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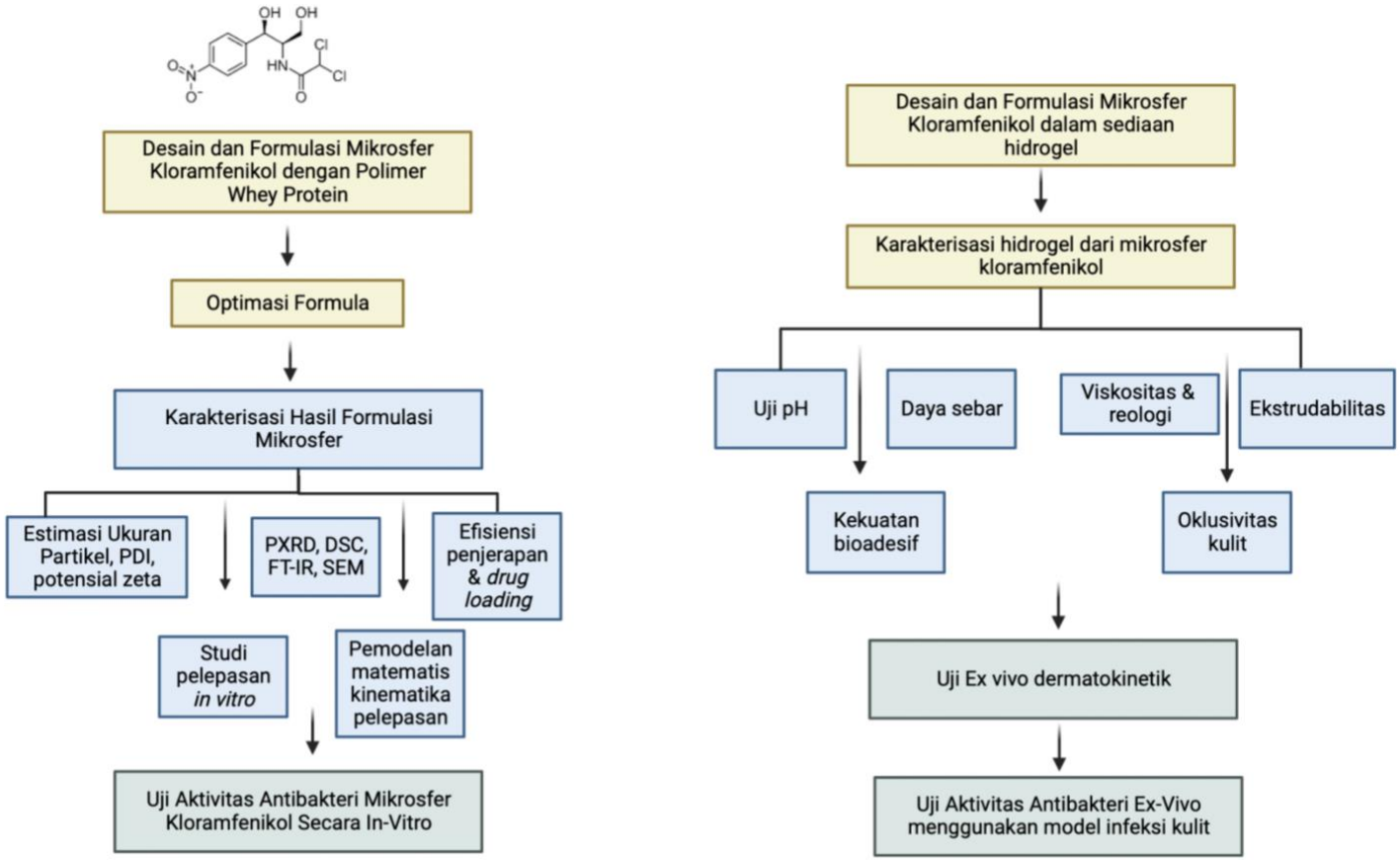
LAMPIRAN

Lampiran 1. Prosedur Penelitian



Lampiran 2. Ukuran Partikel

Tabel 8. Ukuran partikel formulasi mikropartikel (F1-F13)

Formula	Replikasi			Rata-rata	SD
	1	2	3		
F1	1,29	1,43	1,27	1,33	0,09
F2	1,34	1,31	1,56	1,40	0,14
F3	1,49	1,39	1,44	1,44	0,05
F4	1,53	1,32	1,49	1,45	0,11
F5	1,58	1,45	1,38	1,47	0,10
F6	0,59	0,41	0,67	0,56	0,13
F7	2,87	3,14	2,76	2,92	0,20
F8	6,54	8,43	7,98	7,65	0,99
F9	10,23	12,31	11,73	11,42	1,07
F10	139,87	141,23	122,77	134,62	10,29
F11	37,41	29,34	32,34	33,03	4,08
F12	1,34	1,25	1,29	1,29	0,05
F13	1,31	1,21	1,35	1,29	0,07

Lampiran 3. Indeks Polidispersitas

Tabel 9. Ukuran partikel formulasi mikropartikel (F1-F13)

Formula	Replikasi			Rata-rata	SD
	1	2	3		
F1	0,132	0,121	0,128	0,127	0,01
F2	0,127	0,133	0,123	0,13	0,01
F3	0,131	0,126	0,129	0,13	0,00
F4	0,128	0,141	0,136	0,14	0,01
F5	0,127	0,126	0,143	0,13	0,01
F6	0,124	0,133	0,128	0,13	0,13
F7	0,126	0,133	0,127	0,13	0,20
F8	0,142	0,132	0,138	0,14	0,99
F9	0,146	0,131	0,129	0,14	1,07
F10	0,651	0,593	0,631	0,625	0,03
F11	0,411	0,398	0,405	0,405	0,01
F12	0,133	0,126	0,119	0,126	0,01
F13	0,131	0,112	0,123	0,122	0,01

Lampiran 4. Indeks Polidispersitas

Tabel 10. Indeks polidispersitas formulasi mikropartikel (F1-F13)

Formula	Replikasi			Rata-rata	SD
	1	2	3		
F1	0,132	0,121	0,128	0,127	0,01
F2	0,127	0,133	0,123	0,13	0,01
F3	0,131	0,126	0,129	0,13	0,00
F4	0,128	0,141	0,136	0,14	0,01
F5	0,127	0,126	0,143	0,13	0,01
F6	0,124	0,133	0,128	0,13	0,13
F7	0,126	0,133	0,127	0,13	0,20
F8	0,142	0,132	0,138	0,14	0,99
F9	0,146	0,131	0,129	0,14	1,07
F10	0,651	0,593	0,631	0,625	0,03
F11	0,411	0,398	0,405	0,405	0,01
F12	0,133	0,126	0,119	0,126	0,01
F13	0,131	0,112	0,123	0,122	0,01

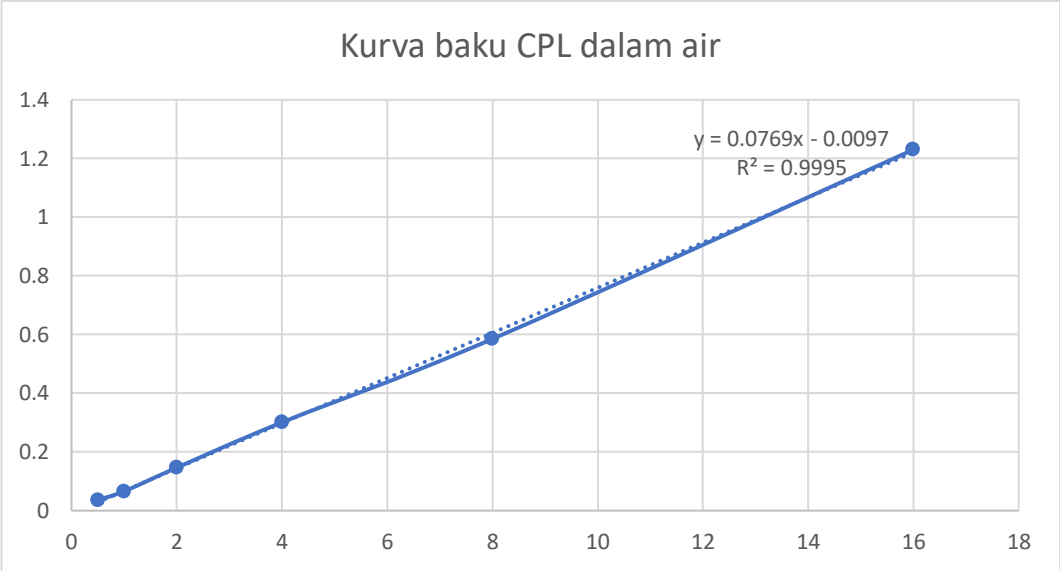
Lampiran 5. Potensial Zeta

Tabel 11. Potensial zeta formulasi mikropartikel (F1-F13)

Formula	Replikasi			Rata-rata	SD
	1	2	3		
F1	-27,43	-29,04	-28,34	-28,27	0,81
F2	-28,31	-30,32	-29,13	-29,25	1,01
F3	-30,21	-29,12	-28,99	-29,44	0,67
F4	-28,09	-30,21	-29,13	-29,14	1,06
F5	-29,19	-30,87	-27,56	-29,21	1,66
F6	-25,4	-23,98	-24,64	-24,67	0,71
F7	-32,91	-31,21	-31,73	-31,95	0,87
F8	-35,43	-33,16	-34,12	-34,24	1,14
F9	-36,01	-34,32	-35,17	-35,17	0,85
F10	-29,32	-26,54	-27,34	-27,73	1,43
F11	-29,32	-26,54	-27,34	-28,36	0,91
F12	-29,34	-28,18	-27,55	-32,32	2,00
F13	-33,43	-30,23	-34,03	-32,56	2,04

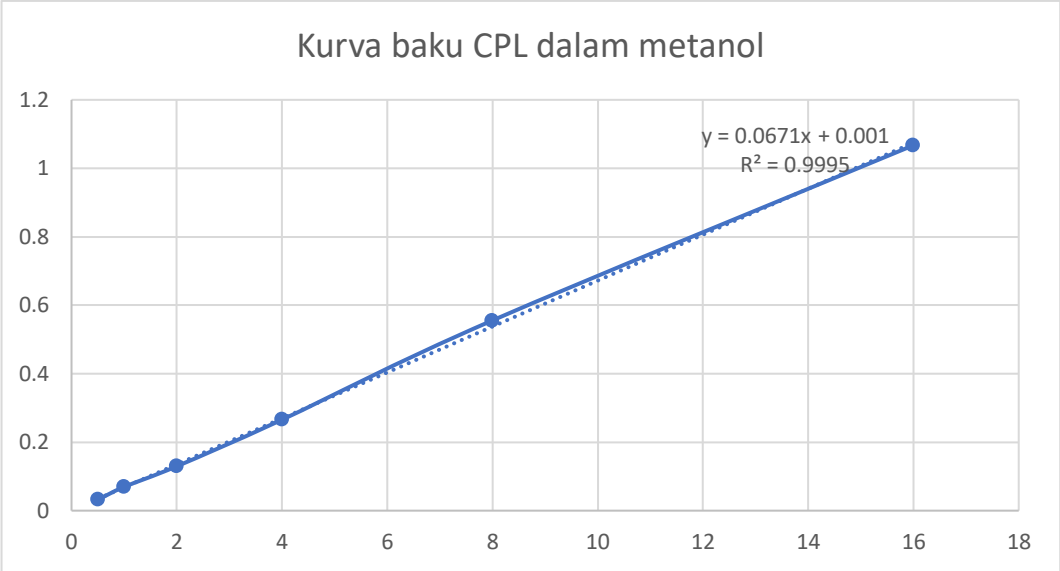
Lampiran 6. Kurva baku kloramfenikol dan media air

Konsentrasi (ppm)	Absorbansi			Rata-rata
	Replikasi 1	Replikasi 2	Replikasi 3	
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



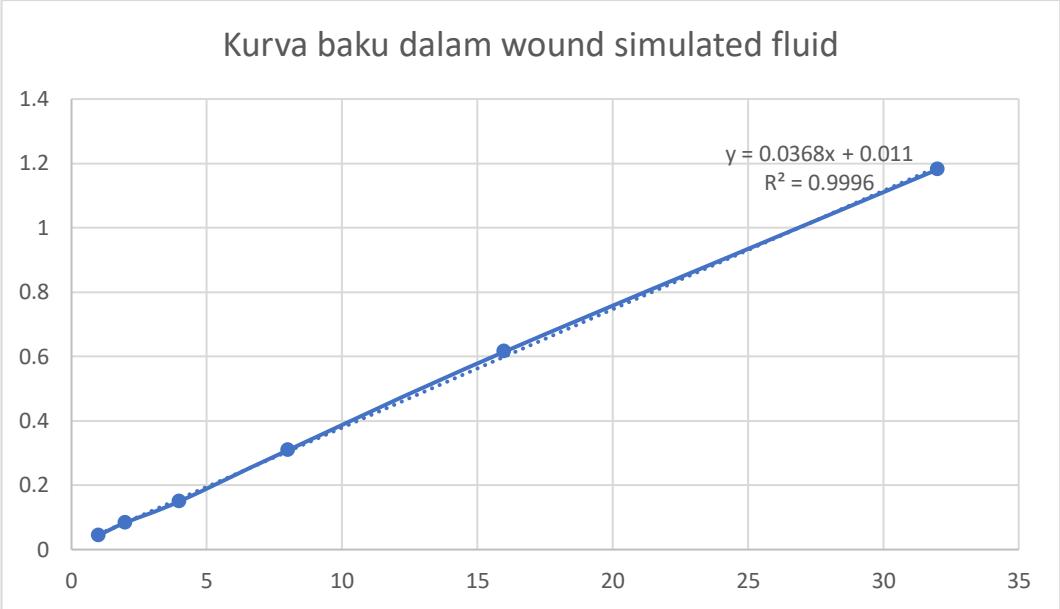
Lampiran 7. Kurva baku kloramfenikol dalam methanol

Konsentrasi (ppm)	Absorbansi			Rata-rata
	Replikasi 1	Replikasi 2	Replikasi 3	
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 8. Kurva baku kloramfenikol dalam *wound simulated fluid*

Konsentrasi (ppm)	Absorbansi			Rata-rata
	Replikasi 1	Replikasi 2	Replikasi 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



Lampiran 9. Efisiensi Penjerapan

Berdasarkan persamaan garis regresi kurva baku:

y = 0,0769x - 0,0097 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 = 62,5 mg

x = $\frac{0,301+0,0097}{0,0769}$ = 4,0403 µg/ml

Faktor pengenceran = 500

Konsentrasi dalam 22 mL = 4,0403 µg/ml x 500 x 22 ml = 44443,433 µg

Konsentrasi dalam mg = 44443,433 µg / 1000 = 44,44 mg

Jumlah obat yang terjerap = 62,5 - 44,44 = 18,0566 mg

Persen Efisiensi Penjerapan = $\frac{18,0566}{62,5}$ x 100%

= 28,8905

Tabel 12. Perhitungan efisiensi penjerapan mikropartikel kloramfenikol

Formulasi	Jumlah kloram untuk formulasi (mg)	Absorbansi	Kadar kloram (μg/mL)	Faktor pengenceran	Jumlah kloram dlm 22 mL (μg)	Jumlah kloram terjerap (mg)	EE (%)	Rata-rata EE (%)	SD EE
F1	62,5	0,301	4,04031	500	44443,4330	18,0566	28,89051	28,3565	1,5579
		0,298	4,00130		44014,3043	18,4857	29,57711		
		0,311	4,17035		45873,8622	16,6261	26,60182		
F2	125	0,611	8,07152	500	88786,7360	36,2133	28,97061	30,6108	2,0987
		0,576	7,61638		83780,2341	41,2198	32,97581		
		0,603	7,96749		87642,3927	37,3576	29,88609		
F3	250	0,543	7,18726	1000	158119,6359	91,8804	36,75215	35,4934	3,3304
		0,587	7,75943		170707,4122	79,2926	31,71704		
		0,532	7,04421		154972,6918	95,0273	38,01092		
F4	500	0,643	8,48765	2000	373456,4369	126,5436	25,30871	25,3087	1,2588
		0,654	8,63069		379750,3251	120,2497	24,04993		
		0,632	8,34460		367162,5488	132,8375	26,56749		
F5	1000	0,763	10,04811	5000	884234,0702	115,7659	11,57659	11,9962	2,9406
		0,732	9,64499		848759,4278	151,2406	15,12406		
		0,783	10,30819		907120,9363	92,8791	9,28791		
F6	250	0,723	9,52796	1000	209615,0845	40,3849	16,15397	17,4509	1,6870
		0,695	9,16385		201604,6814	48,3953	19,35813		
		0,717	9,44993		207898,5696	42,1014	16,84057		
F7	250	0,123	1,72562	2000	75927,1782	174,0728	69,62913	66,6538	2,7749

		0,147	2,03771		89659,2978	160,3407	64,13628		
		0,138	1,92068		84509,7529	165,4902	66,19610		
		0,137	1,90767		83937,5813	166,0624	66,42497		
F8	250	0,121	1,69961	2000	74782,8349	175,2172	70,08687	67,6456	2,1142
		0,137	1,90767		83937,5813	166,0624	66,42497		
		0,128	1,79064		78788,0364	171,2120	68,48479		
F9	250	0,12	1,68661	2000	74210,6632	175,7893	70,31573	68,7899	1,3984
		0,132	1,84265		81076,7230	168,9233	67,56931		
		0,575	7,60338		836371,9116	163,6281	16,36281		
F10	1000	0,612	8,08453	5000	889297,7893	110,7022	11,07022	13,5020	2,6723
		0,598	7,90247		869271,7815	130,7282	13,07282		
		0,287	3,85826		424408,3225	75,5917	15,11834		
F11	500	0,265	3,57217	5000	392938,8817	107,0611	21,41222	18,5514	3,1857
		0,273	3,67620		404382,3147	95,6177	19,12354		
		0,343	4,58648		50451,2354	74,5488	59,63901		
F12	250	0,387	5,15865	500	56745,1235	68,2549	54,60390	55,6720	3,5555
		0,403	5,36671		59033,8101	65,9662	52,77295		
		0,219	2,97399		32713,9142	29,7861	47,65774		
F13	62,5	0,231	3,13004	500	34430,4291	28,0696	44,91131	45,9794	1,4714
		0,229	3,10403		34144,3433	28,3557	45,36905		

Lampiran 10. 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 = 518 mg

Faktor pengenceran = 5000

Konsentrasi dalam 5 mL = 0,7004 µg/ml x 5000 x 5 ml = 17511,1773 µg

Konsentrasi dalam mg = 17511,1773 µg / 1000 = 17,51 mg

Persen *Drug Loading* = $\frac{17,51}{518}$ x 100%

= 3,3805

Tabel 13. Perhitungan persen *drug loading* mikropartikel kloramfenikol

Formulasi	Massa endapan	Absorbansi	Kadar kloram (ug/mL)	Faktor pengenceran	Jumlah kloram dlm 5 mL (ug)	DL (%)	Rata-rata DL (%)	SD DL
F1	518	0,048	0,7004	5000	17511,1773	3,3805	3,3997	0,1672
	521	0,051	0,7452		18628,9121	3,5756		
	517	0,046	0,6706		16766,0209	3,2429		
F2	538	0,091	1,3413	5000	33532,0417	6,2327	6,9160	0,6530
	544	0,111	1,6393		40983,6066	7,5338		
	539	0,102	1,5052		37630,4024	6,9815		
F3	598	0,232	3,4426	5000	86065,5738	14,3922	14,3943	0,0555
	582	0,225	3,3383		83457,5261	14,3398		
	593	0,231	3,4277		85692,9955	14,4508		
F4	632	0,351	5,2161	5000	130402,3845	20,6333	19,8916	0,7353
	628	0,324	4,8137		120342,7720	19,1629		
	641	0,343	5,0969		127421,7586	19,8786		
F5	619	0,318	4,7243	5000	118107,3025	19,0803	20,4342	2,1512
	652	0,402	5,9762		149403,8748	22,9147		
	604	0,314	4,6647		116616,9896	19,3074		
F6	172	0,106	1,5648	5000	39120,7154	22,7446	25,1580	2,0901
	181	0,129	1,9076		47690,0149	26,3481		
	161	0,115	1,6990		42473,9195	26,3813		
F7	1181	0,453	6,7362	5000	168405,3651	14,2596	14,1302	0,1141
	1169	0,443	6,5872		164679,5827	14,0872		
	1162	0,439	6,5276		163189,2697	14,0438		

	3201	0,449	6,6766		166915,0522	5,2145		
F8	3187	0,463	6,8852	5000	172131,1475	5,4010	5,2550	0,1306
	3169	0,439	6,5276		163189,2697	5,1496		
	4102	0,471	7,0045		175111,7735	4,2689		
F9	4189	0,463	6,8852	5000	172131,1475	4,1091	4,0712	0,2192
	4177	0,431	6,4083		160208,6438	3,8355		
	1159	0,41	6,0954		152384,5007	13,1479		
F10	1151	0,334	4,9627	5000	124068,5544	10,7792	11,1686	1,8162
	1128	0,291	4,3219		108047,6900	9,5787		
	1082	0,219	3,2489		81222,05663	7,5067		
F11	1103	0,266	3,9493	5000	98733,23398	8,9513	8,3397	0,7474
	1088	0,251	3,7258		93144,56036	8,5611		
	1032	0,201	2,9806		74515,6483	7,2205		
F12	1068	0,191	2,8316	5000	70789,8659	6,6283	6,5476	0,7166
	1061	0,166	2,4590		61475,4098	5,7941		
	1019	0,081	1,1923		29806,2593	2,9250		
F13	1031	0,079	1,1624	5000	29061,1028	2,8187	2,7377	0,2384
	1026	0,069	1,0134		25335,3204	2,4693		

Lampiran 11. Profil Pelepasan Obat

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 CPL 0,25 jam replikasi 1

Maka, konsentrasi ditentukan berdasarkan perhitungan :

x = $\frac{0,265-0,011}{0,0368}$ = 6,90 µg/ml

Konsentrasi dalam 50 mL = $\frac{6,90\ \mu g/ml\ x\ 1\ x\ 50\ ml}{1000}$ = 0,3451 mg

Kloramfenikol yang dilepaskan = Konsentrasi dalam 50 mL+faktpr koreksi

= 0,3451 mg + 0

= 0,3451 mg

Tabel 14. Profil pelepasan obat kloramfenikol murni

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	0,265	6,90	6,90	1	0,34511	0	0,3451	0,4139	0,0602
	0,347	9,13	9,13	1	0,45652	0	0,4565		
	0,335	8,80	8,80	1	0,44022	0	0,4402		
0,5	0,879	23,59	23,59	1	1,17935	0,0069	1,1863	1,2234	0,0323
	0,916	24,59	24,59	1	1,22962	0,0091	1,2388		
	0,921	24,73	24,73	1	1,23641	0,0088	1,2452		
0,75	0,906	24,32	24,32	2	2,43207	0,0305	2,4626	2,4094	0,0745
	0,897	24,08	24,08	2	2,40761	0,0337	2,4413		
	0,854	22,91	22,91	2	2,29076	0,0335	2,3243		
1	0,886	23,78	23,78	4	4,75543	0,0548	4,8102	4,7683	0,1571
	0,902	24,21	24,21	4	4,84239	0,0578	4,9002		
	0,846	22,69	22,69	4	4,53804	0,0564	4,5945		
2	0,945	25,38	25,38	8	10,15217	0,0786	10,2308	10,3118	0,2298
	0,976	26,22	26,22	8	10,48913	0,0820	10,5711		
	0,936	25,14	25,14	8	10,05435	0,0791	10,1335		
3	0,931	25,00	25,00	15	18,75000	0,1040	18,8540	18,5226	0,6314
	0,934	25,08	25,08	15	18,81114	0,1082	18,9194		
	0,879	23,59	23,59	15	17,69022	0,1043	17,7945		

	0,946	25,41	25,41	20	25,40761	0,1290	25,5366		
4	0,936	25,14	25,14	20	25,13587	0,1333	25,2692	24,8130	1,0304
	0,876	23,51	23,51	20	23,50543	0,1279	23,6333		
	0,892	23,94	23,94	30	35,91033	0,1544	36,0647		
5	0,932	25,03	25,03	30	37,54076	0,1585	37,6992	37,9944	2,0930
	0,994	26,71	26,71	30	40,06793	0,1514	40,2193		
	0,987	26,52	26,52	35	46,41304	0,1783	46,5914		
6	0,812	21,77	21,77	35	38,09103	0,1835	38,2745	42,0436	4,2127
	0,875	23,48	23,48	35	41,08696	0,1781	41,2650		
	0,936	25,14	25,14	40	50,27174	0,2048	50,4766		
7	0,932	25,03	25,03	40	50,05435	0,2052	50,2596	51,3271	1,6645
	0,987	26,52	26,52	40	53,04348	0,2015	53,2450		
	0,898	24,10	24,10	50	60,25815	0,2300	60,4881		
8	0,935	25,11	25,11	50	62,77174	0,2303	63,0020	62,3898	1,6813
	0,945	25,38	25,38	50	63,45109	0,2281	63,6792		
	0,726	19,43	19,43	100	97,14674	0,2541	97,4008		
24	0,698	18,67	18,67	100	93,34239	0,2554	93,5978	99,3938	7,0084
	0,798	21,39	21,39	100	106,92935	0,2535	107,1828		

Tabel 15. Profil pelepasan mikropartikel kloramfenikol

Waktu (Jam)	**Abs**	Konsentrasi (µg/ml)	Konsentrasi 1 ml (µg)	Faktor pengenceran	Konsentrasi 50 ml (mg)	Faktor koreksi	Obat yang dilepaskan (mg)	Rata-rata (mg)	SD
0,25	0,445	11,79	11,79	1	0,5897	0	0,5897	0,5725	0,0202
	0,416	11,01	11,01	1	0,5503	0	0,5503		
	0,436	11,55	11,55	1	0,5774	0	0,5774		
0,5	0,896	24,05	24,05	2	2,4049	0,0118	2,4167	2,4843	0,0806
	0,954	25,63	25,63	2	2,5625	0,0110	2,5735		
	0,913	24,51	24,51	2	2,4511	0,0115	2,4626		
0,75	0,898	24,10	24,10	5	6,0258	0,0358	6,0617	5,9284	0,1214
	0,874	23,45	23,45	5	5,8628	0,0366	5,8994		
	0,863	23,15	23,15	5	5,7880	0,0361	5,8241		
1	0,936	25,14	25,14	10	12,5679	0,0599	12,6279	12,2971	0,3399
	0,886	23,78	23,78	10	11,8886	0,0601	11,9487		
	0,913	24,51	24,51	10	12,2554	0,0592	12,3146		
2	0,936	25,14	25,14	20	25,1359	0,0851	25,2210	25,0752	0,4790
	0,945	25,38	25,38	20	25,3804	0,0839	25,4643		
	0,911	24,46	24,46	20	24,4565	0,0837	24,5402		
3	0,978	26,28	26,28	30	39,4158	0,1102	39,5260	37,9761	1,6849
	0,896	24,05	24,05	30	36,0734	0,1092	36,1826		
	0,946	25,41	25,41	30	38,1114	0,1082	38,2196		

	0,903	24,24	24,24	50	60,5978	0,1365	60,7343		
4	0,917	24,62	24,62	50	61,5489	0,1333	61,6822	60,8908	0,7259
	0,896	24,05	24,05	50	60,1223	0,1336	60,2559		
	0,963	25,87	25,87	60	77,6087	0,1607	77,7694		
5	0,977	26,25	26,25	60	78,7500	0,1579	78,9079	78,2022	0,6163
	0,965	25,92	25,92	60	77,7717	0,1576	77,9294		
	0,698	18,67	18,67	100	93,3424	0,1866	93,5290		
6	0,732	19,59	19,59	100	97,9620	0,1842	98,1461	95,4293	2,4144
	0,706	18,89	18,89	100	94,4293	0,1836	94,6129		

Lampiran 12. MIC dan MBC Mikropartikel Kloramfenikol

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

Lampiran 13. Karakteristik fisik hidrogel mikropartikel kloramfenikol

Tabel 16. Karakteristik pH, viskosotas dan daya sebar hidrogel mikropartikel kloramfenikol

Formula	pH	Rata-rata (pH)	SD	Viskositas (Cps)	Rata-rata (Cps)	SD	Daya sebar (mm)	Rata-rata (mm)	SD
F1	5,41	5,45	0,04	2400	2266,67	230,94	88,15	87,84	1,45
	5,49			2400			89,12		
	5,44			2000			86,26		
F2	5,56	5,55	0,01	3000	3200,00	173,21	82,08	81,83	0,25
	5,54			3300			81,59		
	5,55			3300			81,83		
F3	5,4	5,40	0,01	7100	6900,00	173,21	70,89	70,59	0,30
	5,39			6800			70,29		
	5,41			6800			70,58		
F4	5,56	5,54	0,02	9600	9433,33	152,75	64,79	64,51	0,49
	5,54			9300			64,80		
	5,52			9400			63,95		
F5	5,58	5,55	0,03	22800	23066,67	832,67	53,23	53,52	0,50
	5,54			24000			53,24		
	5,52			22400			54,10		

Lampiran 14. Uji ekstrudabilitas

Formula	Bobot awal (g)	Bobot ekstruksi (g)	Rata-rata	% Ekstrudabilitas	SD
F1	10	7,49 7,48 7,5	7,49	74,90	0,01
F2	10	7,3 7,32 7,39	7,34	73,37	0,05
F3	10	7,07 7,06 6,96	7,03	70,30	0,06
F4	10	6,72 6,27 6,55	6,51	65,13	0,23
F5	10	4,33 4,37 4,55	4,42	44,17	0,12

Lampiran 15. Uji Reologi

Tabel 17. Hasil uji reologi hidrogel mikropartikel kloramfenikol

Formula	Kecepatan (rpm)	Faktor koreksi	Torsi (%)			Rata-rata	Viskositas (Pa.s)	SD
			Replikasi 1	Replikasi 2	Replikasi 3			
F1	100	100	6,5	6	6	6,16667	616,66667	0,28868
	50	200	5,5	5	5	5,16667	1033,33333	0,28868
	20	500	2,5	2	2	2,16667	1083,33333	0,28868
	10	1000	1	1	1,5	1,16667	1166,66667	0,28868
	5	2000	0,8	0,6	0,5	0,63333	1266,66667	0,15275
F2	100	100	17	14	17	16,0000	1600,0000	1,7321
	50	200	11	11,5	8,5	10,3333	2066,6667	1,6073
	20	500	5	5,5	5	5,1667	2583,3333	0,2887
	10	1000	3	3	3	3,0000	3000,0000	0,0000
	5	2000	1,5	2	1,5	1,6667	3333,3333	0,2887
F3	100	100	37	37	38	37,33333	3733,33333	0,57735
	50	200	25	21	22	22,66667	4533,33333	2,08167
	20	500	13,5	12	11,5	12,33333	6166,66667	1,04083
	10	1000	5,5	5	6,5	5,66667	5666,66667	0,76376
	5	2000	3,5	4,5	3,5	3,83333	7666,66667	0,57735
F4	100	100	75	74,5	76	75,1667	7516,6667	0,7638
	50	200	55	55	54	54,6667	10933,3333	0,5774

	20	500	33	32	31	32,0000	16000,0000	1,0000
	10	1000	20	19,5	20	19,8333	19833,3333	0,2887
	5	2000	12	12,5	12,5	12,3333	24666,6667	0,2887
	100	400	54	55	52	53,6667	21466,6667	1,5275
	50	800	34,5	32	32	32,8333	26266,6667	1,4434
F5	20	2000	25,5	24,5	24,5	24,8333	49666,6667	0,5774
	10	4000	17	16,5	18	17,1667	68666,6667	0,7638
	5	8000	13	13	13,5	13,1667	105333,3333	0,2887

Lampiran 16. 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	0,5194	0,5175	0,5231	0,52	0,0028478	0
	6	0,4337	0,4319	0,4315	0,43236667	0,0011719	16,8525641
	12	0,3828	0,3822	0,3827	0,38256667	0,0003215	26,4294872
	24	0,3324	0,3311	0,3307	0,3314	0,0008888	36,2692308
	48	0,3169	0,3167	0,3165	0,3167	0,0002	39,0961538
F2	0	0,5168	0,5157	0,5143	0,5156	0,001253	0
	6	0,433	0,4324	0,4319	0,43243333	0,0005508	16,130075
	12	0,3886	0,3884	0,3867	0,3879	0,0003606	24,7672614
	24	0,3384	0,3382	0,3377	0,3381	0,001044	34,4259116
	48	0,3105	0,3104	0,3195	0,31346667	0,0052253	39,2035169
F3	0	0,5187	0,5178	0,5165	0,51766667	0,001106	0
	6	0,4456	0,4452	0,4439	0,4449	0,0008888	14,0566645

	12	0,3832	0,3819	0,3814	0,38216667	0,0009292	26,1751449
	24	0,3327	0,3368	0,3366	0,33536667	0,0023116	35,2157115
	48	0,3123	0,3126	0,3123	0,3124	0,0001732	39,6522859
	0	0,5236	0,5228	0,5221	0,52283333	0,0007506	0
	6	0,4382	0,4376	0,4369	0,43756667	0,0006506	16,3085751
F4	12	0,3729	0,3728	0,3724	0,3727	0,0002646	28,7153331
	24	0,3281	0,3281	0,3278	0,328	0,001562	37,2649028
	48	0,3151	0,3125	0,3153	0,3143	0,0001732	39,8852407
	0	0,5145	0,5136	0,5128	0,51363333	0,0008505	0
	6	0,4371	0,436	0,4355	0,4362	0,0008185	15,0756052
F5	12	0,3911	0,3909	0,3996	0,39386667	0,0003786	23,3175417
	24	0,3515	0,3514	0,3508	0,35123333	0,0049662	31,6178857
	48	0,3226	0,3219	0,3219	0,32213333	0,0004041	37,2834058

Lampiran 17. Uji kekuatan bioadhesive

Formula	Bobot yang dibutuhkan (g)			Luas Permukaan mukosa (cm^2)	Percepatan gravitasi (cm/s^2)	Kekuatan mukoadhesif ($dyne/cm^2$)			Rata-rata	SD
	Replikasi 1	Replikasi 2	Replikasi 3			Replikasi 1	Replikasi 2	Replikasi 3		
F1	10	12	12	6,60185	980	1484,43	1781,32	1781,32	1682,35671	171,407488
F2	14	16	16	6,60185	980	2078,21	2375,09	2375,09	2276,12967	171,407488
F3	50	60	70	6,60185	980	7422,16	8906,59	10391,03	8906,59436	1484,43239
F4	80	70	85	6,60185	980	11875,46	10391,03	12617,68	11628,0538	1133,75397
F5	121	130	130	6,60185	980	17961,63	19297,62	19297,62	18852,2914	771,333698

Lampiran 18. Uji dermatokinetik *ex vivo*

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 dermatokinetik sampel CPL MPs 1 jam replikasi 1

Maka, konsentrasi ditentukan berdasarkan perhitungan :

x = $\frac{0,145-0,011}{0,0368}$ = 3,6413 µg/ml

Konsentrasi CPL dalam kulit = 3,6413 µg/ml x 4 x 2 ml = 29,1304 µg

Konsentrasi CPL dalam kulit per satuan luas = $\frac{\text{Rata−rata konsentrasi}}{Luas\ permukaan}$

= $\frac{3,9402}{7,06858}$

= 0,5574 µg/cm^2

Tabel 18. Uji dermatokinetik ex vivo sampel hidrogel CPL MPs

Waktu (Jam)	Absorbansi	Konsentrasi (μg/ml)	Rata-rata	SD	Faktor pengenceran	Jumlah kloram dalam kulit (μg)	Jumlah kloram dalam kulit (μg/cm^2)
1	0,145	3,6413	3,9402	1,0251	4	29,1304	0,5574
	0,198	5,0815				40,6522	
	0,125	3,0978				24,7826	
2	0,235	6,0870	5,0906	1,1152	4	48,6957	0,7202
	0,154	3,8859				31,0870	
	0,206	5,2989				42,3913	
3	0,465	12,3370	11,2772	0,9464	4	98,6957	1,5954
	0,398	10,5163				84,1304	
	0,415	10,9783				87,8261	
4	0,687	18,3696	18,1884	1,0445	4	146,9565	2,5731
	0,715	19,1304				153,0435	
	0,639	17,0652				136,5217	
5	0,816	21,8750	21,1051	0,8517	4	175,0000	2,9858
	0,754	20,1902				161,5217	
	0,793	21,2500				170,0000	
6	0,945	25,3804	24,4384	0,9512	4	203,0435	3,4573
	0,875	23,4783				187,8261	
	0,911	24,4565				195,6522	
7	0,874	23,4511	20,6341	2,9268	4	187,6087	2,9191
	0,659	17,6087				140,8696	
	0,778	20,8424				166,7391	

	0,815	21,8478				174,7826	
8	0,698	18,6685	20,2355	1,5902	4	149,3478	2,8627
	0,754	20,1902				161,5217	
	0,546	14,5380				116,3043	
24	0,745	19,9457	17,6178	2,7811	4	159,5652	2,4924
	0,687	18,3696				146,9565	

Tabel 19. Uji dermatokinetik ex vivo sampel hidrogel CPL murni

Waktu (Jam)	Absorbansi	Konsentrasi (μg/ml)	Rata-rata	SD	Faktor pengenceran	Jumlah kloram dalam kulit (μg)	Jumlah kloram dalam kulit (μg/cm^2)
	0	0				0	
1	0	0	0	0	1	0	0
	0	0				0	
	0	0				0	
2	0	0	0	0	1	0	0
	0	0				0	
	0,032	0,57065				1,1413	
3	0,012	0,02717	0,2717	0,2758	1	0,0543	0,0384
	0,019	0,21739				0,4348	
	0,045	0,92391				1,8478	
4	0,051	1,08696	0,7790	0,4006	1	2,1739	0,1102
	0,023	0,32609				0,6522	
5	0,067	1,52174	1,9293	0,4219	1	3,0435	0,2729

	0,081	1,90217				3,8043	
	0,098	2,36413				4,7283	
	0,102	2,47283				4,9457	
6	0,142	3,55978	3,0072	0,5437	1	7,1196	0,4254
	0,121	2,98913				5,9783	
	0,132	3,28804				6,5761	
7	0,103	2,50000	3,2246	0,6951	1	5,0000	0,4562
	0,154	3,88587				7,7717	
	0,098	2,36413				4,7283	
8	0,112	2,74457	2,5634	0,1909	1	5,4891	0,3626
	0,106	2,58152				5,1630	
	0,078	1,82065				3,6413	
24	0,087	2,06522	2,0471	0,2180	1	4,1304	0,2896
	0,094	2,25543				4,5109	

Lampiran 19. Uji Aktivitas antibakteri ex vivo pada model infeksi kulit

Tabel 20. Uji Aktivitas antibakteri ex vivo sampel hidrogel CPL murni

Waktu (jam)	Pengenceran (10 pangkat)	Jumlah koloni			Jumlah bakteri (CFU/mL)			Log CFU/mL			Average	SD
		Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3		
0	5	26	34	21	130000000	170000000	105000000	8,113943	8,230449	8,021189	8,1219	0,1048
6	5	10	6	7	50000000	30000000	35000000	7,69897	7,477121	7,544068	7,5733	0,1138
12	3	11	19	8	550000	950000	400000	5,740363	5,977724	5,60206	5,7733	0,1899
24	2	3	6	7	15000	30000	35000	4,176091	4,477121	4,544068	4,3990	0,1960

Tabel 21. Uji Aktivitas antibakteri ex vivo sampel hidrogel CPL MPs

Waktu	Pengenceran (10 pangkat)	Jumlah koloni			Jumlah bakteri (CFU/mL)			Log CFU/mL			Average	SD
		Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3		
0	5	31	35	21	155000000	175000000	105000000	8,190332	8,243038	8,021189	8,1515	0,1159
6	5	14	8	14	70000000	40000000	70000000	7,845098	7,60206	7,845098	7,7640	0,1403
12	4	8	12	5	4000000	6000000	2500000	6,60206	6,778151	6,39794	6,5927	0,1903
24	3	5	7	4	250000	350000	200000	5,39794	5,544068	5,30103	5,4143	0,1223

Tabel 22. Uji Aktivitas antibakteri ex vivo sampel hidrogel kontrol tanpa perlakuan

Waktu	Pengenceran (10 pangkat)	Jumlah koloni			Jumlah bakteri (CFU/mL)			Log CFU/mL			Average	SD
		Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3		
0	5	35	21	24	175000000	105000000	120000000	8,243038	8,021189	8,079181	8,1145	0,1150
6	5	37	25	25	185000000	125000000	125000000	8,267172	8,09691	8,09691	8,1537	0,0983
12	6	10	5	14	500000000	250000000	700000000	8,69897	8,39794	8,845098	8,6473	0,2280
24	6	17	8	16	850000000	400000000	800000000	8,929419	8,60206	8,90309	8,8115	0,1819

Tabel 23. Uji Aktivitas antibakteri ex vivo sampel hidrogel blank hidrogel

Waktu	Pengenceran (10 pangkat)	Jumlah koloni			Jumlah bakteri (CFU/mL)			Log CFU/mL			Average	SD
		Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3	Rep 1	Rep 2	Rep 3		
0	5	32	28	27	160000000	140000000	135000000	8,20412	8,146128	8,130334	8,1602	0,0389
6	5	24	20	24	120000000	100000000	120000000	8,079181	8	8,079181	8,0528	0,0457
12	5	18	14	21	90000000	70000000	105000000	7,954243	7,845098	8,021189	7,9402	0,0889
24	4	35	28	26	17500000	14000000	13000000	7,243038	7,146128	7,113943	7,1677	0,0672

Lampiran 20. Hasil analisis ANOVA

1. Hasil analisis Ukuran partikel, PDI, Potensial zeta, %EE dan %DL F1-F5

Test homogenitas

		Levene Statistic	df1	df2	Sig.
Ukuran Partikel	Based on Mean	1.279	4	10	.341
	Based on Median	.163	4	10	.952
	Based on Median and with adjusted df	.163	4	6.854	.950
	Based on trimmed mean	1.123	4	10	.399
PDI	Based on Mean	1.719	4	10	.222
	Based on Median	.265	4	10	.894
	Based on Median and with adjusted df	.265	4	4.181	.887
	Based on trimmed mean	1.544	4	10	.263
Potensial Zeta	Based on Mean	.469	4	10	.758
	Based on Median	.460	4	10	.763
	Based on Median and with adjusted df	.460	4	7.785	.763
	Based on trimmed mean	.470	4	10	.757
%DL	Based on Mean	7.655	4	10	.004
	Based on Median	.823	4	10	.539
	Based on Median and with adjusted df	.823	4	2.342	.602
	Based on trimmed mean	6.565	4	10	.007
%EE	Based on Mean	1.301	4	10	.334
	Based on Median	.326	4	10	.855
	Based on Median and with adjusted df	.326	4	6.382	.852
	Based on trimmed mean	1.199	4	10	.369

Data tidak homogen karena nilai sig based on mean %DL 0,004<0,05.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Ukuran Partikel is the same across categories of Pengaruh Konsentrasi Obat.	Independent-Samples Kruskal-Wallis Test	.373	Retain the null hypothesis.
2	The distribution of PDI is the same across categories of Pengaruh Konsentrasi Obat.	Independent-Samples Kruskal-Wallis Test	.633	Retain the null hypothesis.
3	The distribution of Potensial Zeta is the same across categories of Pengaruh Konsentrasi Obat.	Independent-Samples Kruskal-Wallis Test	.624	Retain the null hypothesis.
4	The distribution of %DL is the same across categories of Pengaruh Konsentrasi Obat.	Independent-Samples Kruskal-Wallis Test	.012	Reject the null hypothesis.
5	The distribution of %EE is the same across categories of Pengaruh Konsentrasi Obat.	Independent-Samples Kruskal-Wallis Test	.012	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

Independent-Samples Kruskal-Wallis Test Summary

Total N	15
Test Statistic	4.249[a,b]
Degree Of Freedom	4
Asymptotic Sig.(2-sided test)	.373

a. The test statistic is adjusted for ties.

b. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

Independent-Samples Kruskal-Wallis Test Summary

Total N	15
Test Statistic	2.564[a,b]
Degree Of Freedom	4
Asymptotic Sig.(2-sided test)	.633

a. The test statistic is adjusted for ties.

b. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

Independent-Samples Kruskal-Wallis Test Summary

Total N	15
Test Statistic	2.618[a,b]
Degree Of Freedom	4
Asymptotic Sig.(2-sided test)	.624

a. The test statistic is adjusted for ties.

b. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

Independent-Samples Kruskal-Wallis Test Summary

Total N	15
Test Statistic	12.833[a]
Degree Of Freedom	4
Asymptotic Sig.(2-sided test)	.012

a. The test statistic is adjusted for ties.

Independent-Samples Kruskal-Wallis Test Summary

Total N	15
Test Statistic	12.933[a]
Degree Of Freedom	4
Asymptotic Sig.(2-sided test)	.012

a. The test statistic is adjusted for ties.

Multiple Comparisons

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	-.073333333333	.082838531024	.896	-.34596174334	.19929507667
		Formula 3	-.110000000000	.082838531024	.682	-.38262841000	.16262841000
		Formula 4	-.116666666667	.082838531024	.636	-.38929507667	.15596174334
		Formula 5	-.140000000000	.082838531024	.480	-.41262841000	.13262841000
	Formula 2	Formula 1	.073333333333	.082838531024	.896	-.19929507667	.34596174334
		Formula 3	-.036666666667	.082838531024	.991	-.30929507667	.23596174334
		Formula 4	-.043333333333	.082838531024	.983	-.31596174334	.22929507667
		Formula 5	-.066666666667	.082838531024	.923	-.33929507667	.20596174334
	Formula 3	Formula 1	.110000000000	.082838531024	.682	-.16262841000	.38262841000
		Formula 2	.036666666667	.082838531024	.991	-.23596174334	.30929507667
		Formula 4	-.006666666667	.082838531024	1.000	-.27929507667	.26596174334
		Formula 5	-.030000000000	.082838531024	.996	-.30262841000	.24262841000
	Formula 4	Formula 1	.116666666667	.082838531024	.636	-.15596174334	.38929507667
		Formula 2	.043333333333	.082838531024	.983	-.22929507667	.31596174334
		Formula 3	.006666666667	.082838531024	1.000	-.26596174334	.27929507667
		Formula 5	-.023333333333	.082838531024	.998	-.29596174334	.24929507667
	Formula 5	Formula 1	.140000000000	.082838531024	.480	-.13262841000	.41262841000
		Formula 2	.066666666667	.082838531024	.923	-.20596174334	.33929507667

		Formula 3	.030000000000	.082838531024	.996	-.24262841000	.30262841000
		Formula 4	.023333333333	.082838531024	.998	-.24929507667	.29596174334
PDI	Formula 1	Formula 2	-.0006666667	.0051207638	1.000	-.017519521	.016186188
		Formula 3	-.0016666667	.0051207638	.997	-.018519521	.015186188
		Formula 4	-.0080000000	.0051207638	.550	-.024852854	.008852854
		Formula 5	-.0050000000	.0051207638	.860	-.021852854	.011852854
	Formula 2	Formula 1	.0006666667	.0051207638	1.000	-.016186188	.017519521
		Formula 3	-.0010000000	.0051207638	1.000	-.017852854	.015852854
		Formula 4	-.0073333333	.0051207638	.623	-.024186188	.009519521
		Formula 5	-.0043333333	.0051207638	.910	-.021186188	.012519521
	Formula 3	Formula 1	.0016666667	.0051207638	.997	-.015186188	.018519521
		Formula 2	.0010000000	.0051207638	1.000	-.015852854	.017852854
		Formula 4	-.0063333333	.0051207638	.732	-.023186188	.010519521
		Formula 5	-.0033333333	.0051207638	.963	-.020186188	.013519521
	Formula 4	Formula 1	.0080000000	.0051207638	.550	-.008852854	.024852854
		Formula 2	.0073333333	.0051207638	.623	-.009519521	.024186188
		Formula 3	.0063333333	.0051207638	.732	-.010519521	.023186188
		Formula 5	.0030000000	.0051207638	.974	-.013852854	.019852854
	Formula 5	Formula 1	.0050000000	.0051207638	.860	-.011852854	.021852854
		Formula 2	.0043333333	.0051207638	.910	-.012519521	.021186188
		Formula 3	.0033333333	.0051207638	.963	-.013519521	.020186188
		Formula 4	-.0030000000	.0051207638	.974	-.019852854	.013852854
	Formula 1	Formula 2	.9833333333	.8933084574	.803	-1.956618177	3.923284843

Potensial Zeta		Formula 3	1.1700000000	.8933084574	.692	-1.769951510	4.109951510
		Formula 4	.8733333333	.8933084574	.859	-2.066618177	3.813284843
		Formula 5	.9366666667	.8933084574	.828	-2.003284843	3.876618177
	Formula 2	Formula 1	-.9833333333	.8933084574	.803	-3.923284843	1.956618177
		Formula 3	.1866666667	.8933084574	.999	-2.753284843	3.126618177
		Formula 4	-.1100000000	.8933084574	1.000	-3.049951510	2.829951510
		Formula 5	-.0466666667	.8933084574	1.000	-2.986618177	2.893284843
	Formula 3	Formula 1	-1.1700000000	.8933084574	.692	-4.109951510	1.769951510
		Formula 2	-.1866666667	.8933084574	.999	-3.126618177	2.753284843
		Formula 4	-.2966666667	.8933084574	.997	-3.236618177	2.643284843
		Formula 5	-.2333333333	.8933084574	.999	-3.173284843	2.706618177
	Formula 4	Formula 1	-.8733333333	.8933084574	.859	-3.813284843	2.066618177
		Formula 2	.1100000000	.8933084574	1.000	-2.829951510	3.049951510
		Formula 3	.2966666667	.8933084574	.997	-2.643284843	3.236618177
		Formula 5	.0633333333	.8933084574	1.000	-2.876618177	3.003284843
	Formula 5	Formula 1	-.9366666667	.8933084574	.828	-3.876618177	2.003284843
		Formula 2	.0466666667	.8933084574	1.000	-2.893284843	2.986618177
		Formula 3	.2333333333	.8933084574	.999	-2.706618177	3.173284843
		Formula 4	-.0633333333	.8933084574	1.000	-3.003284843	2.876618177
%DL	Formula 1	Formula 2	-3.5163024430*	.8660857212	.015	-6.366661692	-.665943194
		Formula 3	-10.9945628217*	.8660857212	.000	-13.844922071	-8.144203572
		Formula 4	-16.4918842617*	.8660857212	.000	-19.342243511	-13.641525012
		Formula 5	-17.0344686117*	.8660857212	.000	-19.884827861	-14.184109362

	Formula 2	Formula 1	3.5163024430*	.8660857212	.015	.665943194	6.366661692
		Formula 3	-7.4782603787*	.8660857212	.000	-10.328619628	-4.627901129
		Formula 4	-12.9755818187*	.8660857212	.000	-15.825941068	-10.125222569
		Formula 5	-13.5181661687*	.8660857212	.000	-16.368525418	-10.667806919
	Formula 3	Formula 1	10.9945628217*	.8660857212	.000	8.144203572	13.844922071
		Formula 2	7.4782603787*	.8660857212	.000	4.627901129	10.328619628
		Formula 4	-5.4973214400*	.8660857212	.001	-8.347680689	-2.646962191
		Formula 5	-6.0399057900*	.8660857212	.000	-8.890265039	-3.189546541
	Formula 4	Formula 1	16.4918842617*	.8660857212	.000	13.641525012	19.342243511
		Formula 2	12.9755818187*	.8660857212	.000	10.125222569	15.825941068
		Formula 3	5.4973214400*	.8660857212	.001	2.646962191	8.347680689
		Formula 5	-.5425843500	.8660857212	.967	-3.392943599	2.307774899
	Formula 5	Formula 1	17.0344686117*	.8660857212	.000	14.184109362	19.884827861
		Formula 2	13.5181661687*	.8660857212	.000	10.667806919	16.368525418
		Formula 3	6.0399057900*	.8660857212	.000	3.189546541	8.890265039
		Formula 4	.5425843500	.8660857212	.967	-2.307774899	3.392943599
%EE	Formula 1	Formula 2	-2.2543563067	1.9375143627	.771	-8.630875223	4.122162609
		Formula 3	-7.1368877333*	1.9375143627	.027	-13.513406649	-.760368817
		Formula 4	3.0477676633	1.9375143627	.544	-3.328751253	9.424286579
		Formula 5	16.3602947527*	1.9375143627	.000	9.983775837	22.736813669
	Formula 2	Formula 1	2.2543563067	1.9375143627	.771	-4.122162609	8.630875223
		Formula 3	-4.8825314267	1.9375143627	.162	-11.259050343	1.493987489
		Formula 4	5.3021239700	1.9375143627	.117	-1.074394946	11.678642886

	Formula 5	18.6146510593*	1.9375143627	.000	12.238132143	24.991169975
Formula 3	Formula 1	7.1368877333*	1.9375143627	.027	.760368817	13.513406649
	Formula 2	4.8825314267	1.9375143627	.162	-1.493987489	11.259050343
	Formula 4	10.1846553967*	1.9375143627	.003	3.808136481	16.561174313
	Formula 5	23.4971824860*	1.9375143627	.000	17.120663570	29.873701402
Formula 4	Formula 1	-3.0477676633	1.9375143627	.544	-9.424286579	3.328751253
	Formula 2	-5.3021239700	1.9375143627	.117	-11.678642886	1.074394946
	Formula 3	-10.1846553967*	1.9375143627	.003	-16.561174313	-3.808136481
	Formula 5	13.3125270893*	1.9375143627	.000	6.936008173	19.689046005
Formula 5	Formula 1	-16.3602947527*	1.9375143627	.000	-22.736813669	-9.983775837
	Formula 2	-18.6146510593*	1.9375143627	.000	-24.991169975	-12.238132143
	Formula 3	-23.4971824860*	1.9375143627	.000	-29.873701402	-17.120663570
	Formula 4	-13.3125270893*	1.9375143627	.000	-19.689046005	-6.936008173

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

2. Hasil analisis Ukuran partikel, PDI, Potensial zeta, %EE dan %DL F6-F9

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Ukuran Partikel	Based on Mean	4.594	3	8	.038
	Based on Median	1.089	3	8	.408
	Based on Median and with adjusted df	1.089	3	4.187	.446
	Based on trimmed mean	4.195	3	8	.047
PDI	Based on Mean	1.926	3	8	.204
	Based on Median	.271	3	8	.845
	Based on Median and with adjusted df	.271	3	3.726	.844
	Based on trimmed mean	1.709	3	8	.242
Potensial Zeta	Based on Mean	.239	3	8	.867
	Based on Median	.140	3	8	.933
	Based on Median and with adjusted df	.140	3	7.074	.933
	Based on trimmed mean	.232	3	8	.872
%DL	Based on Mean	13.403	3	8	.002
	Based on Median	.861	3	8	.500
	Based on Median and with adjusted df	.861	3	2.034	.576
	Based on trimmed mean	10.630	3	8	.004
%EE	Based on Mean	.683	3	8	.587
	Based on Median	.193	3	8	.898
	Based on Median and with adjusted df	.193	3	6.145	.897
	Based on trimmed mean	.630	3	8	.616

Data tidak homogen karena nilai sig based on mean %DL dan Ukuran Partikel<0,05.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Ukuran Partikel is the same across categories of Pengaruh Konsentrasi Whey.	Independent-Samples Kruskal-Wallis Test	.016	Reject the null hypothesis.

2	The distribution of PDI is the same across categories of Pengaruh Konsentrasi Whey.	Independent-Samples Kruskal-Wallis Test	.259	Retain the null hypothesis.
3	The distribution of Potensial Zeta is the same across categories of Pengaruh Konsentrasi Whey.	Independent-Samples Kruskal-Wallis Test	.022	Reject the null hypothesis.
4	The distribution of %DL is the same across categories of Pengaruh Konsentrasi Whey.	Independent-Samples Kruskal-Wallis Test	.016	Reject the null hypothesis.
5	The distribution of %EE is the same across categories of Pengaruh Konsentrasi Whey.	Independent-Samples Kruskal-Wallis Test	.057	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

Independent-Samples Kruskal-Wallis Test Summary

Total N	12
Test Statistic	10.385[a]
Degree Of Freedom	3
Asymptotic Sig.(2-sided test)	.016

a. The test statistic is adjusted for ties.

Independent-Samples Kruskal-Wallis Test Summary

Total N	12
Test Statistic	4.027[a,b]
Degree Of Freedom	3
Asymptotic Sig.(2-sided test)	.259

a. The test statistic is adjusted for ties.

b. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

Independent-Samples Kruskal-Wallis Test Summary

Total N	12
Test Statistic	9.667[a]
Degree Of Freedom	3
Asymptotic Sig.(2-sided test)	.022

a. The test statistic is adjusted for ties.

Independent-Samples Kruskal-Wallis Test Summary

Total N	12
Test Statistic	10.385[a]
Degree Of Freedom	3
Asymptotic Sig.(2-sided test)	.016

a. The test statistic is adjusted for ties.

Independent-Samples Kruskal-Wallis Test Summary

Total N	12
Test Statistic	7.539[a,b]
Degree Of Freedom	3
Asymptotic Sig.(2-sided test)	.057

a. The test statistic is adjusted for ties.

b. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

Multiple Comparisons

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	-2.3666666667*	.6031583540	.018	-4.298192031	-.435141303
		Formula 8	-7.0933333333*	.6031583540	.000	-9.024858697	-5.161807969
		Formula 9	-10.8666666667*	.6031583540	.000	-12.798192031	-8.935141303
	Formula 7	Formula 6	2.3666666667*	.6031583540	.018	.435141303	4.298192031
		Formula 8	-4.7266666667*	.6031583540	.000	-6.658192031	-2.795141303
		Formula 9	-8.5000000000*	.6031583540	.000	-10.431525364	-6.568474636
	Formula 8	Formula 6	7.0933333333*	.6031583540	.000	5.161807969	9.024858697
		Formula 7	4.7266666667*	.6031583540	.000	2.795141303	6.658192031
		Formula 9	-3.7733333333*	.6031583540	.001	-5.704858697	-1.841807969
	Formula 9	Formula 6	10.8666666667*	.6031583540	.000	8.935141303	12.798192031
		Formula 7	8.5000000000*	.6031583540	.000	6.568474636	10.431525364
		Formula 8	3.7733333333*	.6031583540	.001	1.841807969	5.704858697
PDI	Formula 6	Formula 7	-.0003333333	.0049385108	1.000	-.016148183	.015481517
		Formula 8	-.0090000000	.0049385108	.330	-.024814850	.006814850
		Formula 9	-.0070000000	.0049385108	.524	-.022814850	.008814850
	Formula 7	Formula 6	.0003333333	.0049385108	1.000	-.015481517	.016148183
		Formula 8	-.0086666667	.0049385108	.359	-.024481517	.007148183

		Formula 9	-.0066666667	.0049385108	.560	-.022481517	.009148183
	Formula 8	Formula 6	.0090000000	.0049385108	.330	-.006814850	.024814850
		Formula 7	.0086666667	.0049385108	.359	-.007148183	.024481517
		Formula 9	.0020000000	.0049385108	.976	-.013814850	.017814850
	Formula 9	Formula 6	.0070000000	.0049385108	.524	-.008814850	.022814850
		Formula 7	.0066666667	.0049385108	.560	-.009148183	.022481517
		Formula 8	-.0020000000	.0049385108	.976	-.017814850	.013814850
Potensial Zeta	Formula 6	Formula 7	7.2766666667*	.7389406832	.000	4.910318488	9.643014845
		Formula 8	9.5633333333*	.7389406832	.000	7.196985155	11.929681512
		Formula 9	10.4933333333*	.7389406832	.000	8.126985155	12.859681512
	Formula 7	Formula 6	-7.2766666667*	.7389406832	.000	-9.643014845	-4.910318488
		Formula 8	2.2866666667	.7389406832	.058	-.079681512	4.653014845
		Formula 9	3.2166666667*	.7389406832	.010	.850318488	5.583014845
	Formula 8	Formula 6	-9.5633333333*	.7389406832	.000	-11.929681512	-7.196985155
		Formula 7	-2.2866666667	.7389406832	.058	-4.653014845	.079681512
		Formula 9	.9300000000	.7389406832	.611	-1.436348178	3.296348178
	Formula 9	Formula 6	-10.4933333333*	.7389406832	.000	-12.859681512	-8.126985155
		Formula 7	-3.2166666667*	.7389406832	.010	-5.583014845	-.850318488
		Formula 8	-.9300000000	.7389406832	.611	-3.296348178	1.436348178
%DL	Formula 6	Formula 7	11.0277969467*	.8608859926	.000	8.270936963	13.784656931
		Formula 8	19.9029786837*	.8608859926	.000	17.146118700	22.659838668
		Formula 9	21.0868128087*	.8608859926	.000	18.329952825	23.843672793
	Formula 7	Formula 6	-11.0277969467*	.8608859926	.000	-13.784656931	-8.270936963

		Formula 8	8.8751817370*	.8608859926	.000	6.118321753	11.632041721
		Formula 9	10.0590158620*	.8608859926	.000	7.302155878	12.815875846
	Formula 8	Formula 6	-19.9029786837*	.8608859926	.000	-22.659838668	-17.146118700
		Formula 7	-8.8751817370*	.8608859926	.000	-11.632041721	-6.118321753
		Formula 9	1.1838341250	.8608859926	.546	-1.573025859	3.940694109
	Formula 9	Formula 6	-21.0868128087*	.8608859926	.000	-23.843672793	-18.329952825
		Formula 7	-10.0590158620*	.8608859926	.000	-12.815875846	-7.302155878
		Formula 8	-1.1838341250	.8608859926	.546	-3.940694109	1.573025859
%EE	Formula 6	Formula 7	-49.2029475500*	1.6818343108	.000	-54.588773027	-43.817122073
		Formula 8	-50.1947117467*	1.6818343108	.000	-55.580537224	-44.808886270
		Formula 9	-51.3390550500*	1.6818343108	.000	-56.724880527	-45.953229573
	Formula 7	Formula 6	49.2029475500*	1.6818343108	.000	43.817122073	54.588773027
		Formula 8	-.9917641967	1.6818343108	.932	-6.377589674	4.394061280
		Formula 9	-2.1361075000	1.6818343108	.604	-7.521932977	3.249717977
	Formula 8	Formula 6	50.1947117467*	1.6818343108	.000	44.808886270	55.580537224
		Formula 7	.9917641967	1.6818343108	.932	-4.394061280	6.377589674
		Formula 9	-1.1443433033	1.6818343108	.902	-6.530168780	4.241482174
	Formula 9	Formula 6	51.3390550500*	1.6818343108	.000	45.953229573	56.724880527
		Formula 7	2.1361075000	1.6818343108	.604	-3.249717977	7.521932977
		Formula 8	1.1443433033	1.6818343108	.902	-4.241482174	6.530168780

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

3. Hasil analisis Ukuran partikel, PDI, Potensial zeta, %EE dan %DL F10-F13

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Ukuran Partikel	Based on Mean	10.296	3	8	.004
	Based on Median	1.041	3	8	.425
	Based on Median and with adjusted df	1.041	3	2.286	.511
	Based on trimmed mean	8.675	3	8	.007
PDI	Based on Mean	3.297	3	8	.079
	Based on Median	1.452	3	8	.299
	Based on Median and with adjusted df	1.452	3	2.727	.394
	Based on trimmed mean	3.153	3	8	.086
Potensial Zeta	Based on Mean	.748	3	8	.554
	Based on Median	.249	3	8	.860
	Based on Median and with adjusted df	.249	3	5.489	.859
	Based on trimmed mean	.702	3	8	.577
%DL	Based on Mean	3.024	3	8	.094
	Based on Median	1.210	3	8	.367
	Based on Median and with adjusted df	1.210	3	3.477	.426
	Based on trimmed mean	2.871	3	8	.104
%EE	Based on Mean	.801	3	8	.528
	Based on Median	.300	3	8	.825
	Based on Median and with adjusted df	.300	3	6.379	.825
	Based on trimmed mean	.756	3	8	.549

Data tidak homohgen karena nilaimsig based on mean ukuran partikel 0,004<0,05.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Ukuran Partikel is the same across categories of RASIO WPI & KLORAM in EtOH.	Independent-Samples Kruskal-Wallis Test	.025	Reject the null hypothesis.

2	The distribution of PDI is the same across categories of RASIO WPI & KLORAM in EtOH.	Independent-Samples Kruskal-Wallis Test	.024	Reject the null hypothesis.
3	The distribution of Potensial Zeta is the same across categories of RASIO WPI & KLORAM in EtOH.	Independent-Samples Kruskal-Wallis Test	.034	Reject the null hypothesis.
4	The distribution of %DL is the same across categories of RASIO WPI & KLORAM in EtOH.	Independent-Samples Kruskal-Wallis Test	.016	Reject the null hypothesis.
5	The distribution of %EE is the same across categories of RASIO WPI & KLORAM in EtOH.	Independent-Samples Kruskal-Wallis Test	.019	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

Independent-Samples Kruskal-Wallis Test Summary

Total N	12
Test Statistic	9.359[a]
Degree Of Freedom	3
Asymptotic Sig.(2-sided test)	.025

a. The test statistic is adjusted for ties.

Independent-Samples Kruskal-Wallis Test Summary

Total N	12
Test Statistic	9.462[a]
Degree Of Freedom	3
Asymptotic Sig.(2-sided test)	.024

a. The test statistic is adjusted for ties.

Independent-Samples Kruskal-Wallis Test Summary

Total N	12
Test Statistic	8.641[a]
Degree Of Freedom	3
Asymptotic Sig.(2-sided test)	.034

a. The test statistic is adjusted for ties.

Independent-Samples Kruskal-Wallis Test Summary

Total N	12
Test Statistic	10.385[a]
Degree Of Freedom	3
Asymptotic Sig.(2-sided test)	.016

a. The test statistic is adjusted for ties.

Independent-Samples Kruskal-Wallis Test Summary

Total N	12
Test Statistic	9.974[a]
Degree Of Freedom	3
Asymptotic Sig.(2-sided test)	.019

a. The test statistic is adjusted for ties.

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) RASIO WPI & KLORAM in EtOH	(J) RASIO WPI & KLORAM in EtOH	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Ukuran Partikel	Formula 10	Formula 11	101.5933333333*	4.5181867061	.000	87.124509077	116.062157590
		Formula 12	133.3300000000*	4.5181867061	.000	118.861175744	147.798824256
		Formula 13	133.3333333333*	4.5181867061	.000	118.864509077	147.802157590
	Formula 11	Formula 10	-101.5933333333*	4.5181867061	.000	-116.062157590	-87.124509077
		Formula 12	31.7366666667*	4.5181867061	.001	17.267842410	46.205490923
		Formula 13	31.7400000000*	4.5181867061	.001	17.271175744	46.208824256
	Formula 12	Formula 10	-133.3300000000*	4.5181867061	.000	-147.798824256	-118.861175744
		Formula 11	-31.7366666667*	4.5181867061	.001	-46.205490923	-17.267842410
		Formula 13	.0033333333	4.5181867061	1.000	-14.465490923	14.472157590
	Formula 13	Formula 10	-133.3333333333*	4.5181867061	.000	-147.802157590	-118.864509077
		Formula 11	-31.7400000000*	4.5181867061	.001	-46.208824256	-17.271175744
		Formula 12	-.0033333333	4.5181867061	1.000	-14.472157590	14.465490923
PDI	Formula 10	Formula 11	.2203333333*	.0132308562	.000	.177963474	.262703192
		Formula 12	.4990000000*	.0132308562	.000	.456630141	.541369859
		Formula 13	.5030000000*	.0132308562	.000	.460630141	.545369859

	Formula 11	Formula 10	-.2203333333*	.0132308562	.000	-.262703192	-.177963474
		Formula 12	.2786666667*	.0132308562	.000	.236296808	.321036526
		Formula 13	.2826666667*	.0132308562	.000	.240296808	.325036526
	Formula 12	Formula 10	-.4990000000*	.0132308562	.000	-.541369859	-.456630141
		Formula 11	-.2786666667*	.0132308562	.000	-.321036526	-.236296808
		Formula 13	.0040000000	.0132308562	.990	-.038369859	.046369859
	Formula 13	Formula 10	-.5030000000*	.0132308562	.000	-.545369859	-.460630141
		Formula 11	-.2826666667*	.0132308562	.000	-.325036526	-.240296808
		Formula 12	-.0040000000	.0132308562	.990	-.046369859	.038369859
Potensial Zeta	Formula 10	Formula 11	.6233333333	1.3568304569	.966	-3.721715401	4.968382067
		Formula 12	4.5833333333*	1.3568304569	.039	.238284599	8.928382067
		Formula 13	4.8300000000*	1.3568304569	.030	.484951266	9.175048734
	Formula 11	Formula 10	-.6233333333	1.3568304569	.966	-4.968382067	3.721715401
		Formula 12	3.9600000000	1.3568304569	.075	-.385048734	8.305048734
		Formula 13	4.2066666667	1.3568304569	.058	-.138382067	8.551715401
	Formula 12	Formula 10	-4.5833333333*	1.3568304569	.039	-8.928382067	-.238284599
		Formula 11	-3.9600000000	1.3568304569	.075	-8.305048734	.385048734
		Formula 13	.2466666667	1.3568304569	.998	-4.098382067	4.591715401
	Formula 13	Formula 10	-4.8300000000*	1.3568304569	.030	-9.175048734	-.484951266
		Formula 11	-4.2066666667	1.3568304569	.058	-8.551715401	.138382067
		Formula 12	-.2466666667	1.3568304569	.998	-4.591715401	4.098382067
%DL	Formula 10	Formula 11	2.8289152200*	.8590208025	.044	.078028231	5.579802209
		Formula 12	4.6209826600*	.8590208025	.003	1.870095671	7.371869649

		Formula 13	8.4309042807*	.8590208025	.000	5.680017292	11.181791270
	Formula 11	Formula 10	-2.8289152200*	.8590208025	.044	-5.579802209	-.078028231
		Formula 12	1.7920674400	.8590208025	.236	-.958819549	4.542954429
		Formula 13	5.6019890607*	.8590208025	.001	2.851102072	8.352876050
	Formula 12	Formula 10	-4.6209826600*	.8590208025	.003	-7.371869649	-1.870095671
		Formula 11	-1.7920674400	.8590208025	.236	-4.542954429	.958819549
		Formula 13	3.8099216207*	.8590208025	.009	1.059034632	6.560808610
	Formula 13	Formula 10	-8.4309042807*	.8590208025	.000	-11.181791270	-5.680017292
		Formula 11	-5.6019890607*	.8590208025	.001	-8.352876050	-2.851102072
		Formula 12	-3.8099216207*	.8590208025	.009	-6.560808610	-1.059034632
%EE	Formula 10	Formula 11	-5.0494148233	2.3128662392	.207	-12.456026661	2.357197015
		Formula 12	-42.1700043333*	2.3128662392	.000	-49.576616171	-34.763392495
		Formula 13	-32.4774165567*	2.3128662392	.000	-39.884028395	-25.070804719
	Formula 11	Formula 10	5.0494148233	2.3128662392	.207	-2.357197015	12.456026661
		Formula 12	-37.1205895100*	2.3128662392	.000	-44.527201348	-29.713977672
		Formula 13	-27.4280017333*	2.3128662392	.000	-34.834613571	-20.021389895
	Formula 12	Formula 10	42.1700043333*	2.3128662392	.000	34.763392495	49.576616171
		Formula 11	37.1205895100*	2.3128662392	.000	29.713977672	44.527201348
		Formula 13	9.6925877767*	2.3128662392	.013	2.285975939	17.099199615
	Formula 13	Formula 10	32.4774165567*	2.3128662392	.000	25.070804719	39.884028395
		Formula 11	27.4280017333*	2.3128662392	.000	20.021389895	34.834613571
		Formula 12	-9.6925877767*	2.3128662392	.013	-17.099199615	-2.285975939

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

16. **Pengujian pH**

Uji Normalitas

Tests of Normality

	Formula	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
pH	Formula 1	.232	3	.	.980	3	.726
	Formula 2	.175	3	.	1.000	3	1.000
	Formula 3	.175	3	.	1.000	3	1.000
	Formula 4	.175	3	.	1.000	3	1.000
	Formula 5	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

Uji One Way Anova

ANOVA

pH

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.057	4	.014	22.579	.000
Within Groups	.006	10	.001		
Total	.064	14			

Post Hoc

Multiple Comparisons

Dependent Variable: pH

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-.10333*	.02055	.004	-.1710	-.0357
	Formula 3	.04667	.02055	.231	-.0210	.1143
	Formula 4	-.09333*	.02055	.007	-.1610	-.0257
	Formula 5	-.10000*	.02055	.005	-.1676	-.0324
Formula 2	Formula 1	.10333*	.02055	.004	.0357	.1710
	Formula 3	.15000*	.02055	.000	.0824	.2176
	Formula 4	.01000	.02055	.987	-.0576	.0776
	Formula 5	.00333	.02055	1.000	-.0643	.0710
Formula 3	Formula 1	-.04667	.02055	.231	-.1143	.0210
	Formula 2	-.15000*	.02055	.000	-.2176	-.0824

Formula 4	Formula 4	-.14000*	.02055	.000	-.2076	-.0724
	Formula 5	-.14667*	.02055	.000	-.2143	-.0790
	Formula 1	.09333*	.02055	.007	.0257	.1610
	Formula 2	-.01000	.02055	.987	-.0776	.0576
	Formula 3	.14000*	.02055	.000	.0724	.2076
	Formula 5	-.00667	.02055	.997	-.0743	.0610
Formula 5	Formula 1	.10000*	.02055	.005	.0324	.1676
	Formula 2	-.00333	.02055	1.000	-.0710	.0643
	Formula 3	.14667*	.02055	.000	.0790	.2143
	Formula 4	.00667	.02055	.997	-.0610	.0743

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

17. **Viskositas**

Uji Normalitas

Tests of Normality

	Formula	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Viscosity	Formula 1	.385	3	.	.750	3	.000
	Formula 2	.385	3	.	.750	3	.000
	Formula 3	.385	3	.	.750	3	.000
	Formula 4	.253	3	.	.964	3	.637
	Formula 5	.292	3	.	.923	3	.463

a. Lilliefors Significance Correction

Uji Kruskal Wallis

Test Statistics[a,b]

	Viscosity
Chi-Square	13.573
df	4
Asymp. Sig.	.009

a. Kruskal Wallis Test

b. Grouping Variable: Formula

Uji Lanjutan Kruskal

Each node shows the sample average rank of Formula.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Formula 1-Formula 2	-3.000	3.642	-.824	.410	1.000
Formula 1-Formula 3	-6.000	3.642	-1.648	.099	.994
Formula 1-Formula 4	-9.000	3.642	-2.471	.013	.135
Formula 1-Formula 5	-12.000	3.642	-3.295	.001	.010
Formula 2-Formula 3	-3.000	3.642	-.824	.410	1.000
Formula 2-Formula 4	-6.000	3.642	-1.648	.099	.994
Formula 2-Formula 5	-9.000	3.642	-2.471	.013	.135
Formula 3-Formula 4	-3.000	3.642	-.824	.410	1.000
Formula 3-Formula 5	-6.000	3.642	-1.648	.099	.994
Formula 4-Formula 5	-3.000	3.642	-.824	.410	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Activate Windows
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18. **Uji Daya Sebar**

Uji Normalitas

Tests of Normality

	Formula	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Spreadability	Formula 1	.250	3	.	.967	3	.649
	Formula 2	.176	3	.	1.000	3	.977
	Formula 3	.177	3	.	1.000	3	.963
	Formula 4	.381	3	.	.759	3	.020
	Formula 5	.381	3	.	.759	3	.019

a. Lilliefors Significance Correction

Uji Kruskal Wallis

Test Statistics[a,b]

	Spreadability
Chi-Square	13.500
df	4
Asymp. Sig.	.009

a. Kruskal Wallis Test

b. Grouping Variable: Formula

Uji Lanjutan Kruskal

Each node shows the sample average rank of Formula.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Formula 5-Formula 4	3.000	3.651	.822	.411	1.000
Formula 5-Formula 3	6.000	3.651	1.643	.100	1.000
Formula 5-Formula 2	9.000	3.651	2.465	.014	.137
Formula 5-Formula 1	12.000	3.651	3.286	.001	.010
Formula 4-Formula 3	3.000	3.651	.822	.411	1.000
Formula 4-Formula 2	6.000	3.651	1.643	.100	1.000
Formula 4-Formula 1	9.000	3.651	2.465	.014	.137
Formula 3-Formula 2	3.000	3.651	.822	.411	1.000
Formula 3-Formula 1	6.000	3.651	1.643	.100	1.000
Formula 2-Formula 1	3.000	3.651	.822	.411	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

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19. **Ekstrudabilitas**

Uji Normalitas

Tests of Normality

	Formula	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Extrudability	Formula 1	.175	3	.	1.000	3	1.000
	Formula 2	.304	3	.	.907	3	.407
	Formula 3	.356	3	.	.818	3	.157
	Formula 4	.231	3	.	.980	3	.732
	Formula 5	.321	3	.	.881	3	.328

a. Lilliefors Significance Correction

Uji One Way Anova

ANOVA

Extrudability

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	18.855	4	4.714	330.096	.000
Within Groups	.143	10	.014		
Total	18.998	14			

Uji Post Hoc

Multiple Comparisons

Dependent Variable: Extrudability

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	.15333	.09757	.545	-.1678	.4744
	Formula 3	.46000*	.09757	.006	.1389	.7811
	Formula 4	.97667*	.09757	.000	.6556	1.2978
	Formula 5	3.07333*	.09757	.000	2.7522	3.3944
Formula 2	Formula 1	-.15333	.09757	.545	-.4744	.1678
	Formula 3	.30667	.09757	.063	-.0144	.6278
	Formula 4	.82333*	.09757	.000	.5022	1.1444
	Formula 5	2.92000*	.09757	.000	2.5989	3.2411
Formula 3	Formula 1	-.46000*	.09757	.006	-.7811	-.1389
	Formula 2	-.30667	.09757	.063	-.6278	.0144

Formula 4	Formula 4	.51667*	.09757	.003	.1956	.8378
	Formula 5	2.61333*	.09757	.000	2.2922	2.9344
	Formula 1	-.97667*	.09757	.000	-1.2978	-.6556
	Formula 2	-.82333*	.09757	.000	-1.1444	-.5022
	Formula 3	-.51667*	.09757	.003	-.8378	-.1956
	Formula 5	2.09667*	.09757	.000	1.7756	2.4178
Formula 5	Formula 1	-3.07333*	.09757	.000	-3.3944	-2.7522
	Formula 2	-2.92000*	.09757	.000	-3.2411	-2.5989
	Formula 3	-2.61333*	.09757	.000	-2.9344	-2.2922
	Formula 4	-2.09667*	.09757	.000	-2.4178	-1.7756

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

20. Uji Oklusivitas kulit

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Oklusivitas kulit	Formula 1	.283	3	.	.935	3	.507
	Formula 2	.368	3	.	.790	3	.092
	Formula 3	.227	3	.	.983	3	.747
	Formula 4	.242	3	.	.973	3	.683
	Formula 5	.304	3	.	.907	3	.407

a. Lilliefors Significance Correction

Uji ANOVA

ANOVA

Oklusivitas kulit

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.576	4	3.144	10.040	.002
Within Groups	3.131	10	.313		
Total	15.707	14			

Multiple Comparisons

Dependent Variable: Oklusivitas kulit

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Formula 1	Formula 2	-.10667	.45690	.999	-1.6104	1.3970
	Formula 3	-.55333	.45690	.746	-2.0570	.9504
	Formula 4	-.78333	.45690	.467	-2.2870	.7204
	Formula 5	1.81333*	.45690	.018	.3096	3.3170
Formula 2	Formula 1	.10667	.45690	.999	-1.3970	1.6104
	Formula 3	-.44667	.45690	.859	-1.9504	1.0570
	Formula 4	-.67667	.45690	.595	-2.1804	.8270
	Formula 5	1.92000*	.45690	.012	.4163	3.4237
Formula 3	Formula 1	.55333	.45690	.746	-.9504	2.0570
	Formula 2	.44667	.45690	.859	-1.0570	1.9504
	Formula 4	-.23000	.45690	.985	-1.7337	1.2737
	Formula 5	2.36667*	.45690	.003	.8630	3.8704
Formula 4	Formula 1	.78333	.45690	.467	-.7204	2.2870
	Formula 2	.67667	.45690	.595	-.8270	2.1804
	Formula 3	.23000	.45690	.985	-1.2737	1.7337
	Formula 5	2.59667*	.45690	.001	1.0930	4.1004
Formula 5	Formula 1	-1.81333*	.45690	.018	-3.3170	-.3096
	Formula 2	-1.92000*	.45690	.012	-3.4237	-.4163
	Formula 3	-2.36667*	.45690	.003	-3.8704	-.8630
	Formula 4	-2.59667*	.45690	.001	-4.1004	-1.0930

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

21. Uji Bioadhesivitas

Tests of Normality

	Formula	Kolmogorov-Smirnov[a] Statistic	df	Sig.	Shapiro-Wilk Statistic	df	Sig.
Nilai Bioadhesive	Formula 1	.385	3	.	.750	3	.000
	Formula 2	.385	3	.	.750	3	.000
	Formula 3	.175	3	.	1.000	3	1.000
	Formula 4	.253	3	.	.964	3	.637
	Formula 5	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Uji Kruskal-Wallis

Test Statistics[a,b]

	Nilai Bioadhesive
Kruskal-Wallis H	13.305
df	4
Asymp. Sig.	.010

a. Kruskal Wallis Test

b. Grouping Variable: Formula

Uji Lanjutan Kruskal Wallis

Each node shows the sample average rank of Formula.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Formula 1-Formula 2	-3.000	3.642	-.824	.410	1.000
Formula 1-Formula 3	-6.333	3.642	-1.739	.082	.820
Formula 1-Formula 4	-8.667	3.642	-2.380	.017	.173
Formula 1-Formula 5	-12.000	3.642	-3.295	.001	.010
Formula 2-Formula 3	-3.333	3.642	-.915	.360	1.000
Formula 2-Formula 4	-5.667	3.642	-1.556	.120	1.000
Formula 2-Formula 5	-9.000	3.642	-2.471	.013	.135
Formula 3-Formula 4	-2.333	3.642	-.641	.522	1.000
Formula 3-Formula 5	-5.667	3.642	-1.556	.120	1.000
Formula 4-Formula 5	-3.333	3.642	-.915	.360	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

22. Uji Dermatokinetik ex vivo

Uji Normalitas

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula CPL MPs	Statistic	df	Sig.	Statistic	df	Sig.
Dermatokinetik	Hidrogel CPL MPs	.273	3	.	.945	3	.549
	Hideogel CPL murni	.200	3	.	.995	3	.862

a. Lilliefors Significance Correction

Uji independent sample t test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Dermatokinetik	Equal variances assumed	7.619	.051	9.668	4	.001	15.570687	1.610589	11.098974	20.042399
	Equal variances not assumed			9.668	2.025	.010	15.570687	1.610589	8.720850	22.420524