
	Based on Median	775955821957893200000000000.000	11	12	.000

	Based on Median and with adjusted df	775955821957893200000000000.000	11	2.000	.000
	Based on trimmed mean	387977910978946600000000000.000	11	12	.000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: Kalium

b. Design: Intercept + A + B + A * B

Tests of Between-Subjects Effects

Dependent Variable: Kalium

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	120.933[a]	11	10.994	8402.976	.000
Intercept	379.851	1	379.851	290332.178	.000

A	69.121	3	23.040	17610.505	.000
B	4.225	2	2.113	1614.710	.000
A * B	47.586	6	7.931	6061.967	.000
Error	.016	12	.001		
Total	500.800	24			
Corrected Total	120.949	23			

a. R Squared = 1.000 (Adjusted R Squared = 1.000)

Post Hoc Tests

A

Homogeneous Subsets

Kalium

Duncan[a,b]

A	N	Subset

		1	2	3	4
A0	6	1.9433			
A2	6		3.0850		
A3	6			4.3717	
A1	6				6.5133
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = .001.

a. Uses Harmonic Mean Sample Size = 6.000.

b. Alpha = ,05.

B

Homogeneous Subsets

Kalium

Duncan[a,b]

B	N	Subset

		1	2
B3	8	3.3850	
B1	8		4.2688
B2	8		4.2812
Sig.		1.000	.503

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = .001.

a. Uses Harmonic Mean Sample Size = 8.000.

b. Alpha = ,05.

```
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  /PRINT DESCRIPTIVE HOMOGENEITY

  /CRITERIA=ALPHA(.05)

  /DESIGN=A B A*B.

UNIANOVA Suhu BY A B

  /METHOD=SSTYPE(3)

  /INTERCEPT=INCLUDE

  /POSTHOC=A B(DUNCAN)

  /PRINT DESCRIPTIVE HOMOGENEITY

  /CRITERIA=ALPHA(.05)

  /DESIGN=A B.
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Univariate Analysis of Variance

Notes

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	Cases Used	Statistics are based on all cases with valid data for all variables in the model.

Syntax		UNIANOVA Suhu BY A B /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /POSTHOC=A B(DUNCAN) /PRINT DESCRIPTIVE HOMOGENEITY /CRITERIA=ALPHA(.05) /DESIGN=A B.
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	Elapsed Time	00:00:00,03

Between-Subjects Factors

		Value Label	N
A	1	A0	6
	2	A1	6
	3	A2	6
	4	A3	6
B	1	B1	8
	2	B2	8
	3	B3	8

Descriptive Statistics

Dependent Variable: Suhu

A	B	Mean	Std. Deviation	N
A0	B1	27.1250	.53033	2
	B2	27.1250	.17678	2

	B3	27.0000	.00000	2
	Total	27.0833	.25820	6
A1	B1	26.6250	.17678	2
	B2	26.8750	.17678	2
	B3	26.6250	.17678	2
	Total	26.7083	.18819	6
A2	B1	26.7500	.00000	2
	B2	26.5000	.00000	2
	B3	26.7500	.00000	2
	Total	26.6667	.12910	6
A3	B1	26.8750	.17678	2
	B2	27.0000	.00000	2
	B3	27.0000	.00000	2
	Total	26.9583	.10206	6
Total	B1	26.8438	.29693	8
	B2	26.8750	.26726	8

	B3	26.8438	.18601	8
	Total	26.8542	.24358	24

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Suhu

F	df1	df2	Sig.
2.750	11	12	.048

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + A + B

Tests of Between-Subjects Effects

Dependent Variable: Suhu

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.724[a]	5	.145	4.068	.012
Intercept	17307.510	1	17307.510	486298.829	.000
A	.719	3	.240	6.732	.003
B	.005	2	.003	.073	.930
Error	.641	18	.036		
Total	17308.875	24			
Corrected Total	1.365	23			

a. R Squared = .531 (Adjusted R Squared = .400)

Post Hoc Tests

A

Homogeneous Subsets

Suhu

Duncan[a,b]

		Subset	
A	N	1	2
A2	6	26.6667	
A1	6	26.7083	
A3	6		26.9583
A0	6		27.0833
Sig.		.707	.266

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = .036.

a. Uses Harmonic Mean Sample Size = 6.000.

b. Alpha = ,05.

B

Homogeneous Subsets

Suhu

Duncan[a,b]

B	N	Subset 1
B1	8	26.8438
B3	8	26.8438
B2	8	26.8750
Sig.		.758

Means for groups in

homogeneous subsets are

displayed.

Based on observed means.

The error term is Mean

Square(Error) = .036.

a. Uses Harmonic Mean

Sample Size = 8.000.

b. Alpha = ,05.

```
UNIANOVA pH BY A B
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /POSTHOC=A B(DUNCAN)
  /PRINT DESCRIPTIVE HOMOGENEITY
  /CRITERIA=ALPHA(.05)
  /DESIGN=A B
```

Univariate Analysis of Variance

Notes

Output Created		10-FEB-2025 13:53:53
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	24
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.

Syntax		UNIANOVA pH BY A B /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /POSTHOC=A B(DUNCAN) /PRINT DESCRIPTIVE HOMOGENEITY /CRITERIA=ALPHA(.05) /DESIGN=A B.
Resources	Processor Time	00:00:00,02
	Elapsed Time	00:00:00,02

Between-Subjects Factors

		Value Label	N
A	1	A0	6
	2	A1	6
	3	A2	6
	4	A3	6
B	1	B1	8
	2	B2	8
	3	B3	8

Descriptive Statistics

Dependent Variable: pH

A	B	Mean	Std. Deviation	N
A0	B1	7.1613	.02298	2
	B2	7.1362	.01237	2

	B3	7.1500	.00707	2
	Total	7.1492	.01648	6
A1	B1	7.3975	.01414	2
	B2	7.3563	.11137	2
	B3	7.2125	.05657	2
	Total	7.3221	.10347	6
A2	B1	7.2600	.01414	2
	B2	7.2300	.02828	2
	B3	7.2638	.00177	2
	Total	7.2513	.02178	6
A3	B1	7.1625	.06364	2
	B2	7.2025	.01061	2
	B3	7.2200	.08132	2
	Total	7.1950	.05339	6
Total	B1	7.2453	.10662	8
	B2	7.2312	.09594	8

	B3	7.2116	.05737	8
	Total	7.2294	.08639	24

Levene's Test of Equality of Error Variances[a]

Dependent Variable: pH

F	df1	df2	Sig.
1.346	11	12	.308

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + A + B

Tests of Between-Subjects Effects

Dependent Variable: pH

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.105[a]	5	.021	5.635	.003
Intercept	1254.333	1	1254.333	337428.201	.000
A	.100	3	.033	8.979	.001
B	.005	2	.002	.619	.550
Error	.067	18	.004		
Total	1254.504	24			
Corrected Total	.172	23			

a. R Squared = .610 (Adjusted R Squared = .502)

Post Hoc Tests

A

Homogeneous Subsets

pH

Duncan[a,b]

A	N	Subset 1	2	3
A0	6	7.1492		
A3	6	7.1950	7.1950	
A2	6		7.2513	7.2513
A1	6			7.3221
Sig.		.209	.127	.059

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = .004.

a. Uses Harmonic Mean Sample Size = 6.000.

b. Alpha = ,05.

B

Homogeneous Subsets

pH

Duncan[a,b]

B	N	Subset 1
B3	8	7.2116
B2	8	7.2312
B1	8	7.2453
Sig.		.309

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = .004.

a. Uses Harmonic Mean Sample Size = 8.000.

b. Alpha = ,05.

```
UNIANOVA Fosfor BY A B
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /POSTHOC=A B(DUNCAN)
  /PRINT DESCRIPTIVE HOMOGENEITY
  /CRITERIA=ALPHA(.05)
  /DESIGN=A B.
```

Univariate Analysis of Variance

Notes

Output Created		10-FEB-2025 13:57:34
Comments		
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	Split File	<none>

	N of Rows in Working Data File	24
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.

Syntax		UNIANOVA Fosfor BY A B /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /POSTHOC=A B(DUNCAN) /PRINT DESCRIPTIVE HOMOGENEITY /CRITERIA=ALPHA(.05) /DESIGN=A B.
Resources	Processor Time	00:00:00,00
	Elapsed Time	00:00:00,00

Between-Subjects Factors

		Value Label	N
A	1	A0	3
	2	A1	3
	3	A2	3
	4	A3	3
B	1	B1	4
	2	B2	4
	3	B3	4

Descriptive Statistics

Dependent Variable: Fosfor

A	B	Mean	Std. Deviation	N
A0	B1	18.2392	.	1
	B2	4.5759	.	1

	B3	4.7031	.	1
	Total	9.1727	7.85205	3
A1	B1	4.1228	.	1
	B2	4.6620	.	1
	B3	4.0383	.	1
	Total	4.2743	.33836	3
A2	B1	4.4403	.	1
	B2	4.4076	.	1
	B3	4.3564	.	1
	Total	4.4015	.04230	3
A3	B1	4.5362	.	1
	B2	4.9684	.	1
	B3	4.2489	.	1
	Total	4.5845	.36215	3
Total	B1	7.8346	6.93864	4
	B2	4.6535	.23500	4

	B3	4.3367	.27772	4
	Total	5.6083	3.98602	12

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Fosfor

F	df1	df2	Sig.
14.71.	11	0	0,000.

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + A + B

Tests of Between-Subjects Effects

Dependent Variable: Fosfor

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	80.909[a]	5	16.182	1.034	.474
Intercept	377.431	1	377.431	24.126	.003
A	50.968	3	16.989	1.086	.424
B	29.941	2	14.971	.957	.436
Error	93.863	6	15.644		
Total	552.203	12			
Corrected Total	174.772	11			

a. R Squared = .463 (Adjusted R Squared = .015)

Post Hoc Tests

A

Homogeneous Subsets

Fosfor

Duncan[a,b]

A	N	Subset 1
A1	3	4.2743
A2	3	4.4015
A3	3	4.5845
A0	3	9.1727
Sig.		.198

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 15.644.

a. Uses Harmonic Mean Sample Size = 3.000.

b. Alpha = ,05.

B

Homogeneous Subsets

Fosfor

Duncan[a,b]

B	N	Subset 1
B3	4	4.3367
B2	4	4.6535

B1	4	7.8346
Sig.		.272

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 15.644.

a. Uses Harmonic Mean Sample Size = 4.000.

b. Alpha = ,05.

```
UNIANOVA Nitrogen BY A B
  /METHOD=SSTYPE(3)
  /INTERCEPT=INCLUDE
  /POSTHOC=A B(DUNCAN)
  /PRINT DESCRIPTIVE HOMOGENEITY
```

/CRITERIA=ALPHA(.05)

/DESIGN=A B.

Univariate Analysis of Variance

Notes

Output Created		10-FEB-2025 14:00:33
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	24
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.

Syntax		UNIANOVA Nitrogen BY A B /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /POSTHOC=A B(DUNCAN) /PRINT DESCRIPTIVE HOMOGENEITY /CRITERIA=ALPHA(.05) /DESIGN=A B.
Resources	Processor Time	00:00:00,03
	Elapsed Time	00:00:00,03

Between-Subjects Factors

		Value Label	N
A	1	A0	3
	2	A1	3
	3	A2	3
	4	A3	3
B	1	B1	4
	2	B2	4
	3	B3	4

Descriptive Statistics

Dependent Variable: Nitrogen

A	B	Mean	Std. Deviation	N
A0	B1	.3772	.	1
	B2	.3062	.	1

	B3	.3489	.	1
	Total	.3441	.03578	3
A1	B1	.4756	.	1
	B2	.4167	.	1
	B3	.4561	.	1
	Total	.4494	.03000	3
A2	B1	.4933	.	1
	B2	.5123	.	1
	B3	.5819	.	1
	Total	.5292	.04662	3
A3	B1	.4306	.	1
	B2	.4328	.	1
	B3	.3993	.	1
	Total	.4209	.01872	3
Total	B1	.4442	.05185	4
	B2	.4170	.08489	4

	B3	.4465	.10028	4
	Total	.4359	.07508	12

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Nitrogen

F	df1	df2	Sig.
1.2.98	11	0	0,000.

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + A + B

Tests of Between-Subjects Effects

Dependent Variable: Nitrogen

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.055[a]	5	.011	9.066	.009
Intercept	2.280	1	2.280	1887.319	.000
A	.053	3	.018	14.514	.004
B	.002	2	.001	.894	.457
Error	.007	6	.001		
Total	2.342	12			
Corrected Total	.062	11			

a. R Squared = .883 (Adjusted R Squared = .786)

Post Hoc Tests

A

Homogeneous Subsets

Nitrogen

Duncan[a,b]

A	N	Subset

		1	2	3
A0	3	.3441		
A3	3		.4209	
A1	3		.4494	
A2	3			.5292
Sig.		1.000	.354	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = .001.

a. Uses Harmonic Mean Sample Size = 3.000.

b. Alpha = ,05.

B

Homogeneous Subsets

Nitrogen

Duncan[a,b]

B	N	Subset 1
B2	4	.4170
B1	4	.4442
B3	4	.4465
Sig.		.289

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = .001.

a. Uses Harmonic Mean Sample Size = 4.000.

b. Alpha = ,05.