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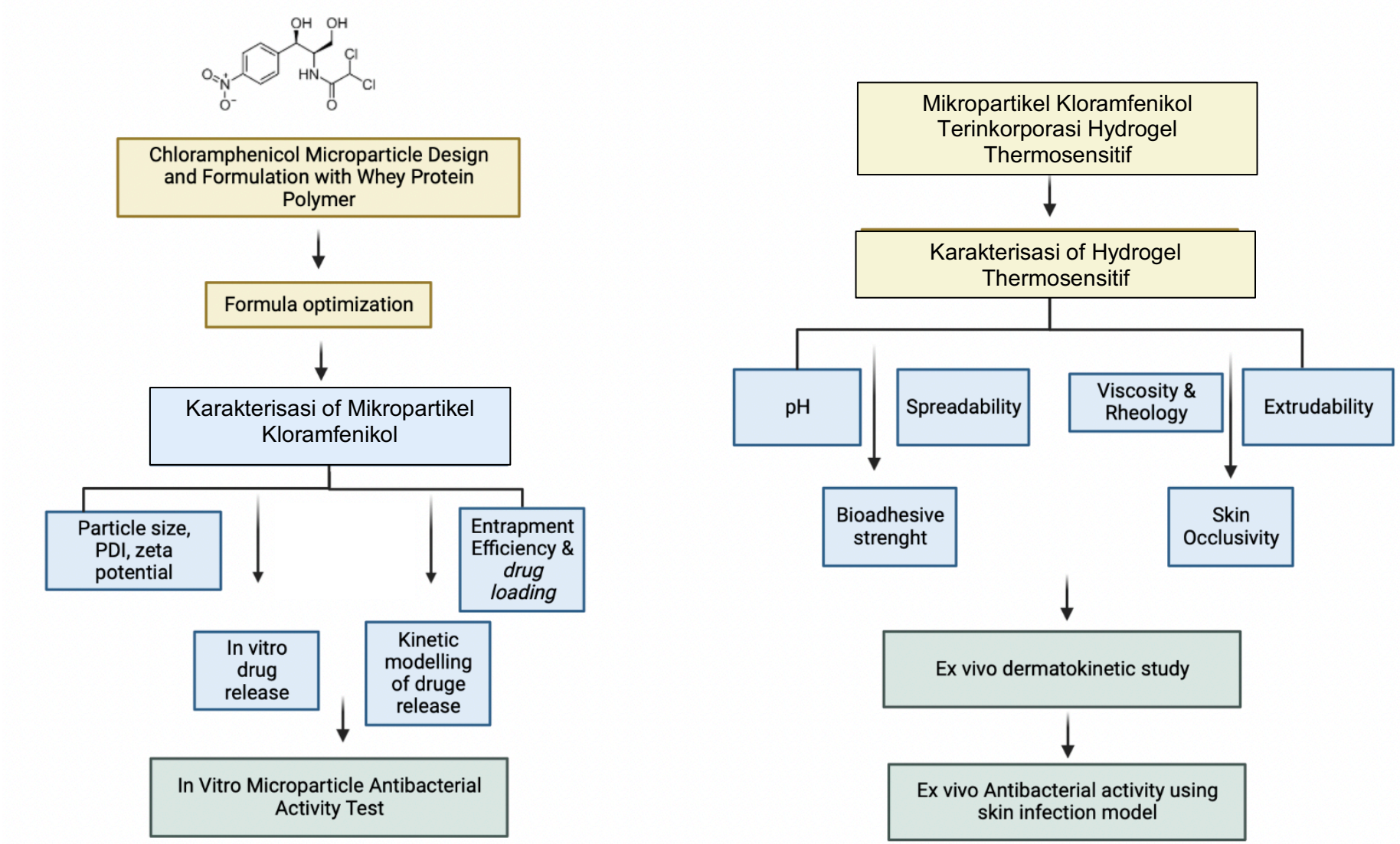
LAMPIRAN

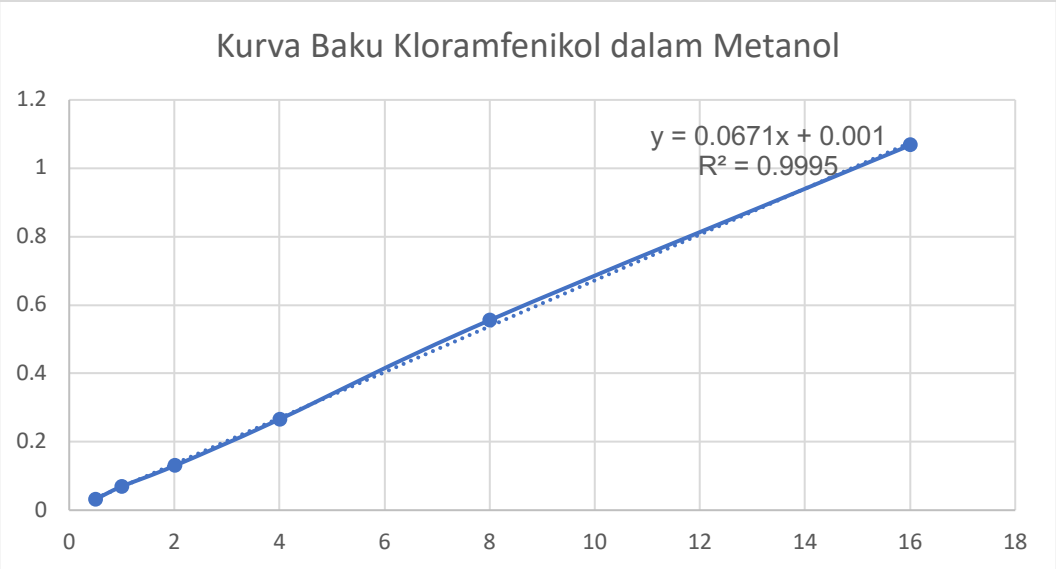
Lampiran 1. Prosedur Penelitian



Lampiran 2. Persamaan Kurva Baku Kloramfenikol dalam Metanol

Tabel 9. Persamaan Kurva Baku Kloramfenikol dalam Metanol

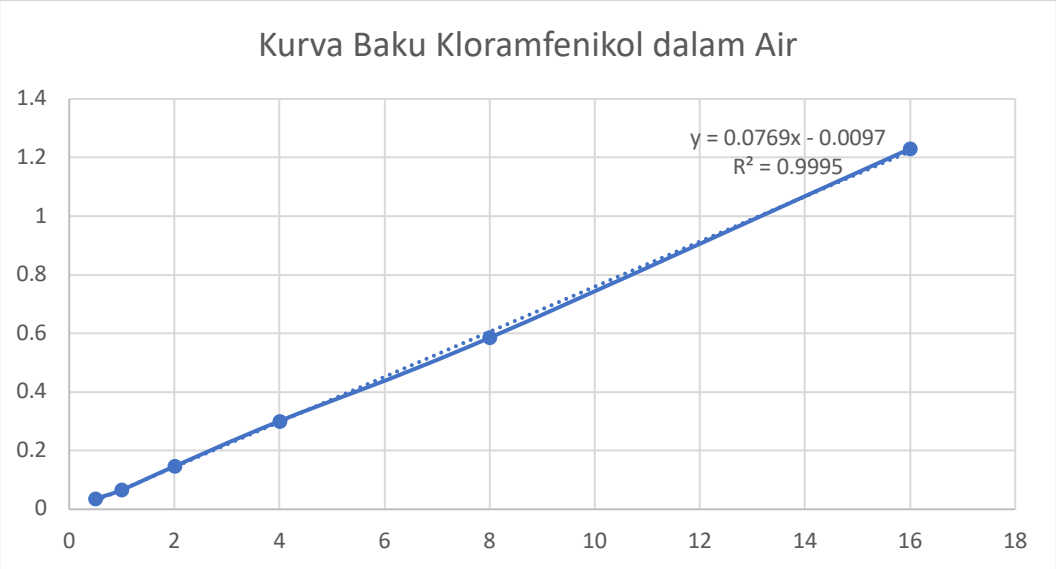
Konsentrasi Pengenceran	Replikasi 1	2	3	Absorbansi
0.5	0.031	0.029	0.036	0.032
1	0.068	0.071	0.069	0.069333
2	0.139	0.122	0.128	0.129667
4	0.277	0.251	0.269	0.265667
8	0.587	0.577	0.503	0.555667
16	1.098	1.102	1.002	1.067333



Lampiran 3. Persamaan Kurva Baku Kloramfenikol dalam Air

Tabel 10. Persamaan Kurva Baku Kloramfenikol dalam Air

Konsentrasi Pengenceran	Replikasi 1	2	3	Absorbansi
0.5	0.039	0.032	0.038	0.036333
1	0.071	0.066	0.061	0.066
2	0.153	0.148	0.138	0.146333
4	0.318	0.298	0.287	0.301
8	0.619	0.574	0.563	0.585333
16	1.198	1.211	1.282	1.230333



Lampiran 4. Ukuran Partikel CAP-MP's

Tabel 11. Ukuran Partikel CAP-MP's

Formula	Replikasi			Rata-rata	SD
	1	2	3		
F1	0,95	0,87	1.02	0.94	0,07
F2	0,98	1,09	0.88	0.98	0,10
F3	1,19	0,99	1,18	1.12	0,11
F4	1,18	1,21	0,95	1.11	0,14
F5	1,19	0,96	1,28	1.14	0,16
F6	0,39	0,29	0,41	0.35	0,06
F7	2,26	2,19	2,24	2.23	0,03
F8	5,87	6,24	5,94	6.01	0,19
F9	8,98	9,12	8,74	8.94	0,19
F10	6,09	7,98	3,13	7.40	1,13
F11	2,09	2,18	2,23	2.16	0,07
F12	5,56	5,98	5,32	5.62	0,03
F13	2,03	2,13	2,16	2.10	0,06
F14	2,04	1,98	2,17	2,06	0,09

Lampiran 5. Indeks Polidispersitas

Tabel 12. Indeks Polidispersitas (PDI) CAP-MP's

Formula	Replikasi			Rata-rata	SD
	1	2	3		
F1	0,102	0,118	0,114	0.11	0,008
F2	0,112	0,114	0,109	0.11	0,002
F3	0,118	0,121	0,112	0.11	0,004
F4	0,114	0,105	0,119	0.11	0,007
F5	0,118	0,118	0,121	0.12	0,001
F6	0,105	0,116	0,112	0.11	0,005
F7	0,121	0,118	0,127	0.12	0,004
F8	0,143	0,187	0,128	0.15	0,031
F9	0,312	0,309	0,332	0.31	0,012
F10	0,283	0,292	0,303	0.29	0,010
F11	0,111	0,103	0,116	0.11	0,006
F12	0,288	0,281	0,298	0.28	0,008
F13	0,113	0,121	0,118	0.12	0,004
F14	0,118	0,115	0,117	0.12	0,001

Lampiran 6. Zeta Potensial

Tabel 13. Zeta Potensial CAP-MP's

Formula	Replikasi			Rata-rata	SD
	1	2	3		
F1	-28,32	-27,32	-28,01	-27.88	0,51
F2	-28,11	-27,32	-29,01	-28.14	0,84
F3	-28,19	-29,03	-28,11	-28.44	0,51
F4	-27,98	-28,11	-28,34	-28.14	0,18
F5	-27,15	-29,01	-28,21	-28.12	0,93
F6	-25,01	-26,11	-25,87	-25.66	0,57
F7	-34,32	-33,11	-33,98	-33.80	0,62
F8	-36,23	-34,98	-35,42	-35.54	0,63
F9	-29,54	-30,11	-39,45	-33.03	5,56
F10	-31,21	-30,42	-31,33	-30.98	0,49
F11	-35,54	-34,02	-34,98	-34.84	0,76
F12	-27,32	-26,53	-25,09	-26.31	1,13
F13	-34,32	-34,11	-35,01	-34.48	0,47
F14	-34,98	-33,87	-35,61	-34.82	0,88

Lampiran 7. Efisiensi Penjerapan

Berdasarkan persamaan garis regresi kurva baku:

y = 0.0671x + 0.001 dengan koefisien korelasi (r) = 0.9995

x adalah konsentrasi

Y adalah serapan

Sehingga $x=\frac{Y-a}{b}$, misal Pada F1 Replikasi 1

Maka, konsentrasi ditentukan berdasarkan perhitungan :

Konsentrasi obat yang ditambahkan dalam formulasi = 25 mg

$x = \frac{0,834-0,001}{0,0671}$ = 12,548 µg/ml

Faktor pengenceran = 100

Konsentrasi dalam 5 mL = 12,548 µg/ml x 100 x 5 ml = 6274,218 µg

Konsentrasi dalam mg = 6274,218 µg / 1000 = 6,274218 mg

Persen Efisiensi Penjerapan = $\frac{6274,218}{25}$ x 100%

= 25,09687

Tabel 14. Efisiensi penjerapan CAP-MP's

Formula	Jumlah kloram dalam formula (mg)	Serapan	Kadar kloram (μg/mL)	FP	Jumlah kloram dlm 5 mL (μg)	EE (%)	Rata-rata EE (%)	SD EE
F1	25	0.843	12.54844	1000	6274.218	25.09687	25.79235	0.750108
		0.893	13.29359		6646.796	26.58718		
		0.863	12.8465		6423.249	25.693		
F2	50	0.203	3.010432	1000	15052.16	30.10432	33.58172	3.187087
		0.245	3.636364		18181.82	36.36364		
		0.231	3.42772		17138.6	34.2772		
F3	100	0.598	8.897168	1000	44485.84	44.48584	42.00199	3.102334
		0.518	7.704918		38524.59	38.52459		
		0.578	8.599106		42995.53	42.99553		
F4	200	0.732	10.89419	1000	54470.94	27.23547	28.05514	0.838922
		0.753	11.20715		56035.77	28.01788		
		0.777	11.56483		57824.14	28.91207		
F5	400	0.812	12.08644	1000	60432.19	15.10805	14.87208	0.224579
		0.798	11.87779		59388.97	14.84724		
		0.788	11.72876		58643.82	14.66095		
F6	100	0.278	4.128167	1000	20640.83	20.64083	21.36115	0.746397
		0.298	4.42623		22131.15	22.13115		
		0.287	4.262295		21311.48	21.31148		
F7	100	0.909	13.53204	1000	67660.21	67.66021	68.72827	1.312689

		0.918	13.66617		68330.85	68.33085		
		0.943	14.03875		70193.74	70.19374		
F8	100	0.932	13.87481	1000	69374.07	69.37407	69.69697	0.830886
		0.928	13.8152		69076.01	69.07601		
		0.949	14.12817		70640.83	70.64083		
F9	100	0.159	2.354694	1000	11773.47	11.77347	12.14605	0.777966
		0.176	2.608048		13040.24	13.04024		
		0.157	2.324888		11624.44	11.62444		
F10	100	0.519	7.719821	1000	38599.11	38.59911	39.49329	3.007517
		0.498	7.406855		37034.28	37.03428		
		0.576	8.5693		42846.5	42.8465		
F11	100	0.965	14.36662	1000	71833.08	71.83308	70.64083	1.125162
		0.947	14.09836		70491.8	70.4918		
		0.935	13.91952		69597.62	69.59762		
F12	100	0.645	9.597615	1000	47988.08	47.98808	46.54744	1.831832
		0.598	8.897168		44485.84	44.48584		
		0.634	9.433681		47168.41	47.16841		
F13	100	0.943	14.03875	1000	70193.74	70.19374	69.97019	1.097684
		0.924	13.75559		68777.94	68.77794		
		0.953	14.18778		70938.9	70.9389		
F14	100	0.813	12.10134128	1000	60506.70641	60.50670641	59.14058619	1.505757036
		0.798	11.87779434		59388.97168	59.38897168		
		0.773	11.5052161		57526.08048	57.52608048		

Lampiran 8. Persen *Drug Loading*

Berdasarkan persamaan garis regresi kurva baku:

y = 0.0671x + 0.001 dengan koefisien korelasi (r) = 0.9995

x adalah konsentrasi

Y adalah serapan

Sehingga $x=\frac{Y-a}{b}$, misal Pada F1 Replikasi 1

Maka, konsentrasi ditentukan berdasarkan perhitungan :

x = $\frac{0,048-0,001}{0,0671}$ = 0,7004 µg/ml

Massa endapan = 487 mg

Faktor pengenceran = 100

Konsentrasi dalam 5 mL = 12,548 µg/ml x 100 x 5 ml = 6274,218 µg

Konsentrasi dalam mg = 6274,218 µg / 1000 = 6,274218 mg

Persen *Drug Loading* = $\frac{6,274218}{487}$ x 100%

= 1,28834

Tabel 15. Drug loading CAP-MP's

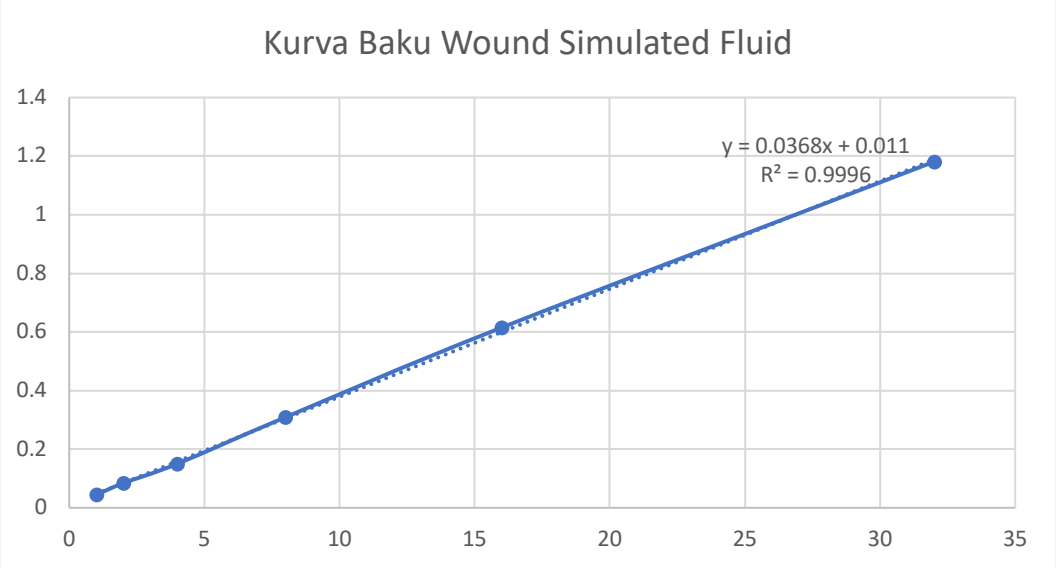
Formulasi	Massa endapan	Absorbansi	Kadar kloram (μg/mL)	Faktor pengenceran	Jumlah kloram dlm 5 mL (ug)	DL (%)	Rata-rata DL (%)	SD DL
F1	487	0.843	12.54844	1000	6274.218	1.28834	1.243398	0.112713
	501	0.893	13.29359		6646.796	1.326706		
	576	0.863	12.8465		6423.249	1.115147		
F2	502	0.203	3.010432	1000	15052.16	2.998438	3.33267	0.295266
	511	0.245	3.636364		18181.82	3.558086		
	498	0.231	3.42772		17138.6	3.441486		
F3	523	0.598	8.897168	1000	44485.84	8.505897	7.990914	0.68436
	534	0.518	7.704918		38524.59	7.214343		
	521	0.578	8.599106		42995.53	8.252501		
F4	523	0.732	10.89419	1000	54470.94	10.41509	10.49991	0.163495
	539	0.753	11.20715		56035.77	10.39625		
	541	0.777	11.56483		57824.14	10.68838		
F5	521	0.812	12.08644	1000	60432.19	11.59927	10.98968	0.627054
	574	0.798	11.87779		59388.97	10.34651		
	532	0,314	11.72876		58643.82	11.02327		
F6	269	0.278	4.128167	1000	20640.83	22,7446	8.049509	0.495829
	257	0.298	4.42623		22131.15	26,3481		
	271	0.287	4.262295		21311.48	26,3813		
F7	798	0.909	13.53204	1000	67660.21	14,2596	8.652707	0.150685
	782	0.918	13.66617		68330.85	14,0872		

	803	0.943	14.03875		70193.74	14,0438		
F8	802	0.932	13.87481	1000	69374.07	5,2145	8.672606	0.033184
	793	0.928	13.8152		69076.01	5,4010		
	816	0.949	14.12817		70640.83	5,1496		
F9	632	0.159	2.354694	1000	11773.47	4,2689	2.013791	0.185935
	587	0.176	2.608048		13040.24	4,1091		
	594	0.157	2.324888		11624.44	3,8355		
F10	669	0.519	7.719821	1000	38599.11	13,1479	5.736177	0.376497
	693	0.498	7.406855		37034.28	10,7792		
	703	0.576	8.5693		42846.5	9,5787		
F11	807	0.965	14.36662	1000	71833.08	7,5067	8.797606	0.1171
	813	0.947	14.09836		70491.8	8,9513		
	789	0.935	13.91952		69597.62	8,5611		
F12	743	0.645	9.597615	1000	47988.08	7,2205	6.389953	0.178613
	719	0.598	8.897168		44485.84	6,6283		
	723	0.634	9.433681		47168.41	5,7941		
F13	811	0.943	14.03875	1000	70193.74	2,9250	8.65583	0.037355
	798	0.924	13.75559		68777.94	2,8187		
	816	0.953	14.18778		70938.9	2,4693		
F14	803	0.813	12.10134128	1000	60506.70641		7.620341031	0.196718795
	757	0.798	11.87779434		59388.97168			
	769	0.773	11.5052161		57526.08048			

Lampiran 9. Profil Pelepasan Obat

Tabel 16. Persamaan Kurva Baku Wound Simulated Fluid

Konsentrasi Pengenceran	Replikasi			Absorbansi
	1	2	3	
1	0.044	0.048	0.042	0.044667
2	0.079	0.089	0.084	0.084
4	0.149	0.156	0.146	0.150333
8	0.306	0.312	0.309	0.309
16	0.589	0.611	0.645	0.615
32	1.121	1.216	1.206	1.181



Berdasarkan persamaan garis regresi kurva baku:

y = 0,0368x + 0,011 dengan koefisien korelasi (r) = 0.9996

x adalah konsentrasi

Y adalah serapan

Sehingga $x=\frac{Y-a}{b}$, misal pelepasan mikropartikel kloramfenikol (CAP) 0,25 jam replikasi 1

Maka, konsentrasi ditentukan berdasarkan perhitungan :

$x = \frac{0,312-0,011}{0,0368}$ = 8,18 µg/ml

Konsentrasi dalam 50 mL $= \frac{8{,}18\ \mu g/ml \times 1 \times 50\ ml}{1000} = 0{,}4089$ mg

Kloramfenikol yang dilepaskan = Konsentrasi dalam 50 mL + faktor koreksi

= 0,4089 mg + 0

= 0,4089 mg

Tabel 17. Pelepasan Obat dari Mikropartikel CAP

Waktu (Jam)	Abs	Konsentrasi (µg/ml)	Konsentrasi dalam 1 ml (µg)	Faktor pengen ceran	Konsentrasi dalam 50 ml (mg)	Faktor koreksi	Obat yang dilepaskan (mg)	Rata-rata (mg)	SD
0,25	0.312	8.18	8.18	1	0.408967391	0	0.408967391	0.45380 4348	0.0520 39995
	0.387	10.22	10.22	1	0.510869565	0	0.510869565		
	0.336	8.83	8.83	1	0.441576087	0	0.441576087		
0,5	0.916	24.59	24.59	1	1.229619565	0.0081793	1.237798913	1.20291 6667	0.0496 39089
	0.847	22.72	22.72	1	1.135869565	0.0102174	1.146086957		
	0.906	24.32	24.32	1	1.216032609	0.0088315	1.22486413		
0,75	0.815	21.85	21.85	2	2.184782609	0.0327717	2.217554348	2.17244 5652	0.1284 74617
	0.745	19.95	19.95	2	1.994565217	0.0329348	2.0275		
	0.835	22.39	22.39	2	2.239130435	0.0331522	2.272282609		
1	0.874	23.45	23.45	4	4.690217391	0.0546196	4.744836957	4.50181 1594	0.2163 80478
	0.798	21.39	21.39	4	4.277173913	0.0528804	4.330054348		
	0.816	21.88	21.88	4	4.375	0.0555435	4.430543478		
2	0.978	26.28	26.28	8	10.51086957	0.0780707	10.58894022	10.3120 9239	0.3612 0854
	0.965	25.92	25.92	8	10.36956522	0.0742663	10.44383152		
	0.915	24.57	24.57	8	9.826086957	0.0774185	9.903505435		
3	0.941	25.27	25.27	15	18.95380435	0.1043478	19.05815217	18.7774 4565	0.2680 73977
	0.915	24.57	24.57	15	18.42391304	0.1001902	18.52410326		

	0.926	24.86	24.86	15	18.64809783	0.1019837	18.75008152		
	0.875	23.48	23.48	25	29.34782609	0.1296196	29.47744565		
4	0.916	24.59	24.59	25	30.74048913	0.1247554	30.86524457	30.0976	0.7055
	0.889	23.86	23.86	25	29.82336957	0.1268478	29.95021739	3587	46321
	1.021	27.45	27.45	30	41.16847826	0.1530978	41.32157609		
5	0.978	26.28	26.28	30	39.41576087	0.1493478	39.5651087	39.9472	1.2286
	0.963	25.87	25.87	30	38.80434783	0.1507065	38.95505435	4638	69276
	0.878	23.56	23.56	35	41.22961957	0.1805435	41.41016304		
6	0.925	24.84	24.84	35	43.46467391	0.1756250	43.64029891	42.6753	1.1449
	0.911	24.46	24.46	35	42.79891304	0.1765761	42.97548913	1703	68981
	0.978	26.28	26.28	45	59.1236413	0.2041033	59.32774457		
7	0.965	25.92	25.92	45	58.32880435	0.2004620	58.5292663	57.7969	2.0001
	0.916	24.59	24.59	45	55.33288043	0.2010326	55.53391304	7464	19426
	0.885	23.75	23.75	50	59.375	0.2303804	59.60538043		
8	0.935	25.11	25.11	50	62.77173913	0.2263859	62.998125	61.3461	1.6981
	0.912	24.48	24.48	50	61.20923913	0.2256250	61.43486413	2319	12228
	0.698	18.67	18.67	100	93.3423913	0.2541304	93.59652174		
24	0.714	19.10	19.10	100	95.51630435	0.2514946	95.76779891	95.8587	2.3091
	0.732	19.59	19.59	100	97.96195652	0.2501087	98.21206522	9529	16856

Tabel 18. Pelepasan Kloramfenikol Tunggal (CAP)

Waktu (Jam)	**Abs**	Konsentrasi (µg/ml)	Konsentrasi 1 ml (µg)	FP	Konsentrasi 50 ml (mg)	Faktor koreksi	Obat yang dilepaskan (mg)	Rata-rata (mg)	SD
0,25	0.465	12.34	12.34	1	0.616847826	0	0.616847826	0.581068841	0.033566475
	0.435	11.52	11.52	1	0.576086957	0	0.576086957		
	0.416	11.01	11.01	1	0.550271739	0	0.550271739		
0,5	0.935	25.11	25.11	2	2.510869565	0.0123370	2.523206522	2.510715558	0.035894367
	0.941	25.27	25.27	2	2.527173913	0.0115217	2.538695652		
	0.916	24.59	24.59	2	2.45923913	0.0110054	2.470244565		
0,75	0.798	21.39	21.39	5	5.346467391	0.0374457	5.383913043	5.489510887	0.116348643
	0.832	22.31	22.31	5	5.577445652	0.0367935	5.614239130		
	0.811	21.74	21.74	5	5.434782609	0.0355978	5.470380435		
1	0.902	24.21	24.21	10	12.10597826	0.0588315	12.16480978	12.028532061	0.169311633
	0.878	23.56	23.56	10	11.7798913	0.0591033	11.83899457		
	0.896	24.05	24.05	10	12.02445652	0.0573370	12.08179348		

	0.879	23.59	23.59	20	23.58695652	0.0830435	23.67		
2	0.936	25.14	25.14	20	25.13586957	0.0826630	25.21853261		
	0.906	24.32	24.32	20	24.32065217	0.0813859	24.40203804	24.43019022	0.7746 50062
	0.936	25.14	25.14	30	37.70380435	0.1066304	37.81043478		
3	0.912	24.48	24.48	30	36.72554348	0.1077989	36.83334239		
	0.936	25.14	25.14	30	37.70380435	0.1057065	37.80951087	37.48442935	0.5638 58034
	0.889	23.86	23.86	50	59.64673913	0.1317663	59.77850543		
4	0.915	24.57	24.57	50	61.41304348	0.1322826	61.54532609	61.43144928	1.5990 49497
	0.936	25.14	25.14	50	62.83967391	0.1308424	62.9705163		
	0.978	26.28	26.28	60	78.83152174	0.1556250	78.98714674		
5	0.936	25.14	25.14	60	75.4076087	0.1568478	75.56445652		
	0.916	24.59	24.59	60	73.77717391	0.1559783	73.93315217	76.16158514	2.5793 67599
6	0.721	19.29	19.29	100	96.4673913	0.1819022	96.64929348	96.51300725	2.9242 85001
	0.741	19.84	19.84	100	99.18478261	0.1819837	99.3667663		

0.698	18.67	18.67	100	93.3423913	0.1805707	93.52296196

Lampiran 10. KHM dan KBM dari Mikropartikel Kloramfenikol

Tabel 19. KHM dan KBM dari Mikropartikel Kloramfenikol

Konsentrasi	Hasil
3,125	+
6,25	+
12,5	-
25	-
50	-
100	-
200	-

Lampiran 11. Data Uji Suhu Gelasi Formula Awal (Preliminary)

Formula	Suhu Gelasi (ºC)	Rata-Rata	SD
F1	78	80.33	2.08
	81		
	82		
F2	59	61.66	2.51
	62		
	64		
F3	34.5	35.16	0.76
	35		
	36		
F4	29	30.16	1.25
	30		
	31.5		
F5	26	27	1
	27		
	28		
F6	15	16.66	2.08
	16		
	19		
F7	10	10.33	0.57
	10		
	11		

Lampiran 12. Data Uji Suhu Gelasi dengan Penambahan 0.5% HPMC

Formula	Suhu Gelasi (ºC)	Rata-Rata	SD
F1	64	65.33	1.53
	65		
	67		
F2	43	43.33	0.58
	43		
	44		
F3	30	31	1
	31		
	32		
F4	16	18.33	2.08
	19		
	20		
F5	15	15.67	0.58
	16		
	16		

Lampiran 13. Data Uji Suhu Gelasi Formula Optimasi

Formula	Suhu Gelasi (ºC)	Rata-Rata	SD
F3a	34	34.83	1.04
	34.5		
	36		
F3b	32	33	1
	33		
	34		
F3c	29	30.3	1.15
	31		
	31		
F3d	10	10.66	0.57
	11		
	11		
F3e	5	6.66	1.52
	7		
	8		

Lampiran 14. Data Uji Bioadesif Formula Awal

Formula	Kekuatan Bioadesif (dyne/cm^2)	Rata-Rata	Standar Deviasi
F1	3379.31	5632.184	1951.046
	6758.621		
	6758.621		
F2	10137.93	9011.494	1951.046
	6758.621		
	10137.93		
F3	10137.93	11264.37	1951.046
	10137.93		
	13517.24		
F4	10137.93	12390.8	1951.046
	13517.24		
	13517.24		
F5	16896.55	18022.99	1951.046
	16896.55		
	20275.86		
F6	30413.79	28160.92	1951.046
	27034.48		
	27034.48		
F7	37172.41	31540.23	5161.982
	30413.79		
	27034.48		

Lampiran 15. Data Uji Bioadesif untuk Formula Optimasi

Formula	Kekuatan Bioadesif (dyne/cm^2)	Rata Rata	Standar Deviasi
F1	16896.55	20275.86	3379.31
	20275.86		
	23655.17		
F2	23655.17	25908.05	1951.046
	27034.48		
	27034.48		
F3	30413.79	28160.92	3902.091
	30413.79		
	23655.17		
F4	33793.1	37172.41	3379.31
	40551.72		

	37172.41		
F5	50689.66		
	57448.28	55195.4	3902.091
	57448.28		

Lampiran 16. Data Uji pH untuk Formula Optimasi

Formula	pH	Rata-rata	Standar Deviasi
F1	6.14		
	6.08	6.11	0.03
	6.11		
F2	6.25		
	6.27	6.23	0.04
	6.19		
F3	6.33		
	6.33	6.32	0.02
	6.3		
F4	6.39	6.38	0.01
	6.37		
	6.38		
F5	6.45		
	6.49	6.46	0.03
	6.44		

Lampiran 17. Data Uji Daya Sebar untuk Formula Optimasi

Formula	Daya Sebar (cm)	Rata Rata	Standar Deviasi
F1	128.82		
	131.88	132.62	4.21
	137.16		
F2	101.6		
	106.92	102.22	4.41
	98.16		
F3	39.24		
	39.58	39.25	0.32
	38.94		
F4	35.41	35.20	0.25
	34.92		
	35.27		
F5	33.96		

	32.82	33.486	0.59
	33.68		

Lampiran 18. Data Uji ekstrudabilitas untuk Formula Optimasi

Kode Formula	Bobot awal	Bobot extrudabilitas	Rata-Rata	Standar Deviasi	% Extrudabilitas
F1	10	9.222	9.218333	0.005508	92.18333
		9.221			
		9.212			
F2	10	8.909	8.908	0.001	89.08
		8.908			
		8.907			
F3	10	7.464	7.457333	0.007024	74.57333
		7.458			
		7.45			
F4	10	6.829	6.821	0.007	68.21
		6.818			
		6.816			
F5	10	6.33	6.416667	0.133167	64.16667
		6.57			
		6.35			

Lampiran 19. Data Uji Viskositas untuk Formula Optimasi pada suhu dingin

Kode Formula	Replikasi 1	replikasi 2	replikasi 3	rata-rata	SD
F1	80	80	70	76.66667	5.773503
F2	112	120	107.5	113.1667	6.33114
F3	165	160	165	163.3333	2.886751
F4	220	225	227.5	224.1667	3.818813
F5	420	420	400	413.3333	11.54701

Lampiran 20. Data Uji Viskositas untuk Formula Optimasi pada suhu ruang

Kode Formula	Replikasi 1	replikasi 2	Replikasi 3	rata-rata	SD
F1	520	500	500	506.6667	11.54701
F2	660	650	640	650	10
F3	720	700	720	713.3333	11.54701
F4	800	740	760	766.6667	30.5505

F5	1100	1030	1160	1096.667	65.06407

Lampiran 21. Data Uji Viskositas untuk Formula Optimasi pada suhu kulit

Kode Formula	Replikasi 1	replikasi 2	Replikasi 3	rata-rata	SD
F1	52000	53600	51200	52266.67	1222.02
F2	58400	58800	59200	58800	400
F3	63200	64800	63200	63733.33	923.7604
F4	67600	64800	68000	66800	1743.56
F5	68000	69600	70400	69333.33	1222.02

Lampiran 22. Uji Reologi

Formula	Kecepatan (rpm)	Faktor koreksi	Torsi (%)			Rata-rata	Viskositas (Pa.s)	SD
			Replikasi 1	Replikasi 2	Replikasi 3			
F1	5	8000	53.5	51	54	52.833333	422666.7	1.607275
	10	4000	59	52.5	55	55.5	222000	3.278719
	20	2000	40	38	42.5	40.166667	80333.33	2.254625
	50	800	25	20	22.5	22.5	18000	2.5
	100	400	3.5	5.5	3	4	1600	1.322876
F2	5	8000	53	58	61	57.333333	458666.7	4.041452
	10	4000	31	28.5	29	29.5	118000	1.322876
	20	2000	43	44	39.5	42.166667	84333.33	2.362908
	50	800	21	19	22.5	20.833333	16666.67	1.755942
	100	400	11	10	10.5	10.5	4200	0.5
F3	5	8000	69	68	68	68.333333	546666.7	0.57735
	10	4000	65.5	63.5	64.5	64.5	258000	1
	20	2000	55.5	57	58	56.833333	113666.7	1.258306
	50	800	29	28.5	29.5	29	23200	0.5
	100	400	24	25	23	24	9600	1
F4	5	8000	76.5	74.5	78	76.333333	610666.7	1.755942
	10	4000	73	69.5	74	72.166667	288666.7	2.362908
	20	2000	52	49	54.5	51.833333	103666.7	2.753785
	50	800	60	61.5	60.5	60.666667	48533.33	0.763763

	100	400	35	34.5	37	35.5	14200	1.322876
F5	5	8000	88	91	85.5	88.166667	705333.3	2.753785
	10	4000	74	77	72.5	74.5	298000	2.291288
	20	2000	69	68	68	68.333333	136666.7	0.57735
	50	800	71	71	69.5	70.5	56400	0.866025
	100	400	54.5	58	59.5	57.333333	22933.33	2.565801

Lampiran 23. Uji Oklusivitas kulit

Sampel	Waktu pengukuran (Jam)	Bobot (g)			Rata-rata	SD	% Oclusivity
		Replikasi 1	Replikasi 2	Replikasi 3			
Kontrol	0	0,2513	0,2514	0,2514	0,25136667	5,7700	0
	6	0,2515	0,2516	0,2515	0,25153333	5,7700	0,0663042
	12	0,2516	0,2515	0,2516	0,25156667	5,77400	0,07956504
	24	0,2517	0,2518	0,2516	0,2517	0,0001	0,13260841
	48	0,2519	0,2518	0,2521	0,25193333	0,0001528	0,22543429
F1	0	0.5319	0.5243	0.5289	0.52836667	0.00382797	-
	6	0.4506	0.4514	0.4467	0.44956667	0.00251462	15.4791001
	12	0.3869	0.3822	0.3845	0.38453333	0.00235018	27.7057091
	24	0.3751	0.3793	0.3737	0.37603333	0.00291433	29.3037538
	48	0.3693	0.3691	0.3718	0.37006667	0.00150444	30.4255186
F2	0	0.5127	0.5152	0.5319	0.51993333	0.00852304	-
	6	0.4178	0.4244	0.4273	0.42316667	0.0039752	17.4631038

	12	0.3561	0.3566	0.3685	0.3604	0.0057312	29.7054808
	24	0.3535	0.3588	0.3496	0.35396667	0.00377035	30.9602757
	48	0.3382	0.3421	0.3354	0.33856667	0.00274752	33.9639815
F3	0	0.5155	0.5207	0.5191	0.51843333	0.00266333	-
	6	0.4158	0.4213	0.4188	0.41863333	0.00275379	18.790818
	12	0.3626	0.3649	0.3571	0.36153333	0.00400791	29.8674426
	24	0.3481	0.3533	0.3442	0.34853333	0.00456545	32.3892661
	48	0.3506	0.3467	0.3416	0.3463	0.00451331	32.8225024
F4	0	0.5211	0.5221	0.5219	0.5217	0.00052915	-
	6	0.4711	0.473	0.4717	0.47193333	0.00097125	9.43516919
	12	0.4233	0.4231	0.4241	0.4235	0.00052915	18.7296104
	24	0.3589	0.3581	0.3573	0.3581	0.0008	31.2799846
	48	0.3192	0.3176	0.3189	0.31856667	0.00085049	38.8665004
F5	0	0.5188	0.5176	0.5182	0.5182	0.0006	-
	6	0.4507	0.4528	0.4511	0.45153333	0.00111505	12.9658186
	12	0.3664	0.3583	0.3612	0.36196667	0.00410406	30.230018
	24	0.3341	0.3326	0.3329	0.3332	0.00079373	35.7748651
	48	0.3019	0.2943	0.3144	0.30353333	0.01014906	41.4931894

Lampiran 24. Data Uji Hemolisis

Sampel	Serapan	Rata-rata	SD	% Hemolisis
Kontrol +	1.663	1.708667	0.077371	-
	1.665			
	1.798			
Kontrol -	0.022	0.025	0.003606	-
	0.024			
	0.029			
10:90 obat 10% 500ppm	0.026	0.027	0.001	0.118788359
	0.027			
	0.028			
10:90 obat 10% 50ppm	0.033	0.035667	0.003055	0.633537913
	0.035			
	0.039			
10:90 obat 10% 5ppm	0.068	0.068333	0.003512	2.573747773
	0.072			
	0.065			

Lampiran 25. Hasil Analisis Statistik dengan SPSS

Pengaruh Konsentrasi Obat

Tukey HSD

Dependent Variable	(I) Pengaruh Konsentrasi Obat	(J) Pengaruh Konsentrasi Obat	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Ukuran Partikel	Formula 1	Formula 2	-.036666666667	.101214843005	.996	-.36977302884	.29643969550
		Formula 3	-.173333333333	.101214843005	.468	-.50643969550	.15977302884
		Formula 4	-.166666666667	.101214843005	.503	-.49977302884	.16643969550
		Formula 5	-.196666666667	.101214843005	.356	-.52977302884	.13643969550
	Formula 2	Formula 1	.036666666667	.101214843005	.996	-.29643969550	.36977302884
		Formula 3	-.136666666667	.101214843005	.669	-.46977302884	.19643969550
		Formula 4	-.130000000000	.101214843005	.706	-.46310636217	.20310636217
		Formula 5	-.160000000000	.101214843005	.539	-.49310636217	.17310636217
	Formula 3	Formula 1	.173333333333	.101214843005	.468	-.15977302884	.50643969550
		Formula 2	.136666666667	.101214843005	.669	-.19643969550	.46977302884
		Formula 4	.006666666667	.101214843005	1.000	-.32643969550	.33977302884
		Formula 5	-.023333333333	.101214843005	.999	-.35643969550	.30977302884
	Formula 4	Formula 1	.166666666667	.101214843005	.503	-.16643969550	.49977302884
		Formula 2	.130000000000	.101214843005	.706	-.20310636217	.46310636217
		Formula 3	-.006666666667	.101214843005	1.000	-.33977302884	.32643969550
		Formula 5	-.030000000000	.101214843005	.998	-.36310636217	.30310636217
	Formula 5	Formula 1	.196666666667	.101214843005	.356	-.13643969550	.52977302884

		Formula 2	.160000000000	.101214843005	.539	-.17310636217	.49310636217
		Formula 3	.023333333333	.101214843005	.999	-.30977302884	.35643969550
		Formula 4	.030000000000	.101214843005	.998	-.30310636217	.36310636217
PDI	Formula 1	Formula 2	-.0003333333	.0044721360	1.000	-.015051500	.014384833
		Formula 3	-.0056666667	.0044721360	.715	-.020384833	.009051500
		Formula 4	-.0013333333	.0044721360	.998	-.016051500	.013384833
		Formula 5	-.0076666667	.0044721360	.468	-.022384833	.007051500
	Formula 2	Formula 1	.0003333333	.0044721360	1.000	-.014384833	.015051500
		Formula 3	-.0053333333	.0044721360	.756	-.020051500	.009384833
		Formula 4	-.0010000000	.0044721360	.999	-.015718167	.013718167
		Formula 5	-.0073333333	.0044721360	.507	-.022051500	.007384833
	Formula 3	Formula 1	.0056666667	.0044721360	.715	-.009051500	.020384833
		Formula 2	.0053333333	.0044721360	.756	-.009384833	.020051500
		Formula 4	.0043333333	.0044721360	.863	-.010384833	.019051500
		Formula 5	-.0020000000	.0044721360	.990	-.016718167	.012718167
	Formula 4	Formula 1	.0013333333	.0044721360	.998	-.013384833	.016051500
		Formula 2	.0010000000	.0044721360	.999	-.013718167	.015718167
		Formula 3	-.0043333333	.0044721360	.863	-.019051500	.010384833
		Formula 5	-.0063333333	.0044721360	.632	-.021051500	.008384833
	Formula 5	Formula 1	.0076666667	.0044721360	.468	-.007051500	.022384833
		Formula 2	.0073333333	.0044721360	.507	-.007384833	.022051500
		Formula 3	.0020000000	.0044721360	.990	-.012718167	.016718167
		Formula 4	.0063333333	.0044721360	.632	-.008384833	.021051500
Potensial Zeta	Formula 1	Formula 2	.2633333333	.5342367349	.986	-1.494883644	2.021550310

		Formula 3	.5600000000	.5342367349	.828	-1.198216977	2.318216977
		Formula 4	.2600000000	.5342367349	.987	-1.498216977	2.018216977
		Formula 5	.2400000000	.5342367349	.990	-1.518216977	1.998216977
	Formula 2	Formula 1	-.2633333333	.5342367349	.986	-2.021550310	1.494883644
		Formula 3	.2966666667	.5342367349	.979	-1.461550310	2.054883644
		Formula 4	-.0033333333	.5342367349	1.000	-1.761550310	1.754883644
		Formula 5	-.0233333333	.5342367349	1.000	-1.781550310	1.734883644
	Formula 3	Formula 1	-.5600000000	.5342367349	.828	-2.318216977	1.198216977
		Formula 2	-.2966666667	.5342367349	.979	-2.054883644	1.461550310
		Formula 4	-.3000000000	.5342367349	.978	-2.058216977	1.458216977
		Formula 5	-.3200000000	.5342367349	.972	-2.078216977	1.438216977
	Formula 4	Formula 1	-.2600000000	.5342367349	.987	-2.018216977	1.498216977
		Formula 2	.0033333333	.5342367349	1.000	-1.754883644	1.761550310
		Formula 3	.3000000000	.5342367349	.978	-1.458216977	2.058216977
		Formula 5	-.0200000000	.5342367349	1.000	-1.778216977	1.738216977
	Formula 5	Formula 1	-.2400000000	.5342367349	.990	-1.998216977	1.518216977
		Formula 2	.0233333333	.5342367349	1.000	-1.734883644	1.781550310
		Formula 3	.3200000000	.5342367349	.972	-1.438216977	2.078216977
		Formula 4	.0200000000	.5342367349	1.000	-1.738216977	1.778216977
%DL	Formula 1	Formula 2	-7.7893691000*	1.6772551214	.006	-13.309353475	-2.269384725
		Formula 3	-16.2096373567*	1.6772551214	.000	-21.729621732	-10.689652982
		Formula 4	-2.2627918567	1.6772551214	.670	-7.782776232	3.257192518
		Formula 5	10.9202682567*	1.6772551214	.001	5.400283882	16.440252632
	Formula 2	Formula 1	7.7893691000*	1.6772551214	.006	2.269384725	13.309353475

		Formula 3	-8.4202682567*	1.6772551214	.004	-13.940252632	-2.900283882
		Formula 4	5.5265772433*	1.6772551214	.050	.006592868	11.046561618
		Formula 5	18.7096373567*	1.6772551214	.000	13.189652982	24.229621732
	Formula 3	Formula 1	16.2096373567*	1.6772551214	.000	10.689652982	21.729621732
		Formula 2	8.4202682567*	1.6772551214	.004	2.900283882	13.940252632
		Formula 4	13.9468455000*	1.6772551214	.000	8.426861125	19.466829875
		Formula 5	27.1299056133*	1.6772551214	.000	21.609921238	32.649889988
	Formula 4	Formula 1	2.2627918567	1.6772551214	.670	-3.257192518	7.782776232
		Formula 2	-5.5265772433*	1.6772551214	.050	-11.046561618	-.006592868
		Formula 3	-13.9468455000*	1.6772551214	.000	-19.466829875	-8.426861125
		Formula 5	13.1830601133*	1.6772551214	.000	7.663075738	18.703044488
	Formula 5	Formula 1	-10.9202682567*	1.6772551214	.001	-16.440252632	-5.400283882
		Formula 2	-18.7096373567*	1.6772551214	.000	-24.229621732	-13.189652982
		Formula 3	-27.1299056133*	1.6772551214	.000	-32.649889988	-21.609921238
		Formula 4	-13.1830601133*	1.6772551214	.000	-18.703044488	-7.663075738
%EE	Formula 1	Formula 2	-2.0892721517*	.3629807659	.001	-3.283871668	-.894672636
		Formula 3	-6.7475157157*	.3629807659	.000	-7.942115232	-5.552916200
		Formula 4	-9.2565092047*	.3629807659	.000	-10.451108721	-8.061909689
		Formula 5	-9.7462865480*	.3629807659	.000	-10.940886064	-8.551687032
	Formula 2	Formula 1	2.0892721517*	.3629807659	.001	.894672636	3.283871668
		Formula 3	-4.6582435640*	.3629807659	.000	-5.852843080	-3.463644048
		Formula 4	-7.1672370530*	.3629807659	.000	-8.361836569	-5.972637537
		Formula 5	-7.6570143963*	.3629807659	.000	-8.851613912	-6.462414880
	Formula 3	Formula 1	6.7475157157*	.3629807659	.000	5.552916200	7.942115232

		Formula 2	4.6582435640*	.3629807659	.000	3.463644048	5.852843080
		Formula 4	-2.5089934890*	.3629807659	.000	-3.703593005	-1.314393973
		Formula 5	-2.9987708323*	.3629807659	.000	-4.193370348	-1.804171316
	Formula 4	Formula 1	9.2565092047*	.3629807659	.000	8.061909689	10.451108721
		Formula 2	7.1672370530*	.3629807659	.000	5.972637537	8.361836569
		Formula 3	2.5089934890*	.3629807659	.000	1.314393973	3.703593005
		Formula 5	-.4897773433	.3629807659	.670	-1.684376859	.704822173
	Formula 5	Formula 1	9.7462865480*	.3629807659	.000	8.551687032	10.940886064
		Formula 2	7.6570143963*	.3629807659	.000	6.462414880	8.851613912
		Formula 3	2.9987708323*	.3629807659	.000	1.804171316	4.193370348
		Formula 4	.4897773433	.3629807659	.670	-.704822173	1.684376859

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

Pengaruh Konsentrasi Whey Protein

Tukey HSD

Dependent Variable	(I) Pengaruh Konsentrasi Whey	(J) Pengaruh Konsentrasi Whey	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Ukuran Partikel	Formula 6	Formula 7	-1.8800000000*	.0983568710	.000	-2.181785890	-1.578214110
		Formula 8	-5.6666666667*	.0983568710	.000	-5.968452557	-5.364880777
	Formula 7	Formula 6	1.8800000000*	.0983568710	.000	1.578214110	2.181785890
		Formula 8	-3.7866666667*	.0983568710	.000	-4.088452557	-3.484880777
	Formula 8	Formula 6	5.6666666667*	.0983568710	.000	5.364880777	5.968452557
		Formula 7	3.7866666667*	.0983568710	.000	3.484880777	4.088452557
PDI	Formula 6	Formula 7	-.0110000000	.0148498659	.750	-.056563467	.034563467

		Formula 8	-.0416666667	.0148498659	.069	-.087230133	.003896800
	Formula 7	Formula 6	.0110000000	.0148498659	.750	-.034563467	.056563467
		Formula 8	-.0306666667	.0148498659	.178	-.076230133	.014896800
	Formula 8	Formula 6	.0416666667	.0148498659	.069	-.003896800	.087230133
		Formula 7	.0306666667	.0148498659	.178	-.014896800	.076230133
Potensial Zeta	Formula 6	Formula 7	8.1400000000*	.5002221729	.000	6.605181008	9.674818992
		Formula 8	9.8800000000*	.5002221729	.000	8.345181008	11.414818992
	Formula 7	Formula 6	-8.1400000000*	.5002221729	.000	-9.674818992	-6.605181008
		Formula 8	1.7400000000*	.5002221729	.030	.205181008	3.274818992
	Formula 8	Formula 6	-9.8800000000*	.5002221729	.000	-11.414818992	-8.345181008
		Formula 7	-1.7400000000*	.5002221729	.030	-3.274818992	-.205181008
%DL	Formula 6	Formula 7	-47.3671137600*	.8124901773	.000	-49.860056741	-44.874170779
		Formula 8	-48.3358171867*	.8124901773	.000	-50.828760167	-45.842874206
	Formula 7	Formula 6	47.3671137600*	.8124901773	.000	44.874170779	49.860056741
		Formula 8	-.9687034267	.8124901773	.499	-3.461646407	1.524239554
	Formula 8	Formula 6	48.3358171867*	.8124901773	.000	45.842874206	50.828760167
		Formula 7	.9687034267	.8124901773	.499	-1.524239554	3.461646407
%EE	Formula 6	Formula 7	-.6031977160	.2447918406	.107	-1.354286305	.147890873
		Formula 8	-.6230968570	.2447918406	.096	-1.374185446	.127991732
	Formula 7	Formula 6	.6031977160	.2447918406	.107	-.147890873	1.354286305
		Formula 8	-.0198991410	.2447918406	.996	-.770987730	.731189448
	Formula 8	Formula 6	.6230968570	.2447918406	.096	-.127991732	1.374185446
		Formula 7	.0198991410	.2447918406	.996	-.731189448	.770987730

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

Pengaruh Kecepatan Pengadukan							
Tukey HSD							
Dependent Variable	(I) Pengaruh Kecepatan Pengadukan	(J) Pengaruh Kecepatan Pengadukan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Ukuran Partikel	Formula 9	Formula 10	1.5466666667	.5446031515	.066	-.124325355	3.217658688
		Formula 11	6.7800000000*	.5446031515	.000	5.109007979	8.450992021
	Formula 10	Formula 9	-1.5466666667	.5446031515	.066	-3.217658688	.124325355
		Formula 11	5.2333333333*	.5446031515	.000	3.562341312	6.904325355
	Formula 11	Formula 9	-6.7800000000*	.5446031515	.000	-8.450992021	-5.109007979
		Formula 10	-5.2333333333*	.5446031515	.000	-6.904325355	-3.562341312
PDI	Formula 9	Formula 10	.0250000000	.0081604285	.050	-.000038435	.050038435
		Formula 11	.2076666667*	.0081604285	.000	.182628231	.232705102
	Formula 10	Formula 9	-.0250000000	.0081604285	.050	-.050038435	.000038435
		Formula 11	.1826666667*	.0081604285	.000	.157628231	.207705102
	Formula 11	Formula 9	-.2076666667*	.0081604285	.000	-.232705102	-.182628231
		Formula 10	-.1826666667*	.0081604285	.000	-.207705102	-.157628231
Potensial Zeta	Formula 9	Formula 10	-2.0466666667	2.6581865163	.734	-10.202712859	6.109379526
		Formula 11	1.8133333333	2.6581865163	.782	-6.342712859	9.969379526
	Formula 10	Formula 9	2.0466666667	2.6581865163	.734	-6.109379526	10.202712859
		Formula 11	3.8600000000	2.6581865163	.376	-4.296046193	12.016046193

	Formula 11	Formula 9	-1.8133333333	2.6581865163	.782	-9.969379526	6.342712859
		Formula 10	-3.8600000000	2.6581865163	.376	-12.016046193	4.296046193
%DL	Formula 9	Formula 10	-27.3472429200*	1.5575176747	.000	-32.126134854	-22.568350986
		Formula 11	-58.4947839067*	1.5575176747	.000	-63.273675840	-53.715891973
	Formula 10	Formula 9	27.3472429200*	1.5575176747	.000	22.568350986	32.126134854
		Formula 11	-31.1475409867*	1.5575176747	.000	-35.926432920	-26.368649053
	Formula 11	Formula 9	58.4947839067*	1.5575176747	.000	53.715891973	63.273675840
		Formula 10	31.1475409867*	1.5575176747	.000	26.368649053	35.926432920
%EE	Formula 9	Formula 10	-3.7223858950*	.2054991437	.000	-4.352913700	-3.091858090
		Formula 11	-6.7838150747*	.2054991437	.000	-7.414342879	-6.153287270
	Formula 10	Formula 9	3.7223858950*	.2054991437	.000	3.091858090	4.352913700
		Formula 11	-3.0614291797*	.2054991437	.000	-3.691956984	-2.430901375
	Formula 11	Formula 9	6.7838150747*	.2054991437	.000	6.153287270	7.414342879
		Formula 10	3.0614291797*	.2054991437	.000	2.430901375	3.691956984

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

Pengaruh Lama Pengadukan

Tukey HSD

Dependent Variable	(I) Pengaruh Lama Pengadukan	(J) Pengaruh Lama Pengadukan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Ukuran Partikel	Formula 12	Formula 13	3.5133333333*	.1858115334	.000	2.943212524	4.083454143
		Formula 14	3.5566666667*	.1858115334	.000	2.986545857	4.126787476

	Formula 13	Formula 12	-3.5133333333*	.1858115334	.000	-4.083454143	-2.943212524
		Formula 14	.0433333333	.1858115334	.971	-.526787476	.613454143
	Formula 14	Formula 12	-3.5566666667*	.1858115334	.000	-4.126787476	-2.986545857
		Formula 13	-.0433333333	.1858115334	.971	-.613454143	.526787476
PDI	Formula 12	Formula 13	.1716666667*	.0045133547	.000	.157818455	.185514878
		Formula 14	.1723333333*	.0045133547	.000	.158485122	.186181545
	Formula 13	Formula 12	-.1716666667*	.0045133547	.000	-.185514878	-.157818455
		Formula 14	.0006666667	.0045133547	.988	-.013181545	.014514878
	Formula 14	Formula 12	-.1723333333*	.0045133547	.000	-.186181545	-.158485122
		Formula 13	-.0006666667	.0045133547	.988	-.014514878	.013181545
Potensial Zeta	Formula 12	Formula 13	8.1666666667*	.7112170060	.000	5.984457586	10.348875747
		Formula 14	8.5066666667*	.7112170060	.000	6.324457586	10.688875747
	Formula 13	Formula 12	-8.1666666667*	.7112170060	.000	-10.348875747	-5.984457586
		Formula 14	.3400000000	.7112170060	.884	-1.842209081	2.522209081
	Formula 14	Formula 12	-8.5066666667*	.7112170060	.000	-10.688875747	-6.324457586
		Formula 13	-.3400000000	.7112170060	.884	-2.522209081	1.842209081
%DL	Formula 12	Formula 13	-23.4227521100*	1.2317850462	.000	-27.202206890	-19.643297330
		Formula 14	-12.5931445567*	1.2317850462	.000	-16.372599337	-8.813689776
	Formula 13	Formula 12	23.4227521100*	1.2317850462	.000	19.643297330	27.202206890
		Formula 14	10.8296075533*	1.2317850462	.000	7.050152773	14.609062334
	Formula 14	Formula 12	12.5931445567*	1.2317850462	.000	8.813689776	16.372599337
		Formula 13	-10.8296075533*	1.2317850462	.000	-14.609062334	-7.050152773
%EE	Formula 12	Formula 13	-2.2658775293*	.1264878473	.000	-2.653976979	-1.877778079
		Formula 14	-1.2303883383*	.1264878473	.000	-1.618487788	-.842288888

	Formula 13	Formula 12	2.2658775293*	.1264878473	.000	1.877778079	2.653976979
		Formula 14	1.0354891910*	.1264878473	.000	.647389741	1.423588641
	Formula 14	Formula 12	1.2303883383*	.1264878473	.000	.842288888	1.618487788
		Formula 13	-1.0354891910*	.1264878473	.000	-1.423588641	-.647389741
*. The mean difference is significant at the 0.05 level.							

Suhu Gelasi (Preliminary)						
Dependent Variable: Suhu Gelasi (Preliminary)						
Tukey HSD						
(I) F1	(J) F1	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	18.6667*	1.3274	.000	14.134	23.199
	Formula 3	45.1667*	1.3274	.000	40.634	49.699
	Formula 4	50.1667*	1.3274	.000	45.634	54.699
	Formula 5	53.3333*	1.3274	.000	48.801	57.866
	Formula 6	63.6667*	1.3274	.000	59.134	68.199
	Formula 7	70.0000*	1.3274	.000	65.468	74.532
Formula 2	Formula 1	-18.6667*	1.3274	.000	-23.199	-14.134
	Formula 3	26.5000*	1.3274	.000	21.968	31.032
	Formula 4	31.5000*	1.3274	.000	26.968	36.032
	Formula 5	34.6667*	1.3274	.000	30.134	39.199
	Formula 6	45.0000*	1.3274	.000	40.468	49.532
	Formula 7	51.3333*	1.3274	.000	46.801	55.866
Formula 3	Formula 1	-45.1667*	1.3274	.000	-49.699	-40.634
	Formula 2	-26.5000*	1.3274	.000	-31.032	-21.968
	Formula 4	5.0000*	1.3274	.027	.468	9.532
	Formula 5	8.1667*	1.3274	.000	3.634	12.699
	Formula 6	18.5000*	1.3274	.000	13.968	23.032
	Formula 7	24.8333*	1.3274	.000	20.301	29.366
Formula 4	Formula 1	-50.1667*	1.3274	.000	-54.699	-45.634
	Formula 2	-31.5000*	1.3274	.000	-36.032	-26.968
	Formula 3	-5.0000*	1.3274	.027	-9.532	-.468
	Formula 5	3.1667	1.3274	.273	-1.366	7.699
	Formula 6	13.5000*	1.3274	.000	8.968	18.032
	Formula 7	19.8333*	1.3274	.000	15.301	24.366
Formula 5	Formula 1	-53.3333*	1.3274	.000	-57.866	-48.801
	Formula 2	-34.6667*	1.3274	.000	-39.199	-30.134
	Formula 3	-8.1667*	1.3274	.000	-12.699	-3.634
	Formula 4	-3.1667	1.3274	.273	-7.699	1.366
	Formula 6	10.3333*	1.3274	.000	5.801	14.866
	Formula 7	16.6667*	1.3274	.000	12.134	21.199
Formula 6	Formula 1	-63.6667*	1.3274	.000	-68.199	-59.134
	Formula 2	-45.0000*	1.3274	.000	-49.532	-40.468
	Formula 3	-18.5000*	1.3274	.000	-23.032	-13.968

	Formula 4	-13.5000*	1.3274	.000	-18.032	-8.968
	Formula 5	-10.3333*	1.3274	.000	-14.866	-5.801
	Formula 7	6.3333*	1.3274	.004	1.801	10.866
Formula 7	Formula 1	-70.0000*	1.3274	.000	-74.532	-65.468
	Formula 2	-51.3333*	1.3274	.000	-55.866	-46.801
	Formula 3	-24.8333*	1.3274	.000	-29.366	-20.301
	Formula 4	-19.8333*	1.3274	.000	-24.366	-15.301
	Formula 5	-16.6667*	1.3274	.000	-21.199	-12.134
	Formula 6	-6.3333*	1.3274	.004	-10.866	-1.801

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

Suhu Gelasi (HPMC 0.5%)

Dependent Variable: Suhu Gelasi (HPMC 0.5%)

Tukey HSD

(I) F2	(J) F2	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	22.000*	1.054	.000	18.53	25.47
	Formula 3	34.333*	1.054	.000	30.86	37.80
	Formula 4	47.000*	1.054	.000	43.53	50.47
	Formula 5	49.667*	1.054	.000	46.20	53.14
Formula 2	Formula 1	-22.000*	1.054	.000	-25.47	-18.53
	Formula 3	12.333*	1.054	.000	8.86	15.80
	Formula 4	25.000*	1.054	.000	21.53	28.47
	Formula 5	27.667*	1.054	.000	24.20	31.14
Formula 3	Formula 1	-34.333*	1.054	.000	-37.80	-30.86
	Formula 2	-12.333*	1.054	.000	-15.80	-8.86
	Formula 4	12.667*	1.054	.000	9.20	16.14
	Formula 5	15.333*	1.054	.000	11.86	18.80
Formula 4	Formula 1	-47.000*	1.054	.000	-50.47	-43.53
	Formula 2	-25.000*	1.054	.000	-28.47	-21.53
	Formula 3	-12.667*	1.054	.000	-16.14	-9.20
	Formula 5	2.667	1.054	.159	-.80	6.14
Formula 5	Formula 1	-49.667*	1.054	.000	-53.14	-46.20
	Formula 2	-27.667*	1.054	.000	-31.14	-24.20
	Formula 3	-15.333*	1.054	.000	-18.80	-11.86
	Formula 4	-2.667	1.054	.159	-6.14	.80

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

Suhu Gelasi (Variasi Konsentrasi HPMC)						
Dependent Variable: Suhu Gelasi (Variasi HPMC)						
Tukey HSD						
(I) F2	(J) F2	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	1.8333	.9006	.317	-1.131	4.797
	Formula 3	4.5000*	.9006	.004	1.536	7.464
	Formula 4	24.1667*	.9006	.000	21.203	27.131
	Formula 5	28.1667*	.9006	.000	25.203	31.131
Formula 2	Formula 1	-1.8333	.9006	.317	-4.797	1.131
	Formula 3	2.6667	.9006	.083	-.297	5.631
	Formula 4	22.3333*	.9006	.000	19.369	25.297
	Formula 5	26.3333*	.9006	.000	23.369	29.297
Formula 3	Formula 1	-4.5000*	.9006	.004	-7.464	-1.536
	Formula 2	-2.6667	.9006	.083	-5.631	.297
	Formula 4	19.6667*	.9006	.000	16.703	22.631
	Formula 5	23.6667*	.9006	.000	20.703	26.631
Formula 4	Formula 1	-24.1667*	.9006	.000	-27.131	-21.203
	Formula 2	-22.3333*	.9006	.000	-25.297	-19.369
	Formula 3	-19.6667*	.9006	.000	-22.631	-16.703
	Formula 5	4.0000*	.9006	.009	1.036	6.964
Formula 5	Formula 1	-28.1667*	.9006	.000	-31.131	-25.203
	Formula 2	-26.3333*	.9006	.000	-29.297	-23.369
	Formula 3	-23.6667*	.9006	.000	-26.631	-20.703
	Formula 4	-4.0000*	.9006	.009	-6.964	-1.036
*. The mean difference is significant at the 0.05 level.						

Uji Bioadesif (Preliminary)						
Dependent Variable: Bioadhesive Strenght (Preliminery)						
Tukey HSD						
(I) F1	(J) F1	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-3379.31034	2170.92329	.709	-10792.1155	4033.4948
	Formula 3	-5632.18390	2170.92329	.199	-13044.9891	1780.6213
	Formula 4	-6758.62069	2170.92329	.085	-14171.4259	654.1845

	Formula 5	-12390.80459*	2170.92329	.001	-19803.6098	-4977.9994
	Formula 6	-22528.73563*	2170.92329	.000	-29941.5408	-15115.9305
	Formula 7	-25908.04597*	2170.92329	.000	-33320.8511	-18495.2408
Formula 2	Formula 1	3379.31034	2170.92329	.709	-4033.4948	10792.1155
	Formula 3	-2252.87356	2170.92329	.936	-9665.6787	5159.9316
	Formula 4	-3379.31035	2170.92329	.709	-10792.1155	4033.4948
	Formula 5	-9011.49425*	2170.92329	.013	-16424.2994	-1598.6891
	Formula 6	-19149.42529*	2170.92329	.000	-26562.2305	-11736.6201
	Formula 7	-22528.73563*	2170.92329	.000	-29941.5408	-15115.9305
Formula 3	Formula 1	5632.18391	2170.92329	.199	-1780.6213	13044.9891
	Formula 2	2252.87356	2170.92329	.936	-5159.9316	9665.6787
	Formula 4	-1126.43678	2170.92329	.998	-8539.2420	6286.3684
	Formula 5	-6758.62069	2170.92329	.085	-14171.4259	654.1845
	Formula 6	-16896.55173*	2170.92329	.000	-24309.3569	-9483.7466
	Formula 7	-20275.86207*	2170.92329	.000	-27688.6672	-12863.0569
Formula 4	Formula 1	6758.62069	2170.92329	.085	-654.1845	14171.4259
	Formula 2	3379.31035	2170.92329	.709	-4033.4948	10792.1155
	Formula 3	1126.43678	2170.92329	.998	-6286.3684	8539.2420
	Formula 5	-5632.18391	2170.92329	.199	-13044.9891	1780.6213
	Formula 6	-15770.11494*	2170.92329	.000	-23182.9201	-8357.3098
	Formula 7	-19149.42529*	2170.92329	.000	-26562.2305	-11736.6201
Formula 5	Formula 1	12390.80459*	2170.92329	.001	4977.9994	19803.6098
	Formula 2	9011.49425*	2170.92329	.013	1598.6891	16424.2994
	Formula 3	6758.62069	2170.92329	.085	-654.1845	14171.4259
	Formula 4	5632.18391	2170.92329	.199	-1780.6213	13044.9891
	Formula 6	-10137.93104*	2170.92329	.005	-17550.7362	-2725.1259
	Formula 7	-13517.24138*	2170.92329	.000	-20930.0465	-6104.4362
Formula 6	Formula 1	22528.73563*	2170.92329	.000	15115.9305	29941.5408
	Formula 2	19149.42529*	2170.92329	.000	11736.6201	26562.2305
	Formula 3	16896.55173*	2170.92329	.000	9483.7466	24309.3569

	Formula 4	15770.11494*	2170.92329	.000	8357.3098	23182.9201
	Formula 5	10137.93104*	2170.92329	.005	2725.1259	17550.7362
	Formula 7	-3379.31034	2170.92329	.709	-10792.1155	4033.4948
Formula 7	Formula 1	25908.04598*	2170.92329	.000	18495.2408	33320.8511
	Formula 2	22528.73563*	2170.92329	.000	15115.9305	29941.5408
	Formula 3	20275.86207*	2170.92329	.000	12863.0569	27688.6672
	Formula 4	19149.42529*	2170.92329	.000	11736.6201	26562.2305
	Formula 5	13517.24138*	2170.92329	.000	6104.4362	20930.0465
	Formula 6	3379.31034	2170.92329	.709	-4033.4948	10792.1155

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

Uji bioadesif (Optimasi)

Dependent Variable: Bioadhesive Strenght (Optimasi)

Tukey HSD

(I) F2	(J) F2	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-5632.18391	2759.19534	.314	-14712.9224	3448.5546
	Formula 3	-7885.05747	2759.19534	.098	-16965.7960	1195.6810
	Formula 4	-16896.55173*	2759.19534	.001	-25977.2902	-7815.8132
	Formula 5	-34919.54023*	2759.19534	.000	-44000.2787	-25838.8017
Formula 2	Formula 1	5632.18391	2759.19534	.314	-3448.5546	14712.9224
	Formula 3	-2252.87356	2759.19534	.920	-11333.6121	6827.8650
	Formula 4	-11264.36782*	2759.19534	.015	-20345.1063	-2183.6293
	Formula 5	-29287.35632*	2759.19534	.000	-38368.0948	-20206.6178
Formula 3	Formula 1	7885.05747	2759.19534	.098	-1195.6810	16965.7960
	Formula 2	2252.87356	2759.19534	.920	-6827.8650	11333.6121
	Formula 4	-9011.49426	2759.19534	.052	-18092.2328	69.2443
	Formula 5	-27034.48276*	2759.19534	.000	-36115.2213	-17953.7442
Formula 4	Formula 1	16896.55173*	2759.19534	.001	7815.8132	25977.2902
	Formula 2	11264.36782*	2759.19534	.015	2183.6293	20345.1063
	Formula 3	9011.49426	2759.19534	.052	-69.2443	18092.2328
	Formula 5	-18022.98850*	2759.19534	.000	-27103.7270	-8942.2500
Formula 5	Formula 1	34919.54023*	2759.19534	.000	25838.8017	44000.2787
	Formula 2	29287.35632*	2759.19534	.000	20206.6178	38368.0948

	Formula 3	27034.48276*	2759.19534	.000	17953.7442	36115.2213
	Formula 4	18022.98850*	2759.19534	.000	8942.2500	27103.7270
*. The mean difference is significant at the 0.05 level.						

Uji Oklusifitas

Dependent Variable: Oklusifitas

Tukey HSD

(I) F3	(J) F3	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	.000000	.0018990	1.000	-.005374	.005374
	Formula 3	.005520*	.0018990	.041	.000146	.010894
	Formula 4	-.019553*	.0018990	.000	-.024927	-.014179
	Formula 5	.005520*	.0018990	.041	.000146	.010894
Formula 2	Formula 1	.000000	.0018990	1.000	-.005374	.005374
	Formula 3	.005520*	.0018990	.041	.000146	.010894
	Formula 4	-.019553*	.0018990	.000	-.024927	-.014179
	Formula 5	.005520*	.0018990	.041	.000146	.010894
Formula 3	Formula 1	-.005520*	.0018990	.041	-.010894	-.000146
	Formula 2	-.005520*	.0018990	.041	-.010894	-.000146
	Formula 4	-.025073*	.0018990	.000	-.030447	-.019699
	Formula 5	.000000	.0018990	1.000	-.005374	.005374
Formula 4	Formula 1	.019553*	.0018990	.000	.014179	.024927
	Formula 2	.019553*	.0018990	.000	.014179	.024927
	Formula 3	.025073*	.0018990	.000	.019699	.030447
	Formula 5	.025073*	.0018990	.000	.019699	.030447
Formula 5	Formula 1	-.005520*	.0018990	.041	-.010894	-.000146
	Formula 2	-.005520*	.0018990	.041	-.010894	-.000146
	Formula 3	.000000	.0018990	1.000	-.005374	.005374
	Formula 4	-.025073*	.0018990	.000	-.030447	-.019699

Based on observed means.

The error term is Mean Square(Error) = 2.705E-5.

*. The mean difference is significant at the 0,05 level.

pH

Dependent Variable: pH

Tukey HSD

(I) F2	(J) F2	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-.12667*	.02231	.001	-.2001	-.0532

	Formula 3	-.21000*	.02231	.000	-.2834	-.1366
	Formula 4	-.27000*	.02231	.000	-.3434	-.1966
	Formula 5	-.35000*	.02231	.000	-.4234	-.2766
Formula 2	Formula 1	.12667*	.02231	.001	.0532	.2001
	Formula 3	-.08333*	.02231	.025	-.1568	-.0099
	Formula 4	-.14333*	.02231	.001	-.2168	-.0699
	Formula 5	-.22333*	.02231	.000	-.2968	-.1499
Formula 3	Formula 1	.21000*	.02231	.000	.1366	.2834
	Formula 2	.08333*	.02231	.025	.0099	.1568
	Formula 4	-.06000	.02231	.126	-.1334	.0134
	Formula 5	-.14000*	.02231	.001	-.2134	-.0666
Formula 4	Formula 1	.27000*	.02231	.000	.1966	.3434
	Formula 2	.14333*	.02231	.001	.0699	.2168
	Formula 3	.06000	.02231	.126	-.0134	.1334
	Formula 5	-.08000*	.02231	.032	-.1534	-.0066
Formula 5	Formula 1	.35000*	.02231	.000	.2766	.4234
	Formula 2	.22333*	.02231	.000	.1499	.2968
	Formula 3	.14000*	.02231	.001	.0666	.2134
	Formula 4	.08000*	.02231	.032	.0066	.1534

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

Extrudabilitas

Dependent Variable: Extrudabilitas

Tukey HSD

(I) F2	(J) F2	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	.31033*	.04880	.001	.1497	.4709
	Formula 3	1.76100*	.04880	.000	1.6004	1.9216
	Formula 4	2.39733*	.04880	.000	2.2367	2.5579
	Formula 5	2.80167*	.04880	.000	2.6411	2.9623
Formula 2	Formula 1	-.31033*	.04880	.001	-.4709	-.1497
	Formula 3	1.45067*	.04880	.000	1.2901	1.6113
	Formula 4	2.08700*	.04880	.000	1.9264	2.2476
	Formula 5	2.49133*	.04880	.000	2.3307	2.6519
Formula 3	Formula 1	-1.76100*	.04880	.000	-1.9216	-1.6004
	Formula 2	-1.45067*	.04880	.000	-1.6113	-1.2901
	Formula 4	.63633*	.04880	.000	.4757	.7969
	Formula 5	1.04067*	.04880	.000	.8801	1.2013
Formula 4	Formula 1	-2.39733*	.04880	.000	-2.5579	-2.2367

	Formula 2	-2.08700*	.04880	.000	-2.2476	-1.9264
	Formula 3	-.63633*	.04880	.000	-.7969	-.4757
	Formula 5	.40433*	.04880	.000	.2437	.5649
Formula 5	Formula 1	-2.80167*	.04880	.000	-2.9623	-2.6411
	Formula 2	-2.49133*	.04880	.000	-2.6519	-2.3307
	Formula 3	-1.04067*	.04880	.000	-1.2013	-.8801
	Formula 4	-.40433*	.04880	.000	-.5649	-.2437

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

Viskositas Suhu Dingin

Dependent Variable: Viskositas (Suhu Dingin)

Tukey HSD

(I) F2	(J) F2	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-36.500*	5.534	.000	-54.71	-18.29
	Formula 3	-86.667*	5.534	.000	-104.88	-68.45
	Formula 4	-147.500*	5.534	.000	-165.71	-129.29
	Formula 5	-336.667*	5.534	.000	-354.88	-318.45
Formula 2	Formula 1	36.500*	5.534	.000	18.29	54.71
	Formula 3	-50.167*	5.534	.000	-68.38	-31.95
	Formula 4	-111.000*	5.534	.000	-129.21	-92.79
	Formula 5	-300.167*	5.534	.000	-318.38	-281.95
Formula 3	Formula 1	86.667*	5.534	.000	68.45	104.88
	Formula 2	50.167*	5.534	.000	31.95	68.38
	Formula 4	-60.833*	5.534	.000	-79.05	-42.62
	Formula 5	-250.000*	5.534	.000	-268.21	-231.79
Formula 4	Formula 1	147.500*	5.534	.000	129.29	165.71
	Formula 2	111.000*	5.534	.000	92.79	129.21
	Formula 3	60.833*	5.534	.000	42.62	79.05
	Formula 5	-189.167*	5.534	.000	-207.38	-170.95
Formula 5	Formula 1	336.667*	5.534	.000	318.45	354.88
	Formula 2	300.167*	5.534	.000	281.95	318.38
	Formula 3	250.000*	5.534	.000	231.79	268.21
	Formula 4	189.167*	5.534	.000	170.95	207.38

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

Viskositas Suhu Ruang

Dependent Variable: Viskositas (Suhu Ruang)

Tukey HSD

(I) F2	(J) F2			Sig.	95% Confidence Interval

		Mean Difference (I-J)	Std. Error		Lower Bound	Upper Bound
Formula 1	Formula 2	-143.333*	27.162	.003	-232.73	-53.94
	Formula 3	-206.667*	27.162	.000	-296.06	-117.27
	Formula 4	-260.000*	27.162	.000	-349.39	-170.61
	Formula 5	-590.000*	27.162	.000	-679.39	-500.61
Formula 2	Formula 1	143.333*	27.162	.003	53.94	232.73
	Formula 3	-63.333	27.162	.212	-152.73	26.06
	Formula 4	-116.667*	27.162	.011	-206.06	-27.27
	Formula 5	-446.667*	27.162	.000	-536.06	-357.27
Formula 3	Formula 1	206.667*	27.162	.000	117.27	296.06
	Formula 2	63.333	27.162	.212	-26.06	152.73
	Formula 4	-53.333	27.162	.347	-142.73	36.06
	Formula 5	-383.333*	27.162	.000	-472.73	-293.94
Formula 4	Formula 1	260.000*	27.162	.000	170.61	349.39
	Formula 2	116.667*	27.162	.011	27.27	206.06
	Formula 3	53.333	27.162	.347	-36.06	142.73
	Formula 5	-330.000*	27.162	.000	-419.39	-240.61
Formula 5	Formula 1	590.000*	27.162	.000	500.61	679.39
	Formula 2	446.667*	27.162	.000	357.27	536.06
	Formula 3	383.333*	27.162	.000	293.94	472.73
	Formula 4	330.000*	27.162	.000	240.61	419.39

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

Viskositas Suhu Kulit

Dependent Variable: Viskositas (Suhu Kulit)

Tukey HSD

(I) F2	(J) F2	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-6533.333*	968.848	.000	-9721.89	-3344.77
	Formula 3	-11466.667*	968.848	.000	-14655.23	-8278.11
	Formula 4	-14533.333*	968.848	.000	-17721.89	-11344.77
	Formula 5	-17066.667*	968.848	.000	-20255.23	-13878.11
Formula 2	Formula 1	6533.333*	968.848	.000	3344.77	9721.89
	Formula 3	-4933.333*	968.848	.003	-8121.89	-1744.77
	Formula 4	-8000.000*	968.848	.000	-11188.56	-4811.44
	Formula 5	-10533.333*	968.848	.000	-13721.89	-7344.77
Formula 3	Formula 1	11466.667*	968.848	.000	8278.11	14655.23

	Formula 2	4933.333*	968.848	.003	1744.77	8121.89
	Formula 4	-3066.667	968.848	.061	-6255.23	121.89
	Formula 5	-5600.000*	968.848	.001	-8788.56	-2411.44
Formula 4	Formula 1	14533.333*	968.848	.000	11344.77	17721.89
	Formula 2	8000.000*	968.848	.000	4811.44	11188.56
	Formula 3	3066.667	968.848	.061	-121.89	6255.23
	Formula 5	-2533.333	968.848	.141	-5721.89	655.23
Formula 5	Formula 1	17066.667*	968.848	.000	13878.11	20255.23
	Formula 2	10533.333*	968.848	.000	7344.77	13721.89
	Formula 3	5600.000*	968.848	.001	2411.44	8788.56
	Formula 4	2533.333	968.848	.141	-655.23	5721.89

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