LAMPIRAN

LAMPIRAN 1. Hasil Pengukuran Suhu dan pH dalam Media Kultur Selama Inkubasi Kultur *Chlorella vulgaris* Bey Berlangsung

Konsentrasi		Hari ke-0	Hari ke-2	Hari ke-4	Hari ke-6	Hari ke-8
0%	pH	5.5	5.5	5.5	6	6
	Suhu (°C)	28.5	28	29	28.5	27.5
10%	pH	6.5	6.5	7	7	7
	Suhu (°C)	28.5	29	28	27	28
25%	pH	7	7	8	8	8
	Suhu (°C)	28.5	28.5	29	28.5	27.5
50%	pH	7	8	8	8	8
	Suhu (°C)	29	28	28	22.5	28
75%	pH	7.5	8	8	8.5	8.5
	Suhu (°C)	29	28	28.5	28.5	28
100 %	pH	7.5	8	8	9	9
	Suhu (°C)	29	28.5	28.5	28	28
Walne	pH	5.5	5.5	5.5	5.5	5.5
	Suhu (°C)	29	28	28.5	27.5	28

LAMPIRAN 2. Perhitungan Laju Spesifik (μ) dan Waktu Penggandaan Diri (*Doubling Time* = dt) dari *Chlorella vulgaris* Bey Selama Inkubasi

Y 0% = fase stasioner 0-7

$Y\ 0\% = 0.0005x^4 - 0.012x^3 + 0.0877x^2 - 0.1308x + 6.1969$

$Y_7 = 0.0005(7)^4 - 0.012(7)^3 + 0.0877(7)^2 - 0.1308(7) + 6.1969 = 6.6631$

= antilog 6.6631 = 4.603.625.638

$Y_0 = 0.0005(0)^4 - 0.012(0)^3 + 0.0877(0)^2 - 0.1308(0) + 6.1969 = 6.1969$

= antilog 6.1969 = 1.573.620.483

$\mu\ 0\% = \frac{\ln Y_7 - \ln Y_0}{t_7 - t_0} = \frac{\ln 15.342 - \ln 14.2688}{7} = 0.153$ sel/hari

$dt = \frac{\ln 2}{\mu} = \frac{0.693}{0.153} = 4.530$ hari

Y 10% = fase stasioner 0 –8 hari

$Y\ 10\% = -0.0002x^4 + 0.0044x^3 - 0.00392x^2 + 0.2511x + 6.2279$

$Y_8 = -0.0002(8)^4 + 0.0044(8)^3 - 0.00392(8)^2 + 0.2511(8) + 6.2279 = 7.1615$

= antilog 7.1615 = 14504.407.74

$Y_0 = -0.0002(0)^4 + 0.0044(0)^3 - 0.00392(0)^2 + 0.2511(0) + 6.2279 = 6.2279$

= antilog 6.2279

$\mu 10\% = \frac{\ln Y_8 - \ln Y_0}{t_8 - t_0} = \frac{16,489 - 14.340}{8} = 0.2686$ sel/hari

$dt = \frac{\ln 2}{\mu} = \frac{0.693}{0.2689} = 2.58$ hari

Y 25% = fase stasioner 0-8 hari

$Y\ 25\% = 0.0022x^4 - 0.0447x^3 + 0.2721x^2 - 0.3176x + 6.196$

$Y_8 = 0.0022(8)^4 - 0.0447(8)^3 + 0.2721(8)^2 - 0.3176(8) + 6.196 = 7.1944$

= antilog 7.1944 = 15.645.880.18

$Y_0 = 0.0022(0)^4 - 0.0447(0)^3 + 0.2721(0)^2 - 0.3176(0) + 6.196 = 6.196$

= antilog 6.196 = 1.570.362.804

$\mu 25\% = \frac{\ln Y8 - \ln Y0}{t_8 - t_0} = \frac{16.5657 - 14.2668}{8} = 0.287$ sel/hari

$dt = \frac{\ln 2}{\mu} = \frac{0.693}{0.287} = 2.41$ hari

Y 50% = fase stasioner 0-7

$Y\ 50\% = 0.0017x^4 - 0.0349x^3 + 0.1929x^2 - 0.0557x + 6.1682$

$Y_7 = 0.0017(7)^4 - 0.0349(7)^3 + 0.1929(7)^2 - 0.0557(7) + 6.1682 = 7.3414$

= antilog 7.3414 = 21.948.255.14

$Y_0 = 0.0017(0)^4 - 0.0349(0)^3 + 0.1929(0)^2 - 0.0557(0) + 6.1682 = 0.6182$

= antilog 0.6182 = 1.472.990.684

$\mu 50\% = \frac{\ln Y_7 - \ln Y_0}{t_7 - t_0} = \frac{16.904 - 14.2028}{7} = 0.3858$ sel/hari

LANJUTAN LAMPIRAN 2.

$dt = \frac{\ln 2}{\mu} = \frac{0.693}{0.3858} = 1.796$ hari

Y 75% = fase stasioner 0-7 hari

Y 75% = $0.0021x + - 0.0442x^3 + 0.2744x^2 - 0.2999x + 6.1957$

$Y_7 = 0.0021(7)^4 - 0.0442(7)^3 + 0.2744(7)^2 - 0.2999(7) + 6.1957 = 9.2229$

= antilog 9.2229 = 1.670 705 876

$Y_0 = 0.0021(0)^4 - 0.0442(0)^3 + 0.2744(0)^2 - 0.2999(0) + 6.1957 = 6.1957$

= antilog 6.1957 = 1.569.278.411

$\mu 75\% = \frac{\ln Y_7 - \ln Y_0}{t_7 - t_0} = \frac{21.2365 - 14,2661}{7} = 0.995$ sel/hari

$dt = \frac{\ln 2}{\mu} = \frac{0.693}{0.995} = 0.6959$ hari

Y 100% = fase stasioner 0-7 hari

Y 100% = $-0.0051x^3 + 0.0548x^2 + 0.0144x + 6.19$

$Y_7 = -0.0051(7)^3 + 0.0548(7)^2 + 0.0144(7) + 6.19 = 7.1403$

= antilog 7.1403 = 13.813.381.3

$Y_0 = -0.0051(0)^3 + 0.0548(0)^2 + 0.0144(0) + 6.19 = 6.19$

= antilog 6.19 = 1.548.816.619

$\mu 100\% = \frac{\ln Y_7 - \ln Y_0}{t7 - t0} = \frac{16.441 - 14.253}{7} = 0.31259$ sel/ hari

$dt = \frac{\ln 2}{\mu} = \frac{0.693}{0.31259} = 2.2169$ hari

Y walne = fase stasioner 0-7

Y walne = $-0.0073x^3 + 0.0806x^2 - 0.0951x + 6.2432$

$Y_7 = -0.0073(7)^3 + 0.0806(7)^2 - 0.0951(7) + 6.2432 = 7.023$

= antilog 7.023 = 10.543.868.96

$Y_0 = -0.0073(0)^3 + 0.0806(0)^2 - 0.0951(0) + 6.2432 = 6.2432$

= antilog 6.2432 = 1.750.642.708

μ walne $= \frac{\ln Y_7 - \ln Y_0}{t_7 - t_0} = \frac{16.171 - 14.375}{7} = 0.256$ sel/hari

$dt = \frac{\ln 2}{\mu} = \frac{0.693}{0.256} = 2.7$ hari

LAMPIRAN 3. Analisa Data Pengukuran Protein *Chlorella vulgaris* Bey

UJI NORMALITAS

NPar Tests

One-Sample Kolmogorov-Smirnov Test

			PST
N			14
Normal Parameters	a,b	Mean	46,8793
		Std. Deviation	14,80890
Most Extreme Differences		Absolute	,434
		Positive	,281
		Negative	-,434
Kolmogorov-Smirnov Z			1,622
Asymp. Sig. (2-tailed)			,010

a. Test distribution is Normal.

b. Calculated from data.

ANOVA

PST

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2735,577	6	455,929	27,663	,000
Within Groups	115,371	7	16,482		
Total	2850,947	13			

Post Hoc Tests
Homogeneous Subsets

PST

Duncan[a]

KONS	N	Subset for alpha = .05	
		1	2
0	2	13,1250	
10	2		48,1250
25	2		52,5000
50	2		52,5000
75	2		52,5000
walne	2		52,5000
100	2		56,9050
Sig.		1,000	,084

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 2,000.

LAMPIRAN 4. Analisa Korelasi Protein *Chlorella vulgaris* Bey

Correlations

Correlations

		KONS	PST
KONS	Pearson Correlation	1	,679**
	Sig. (1-tailed)	,	,004
	N	14	14
PST	Pearson Correlation	,679**	1
	Sig. (1-tailed)	,004	,
	N	14	14

**. Correlation is significant at the 0.01 level