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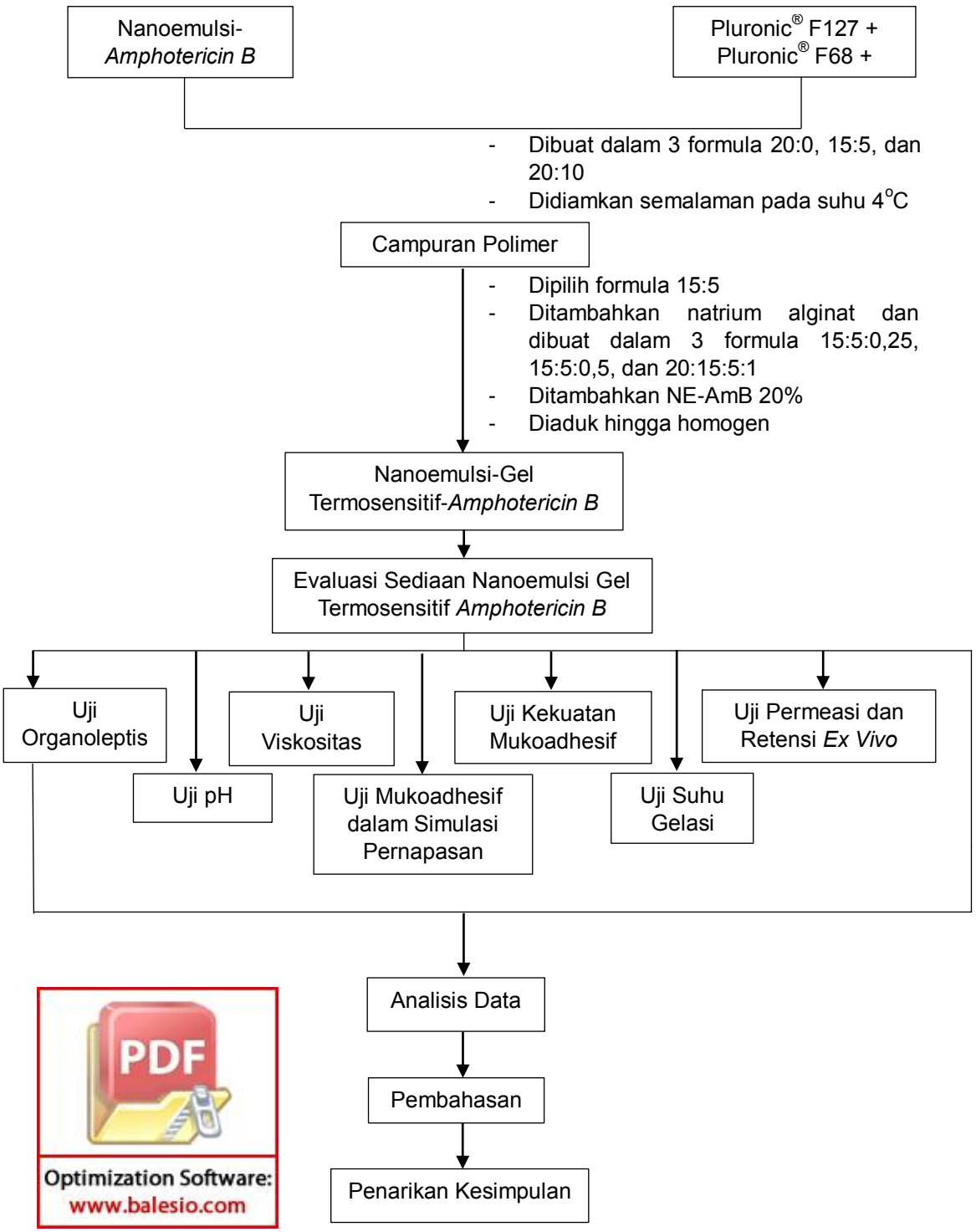
LAMPIRAN

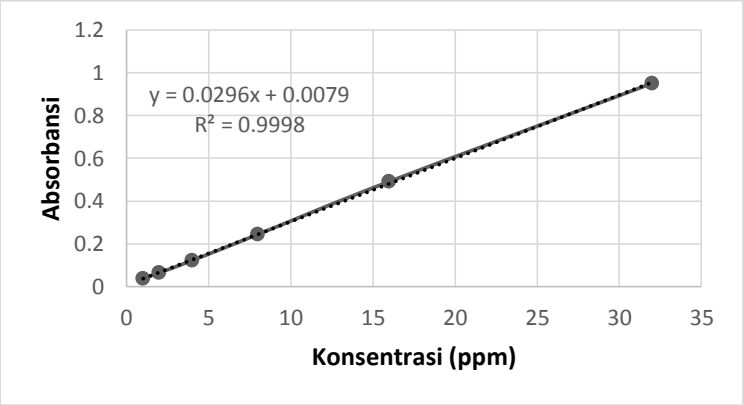
Lampiran 1. Skema Kerja Penelitian



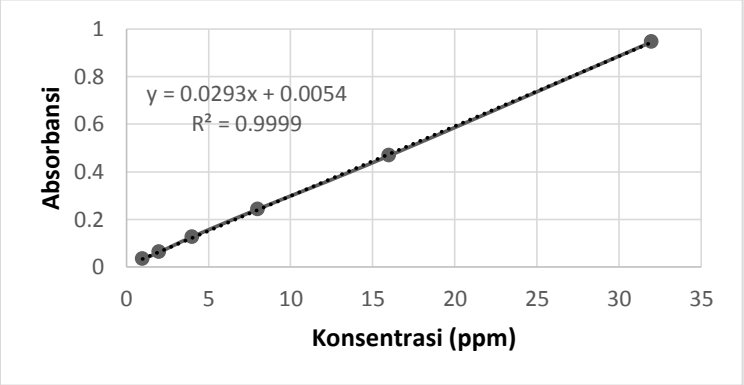
Lampiran 2. Komposisi Formula Nanoemulsi-*Amphotericin B*

Formula	Komposisi					
	AmB	Virgin Coconut Oil	Transcutol	Tween 80	Gliserin	Aquadest
NE1	10 mg	15 mL	5 mL	5 mL	5 mL	20 mL
NE2	10 mg	15 mL	10 mL	5 mL	5 mL	15 mL
NE3	10 mg	15 mL	15 mL	5 mL	10 mL	10 mL

Lampiran 3. Kurva Baku *Amphotericin B* dalam PBS + SLS 2% dan Mukosa Hidung Babi



Gambar 12. Kurva Baku *Amphotericin B* dalam PBS + SLS 2%



Gambar 13. Kurva Baku *Amphotericin B* dalam Mukosa Hidung Babi

Lampiran 4. Perhitungan Data

Lampiran 4.1 Perhitungan Data Uji Kekuatan Mukoadhesif

NE-TG-AmB 6, Replikasi 1

Dik : Bobot yang dibutuhkan = 7 gram

s permukaan = 71,02 cm^2

cepatan gravitasi = 980 cm/s^2

uatan mukoadhesif = ?

sif ($dyne/cm^2$) $= \frac{m \times g}{A}$

$= \frac{7 \text{ gram} \times 980 \text{ cm/s}^2}{71{,}02 \text{ cm}^2}$

= 96,5925 dyne/cm^2

Lampiran 4.2 Perhitungan Data Uji Permeasi secara *Ex Vivo*

Keterangan:

x = konsentrasi

y = absorbansi

Untuk NE-TG-AmB replikasi 1 jam ke-7 diperoleh absorbansi = 0,686 dengan faktor pengenceran = 8

y = 0,0296x + 0,0079

0,686 = 0,0296x + 0,0079

$$x = \frac{(0{,}686-0{,}0079)}{0{,}0296}$$

x = 22,90878 x faktor pengenceran

x = 22,90878 x 8 = 183,27027 µg/mL

Konsentrasi dalam 1 mL = 183,27027 µg/mL x 1 mL

= 183,27027 µg

= 0,18327 mg

Konsentrasi dalam 28 mL = 0,18327 mg x 28 mL

= 5,13156 mg

Faktor koreksi = $\frac{\text{konsentrasi jam sebelumnya}}{1000}$ + faktor koreksi jam sebelumnya

= $\frac{15{,}67905}{1000}$ +0,02964

= 0,04532

Jumlah terpermeasi = konsentrasi dalam 28 mL + faktor koreksi

= 5,13156 + 0,04532

= 5,17689 mg

Lampiran 4.3 Perhitungan Data Uji Retensi secara *Ex Vivo*

Persamaan: y = 0,0293x + 0,0054

Keterangan:

x = konsentrasi

y = absorbansi

Untuk NE-TG-AmB replikasi 1 diperoleh absorbansi = 1,382

0054

Jumlah AmB yang terdeposisi = $\frac{46,9833}{1000}$ x 5 = 0,2349165 mg

Lampiran 5. Tabel Hasil Evaluasi

Lampiran 5.1 Hasil Uji pH

Replikasi	Formula					
	NE-TG-AmB 1	NE-TG-AmB 2	NE-TG-AmB 3	NE-TG-AmB 4	NE-TG-AmB 5	NE-TG-AmB 6
1	6,57	6,52	6,65	6,69	6,69	6,41
2	7,09	7,13	7,21	7,18	7,22	7,07
3	7,61	7,74	7,77	7,67	7,75	7,73
Rata-Rata	7,09	7,13	7,21	7,18	7,22	7,07
SD	0,52	0,61	0,56	0,49	0,53	0,66

Lampiran 5.2 Hasil Uji Viskositas

Lampiran 5.2.1 Hasil Uji Viskositas (Suhu 4°C)

Replikasi	Formula					
	NE-TG-AmB 1	NE-TG-AmB 2	NE-TG-AmB 3	NE-TG-AmB 4	NE-TG-AmB 5	NE-TG-AmB 6
1	185,8635	185,6369	156,3025	187,7896	194,7833	230,1638
2	207,4935	204,1769	173,8125	209,4196	217,7729	251,0728
3	229,1235	222,7169	191,3225	231,0496	240,7625	271,9818
Rata-Rata	207,4935	204,1769	173,8125	209,4196	217,7729	251,0728
SD	21,63	18,54	17,51	21,63	22,9896	20,909

Lampiran 5.2.2 Hasil Uji Viskositas (Suhu 25°C)

Replikasi	Formula					
	NE-TG-AmB 1	NE-TG-AmB 2	NE-TG-AmB 3	NE-TG-AmB 4	NE-TG-AmB 5	NE-TG-AmB 6
1	20445,5	503,67	404,79	511,91	566,50	17901,4
2	22042	536,63	432,6	557,23	605,64	19158
3	23638,5	569,59	460,41	602,55	644,78	20414,6
Rata-Rata	22042	536,63	432,6	557,23	605,64	19158
SD	1596,5	32,96	27,81	45,32	39,14	1256,6

Lampiran 5.2.3 Hasil Uji Viskositas (Suhu 37°C)

Replikasi	Formula					
	NE-TG-AmB 1	NE-TG-AmB 2	NE-TG-AmB 3	NE-TG-AmB 4	NE-TG-AmB 5	NE-TG-AmB 6
1	23854,8	20826,6	490,28	24060,8	25729,4	27768,8
2	25544	22454	535,6	25338	27089	29252
3	27233,2	240814	580,92	26615,2	28448,6	30735,2
	4	22454	535,6	25338	27089	29252
	,2	1627,4	45,32	1277,2	1359,6	1483,2

Lampiran 5.3 Hasil Uji Kekuatan Mukoadhesif

Formula	Bobot yang dibutuhkan (g)			Luas Permukaan Mukosa (cm^2)	Percepatan gravitasi (cm/s^2)	Kekuatan Mukoadhesif			Rata-rata	SD
	Replikasi 1	Replikasi 2	Replikasi 3			Replikasi 1	Replikasi 2	Replikasi 3		
NE-TG-AmB 1	2	2	2	71,02	980	20,8196	23,09	25,3604	23,09	2,2704
NE-TG-AmB 2	2	2	2	71,02	980	22,3072	24,34	26,3728	24,34	2,0328
NE-TG-AmB 3	1	2	2	71,02	980	20,5984	22,09	23,5816	22,09	1,4916
NE-TG-AmB 4	2	2	2	71,02	980	28,4104	31,09	33,7696	31,09	2,6796
NE-TG-AmB 5	4	4	5	71,02	980	56,0124	60,54	65,0676	60,54	4,5276
NE-TG-AmB 6	7	7	7	71,02	980	92,1524	99,32	92,1524	99,32	7,1676

Lampiran 5.4 Hasil Uji Mukoadhesif dalam Simulasi Pernapasan

Replikasi	Formula					
	NE-TG-AmB 1	NE-TG-AmB 2	NE-TG-AmB 3	NE-TG-AmB 4	NE-TG-AmB 5	NE-TG-AmB 6
1	65,66	65,26	54,58	63,45	89,50	90,16
2	69,98	70,35	59,45	68,54	98,04	98,94
3	74,30	75,44	64,32	73,63	106,58	107,72
Rata-Rata	69,98	70,35	59,45	68,54	98,04	98,94
SD	4,32	5,09	4,87	5,09	8,54	8,78

Lampiran 5.5 Hasil Uji Suhu Gelasi

Replikasi	Formula					
	NE-TG-AmB 1	NE-TG-AmB 2	NE-TG-AmB 3	NE-TG-AmB 4	NE-TG-AmB 5	NE-TG-AmB 6
1	21,00	32,22	41,11	32,42	31,67	21,82
2	23,09	35,09	44,56	35,43	34,56	24,01
3	25,18	37,96	47,01	38,44	37,45	26,02
Rata-Rata	23,09	35,09	44,56	35,43	34,56	24,01
SD	2,09	2,87	3,45	3,01	2,89	2,19

Lampiran 5.6 Hasil Uji Permeasi secara *Ex Vivo*

NE-TG-AmB

Waktu	Faktor pengenceran	Absorbansi	Konsentrasi (µg/mL)	28 mL (mg)	Faktor koreksi	AmB yang terpermeasi (%)	Rata-rata (%)	SD
0,5	2	0,040	1,08	0,06	0,000	0,60	0,65	0,04
		0,043	1,19	0,07	0,000	0,66		
		0,045	1,25	0,07	0,000	0,70		
1	4	0,037	0,98	0,11	0,001	1,11	1,23	0,10
		0,040	1,08	0,12	0,001	1,23		
		0,043	1,19	0,13	0,001	1,34		
2	8	0,086	2,64	0,59	0,002	5,93	6,59	0,65
		0,094	2,91	0,65	0,002	6,54		
		0,104	3,25	0,73	0,002	7,30		
3	8	0,143	4,56	1,02	0,005	10,27	11,33	1,05
		0,157	5,04	1,13	0,005	11,34		
		0,170	5,48	1,23	0,006	12,33		
4	8	0,265	8,69	1,95	0,009	19,55	21,39	1,87
		0,289	9,50	2,13	0,010	21,37		
		0,315	10,38	2,32	0,011	23,35		
		0,354	11,69	2,62	0,018	26,37	29,27	2,87
		0,392	12,98	2,91	0,020	29,26		
		0,430	14,26	3,20	0,022	32,17		

Waktu	Faktor pengenceran	Absorbansi	Konsentrasi (µg/mL)	28 mL (mg)	Faktor koreksi	AmB yang terpermeasi (%)	Rata-rata (%)	SD
6	8	0,472	15,68	3,51	0,030	35,42	39,33	3,90
		0,523	17,40	3,90	0,033	39,31		
		0,575	19,16	4,29	0,036	43,27		
7	8	0,686	22,91	5,13	0,045	51,77	57,26	5,49
		0,758	25,34	5,68	0,050	57,27		
		0,83	27,77	6,22	0,055	62,76		
8	12	0,559	18,62	6,26	0,068	63,24	69,45	6,18
		0,613	20,44	6,87	0,075	69,44		
		0,667	22,27	7,48	0,083	75,64		
12	12	0,780	26,08	8,76	0,087	88,51	97,84	9,35
		0,862	28,85	9,70	0,096	97,91		
		0,943	31,59	10,61	0,105	107,20		
24	16	0,892	29,87	13,38	0,113	134,94	147,26	12,32
		0,973	32,60	14,61	0,125	147,32		
		0,995	33,35	14,94	0,137	150,76		

TG-AmB

Waktu	Faktor pengenceran	Absorbansi	Konsentrasi (µg/mL)	28 mL (mg)	Faktor koreksi	AmB yang terpermeasi (mg)	Rata-rata (mg)	SD
1	1	0,025	0,58	0,02	0,000	0,16	2,44	0,24
		0,026	0,61	0,02	0,000	0,17		
		0,028	0,68	0,02	0,000	0,19		
2	1	0,036	0,95	0,03	0,001	0,27	4,96	0,37
		0,038	1,02	0,03	0,001	0,29		
		0,042	1,15	0,03	0,001	0,33		
3	1	0,095	2,94	0,08	0,002	0,84	6,33	0,56
		0,103	3,21	0,09	0,002	0,92		
		0,115	3,62	0,10	0,002	1,03		
4	1	0,176	5,68	0,16	0,004	1,63	10,86	0,98
		0,187	6,05	0,17	0,005	1,74		
		0,209	6,79	0,19	0,005	1,96		
5	1	0,252	8,25	0,23	0,010	2,41	20,61	1,77
		0,275	9,02	0,25	0,011	2,64		
		0,309	10,17	0,28	0,012	2,97		
		0,315	10,38	0,29	0,018	3,09	27,65	2,61
		0,339	11,19	0,31	0,020	3,33		
		0,340	11,22	0,31	0,022	3,37		

Waktu	Faktor pengenceran	Absorbansi	Konsentrasi (µg/mL)	28 mL (mg)	Faktor koreksi	AmB yang terpermeasi (%)	Rata-rata (%)	SD
7	2	0,473	15,71	3,52	0,029	5,72	6,25	0,51
		0,518	17,23	3,86	0,031	6,22		
		0,562	18,72	4,19	0,034	6,81		
8	2	0,689	23,01	5,15	0,038	7,44	8,1	0,72
		0,743	24,83	5,56	0,042	8,23		
		0,798	26,69	5,98	0,045	8,97		
12	2	0,785	26,26	5,88	0,051	9,84	10,69	0,95
		0,877	29,36	6,58	0,056	10,79		
		0,960	32,17	7,21	0,060	11,75		
24	2	1,201	40,31	9,03	0,068	10,80	12,72	2,04
		1,099	36,86	8,26	0,074	12,83		
		1,047	35,10	7,86	0,080	14,88		

Lampiran 5.7 Hasil Uji Retensi secara *Ex Vivo*

NE-TG-AmB

Waktu	Replikasi	Serapan	Konsentrasi (µg/mL)	Faktor Koreksi	Jumlah AmB Terdeposisi Setelah 24 Jam	Rata-rata (mg)	SD
0	1	0	0	30	0	0	0
	2	0	0	30	0		
	3	0	0	30	0		
1	1	0,623	632,03	30	3,16015	3,22336667	0,571453533
	2	0,530	537,23	30	2,68615		
	3	0,752	764,76	30	3,8238		
2	1	0,923	939,94	30	4,6997	4,79368333	0,849831604
	2	0,786	798,95	30	3,99475		
	3	1,116	1137,32	30	5,6866		
3	1	1,087	1106,94	30	5,5347	5,64538333	1,000825834
	2	0,924	940,9	30	4,7045		
	3	1,314	1339,39	30	6,69695		
4	1	1,295	1320,37	30	6,60185	6,7339	1,19381498
	2	1,102	1122,32	30	5,6116		
	3	1,566	1597,65	30	7,98825		
	1	1,451	1480,04	30	7,4002	7,54818333	1,33817596
	2	1,234	1258,03	30	6,29015		
	3	1,754	1790,84	30	8,9542		

6	1	0,791	804,76	30	4,0238	4,10425	0,727618325
	2	0,673	684,04	30	3,4202		
	3	0,956	973,75	30	4,86875		
7	1	0,672	682,68	30	3,4134	3,48165	0,617211623
	2	0,572	580,28	30	2,9014		
	3	0,812	826,03	30	4,13015		
8	1	0,669	679,33	30	3,39665	3,46457833	0,614216153
	2	0,569	577,43	30	2,88715		
	3	0,808	821,987	30	4,109935		
12	1	0,561	569,17	30	2,84585	2,90275	0,514614681
	2	0,478	483,79	30	2,41895		
	3	0,678	688,69	30	3,44345		
24	1	0,464	469,83	30	2,34915	2,39611667	0,424801746
	2	0,395	399,35	30	1,99675		
	3	0,561	568,49	30	2,84245		

TG-AmB

Waktu	Replikasi	Serapan	Konsentrasi (µg/mL)	Faktor Koreksi	Jumlah AmB Terdeposisi Setelah 24 Jam	Rata-rata (mg)	SD
0	1	0	0	15	0	0	0
	2	0	0	15	0		
	3	0	0	15	0		
1	1	0,739	375,51	15	1,87755	1,91508333	0,339509596
	2	0,629	319,18	15	1,5959		
	3	0,893	454,36	15	2,2718		
2	1	1,039	529,03	15	2,64515	2,69805	0,478299088
	2	0,884	449,68	15	2,2484		
	3	1,256	640,12	15	3,2006		
3	1	1,297	661,34	15	3,3067	3,37283333	0,597949206
	2	1,103	562,14	15	2,8107		
	3	1,568	800,22	15	4,0011		
4	1	1,585	808,42	15	4,0421	4,12291667	0,730933568
	2	1,348	687,15	15	3,43575		
	3	1,916	978,18	15	4,8909		
	1	1,127	574,26	15	2,8713	2,92871667	0,519211504
	2	0,959	488,12	15	2,4406		
	3	1,363	694,85	15	3,47425		

	1	0,746	379,33	15	1,89665		
6	2	0,635	322,43	15	1,61215	1,93456667	0,342950646
	3	0,902	458,98	15	2,2949		
	1	0,364	183,52	15	0,9176		
7	2	0,310	155,99	15	0,77995	0,93593333	0,16591144
	3	0,439	222,05	15	1,11025		
	1	0,055	25,39	15	0,12695		
8	2	0,048	21,58	15	0,1079	0,12948333	0,022955083
	3	0,065	30,72	15	0,1536		
	1	0,014	4,42	15	0,0221		
12	2	0,013	3,75	15	0,01875	0,02251667	0,003991345
	3	0,016	5,34	15	0,0267		
	1	0,012	3,21	15	0,01605		
24	2	0,010	2,12	15	0,0106	0,01793333	0,008434206
	3	0,016	5,43	15	0,02715		

Lampiran 6. Data Hasil Uji Analisis Statistik
Lampiran 6.1 Analisis Statistik Uji pH

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Uji pH	F1	,175	3	.	1,000	3	1,000
	F2	,175	3	.	1,000	3	1,000
	F3	,175	3	.	1,000	3	1,000
	F4	,175	3	.	1,000	3	1,000
	F5	,175	3	.	1,000	3	1,000
	F6	,175	3	.	1,000	3	1,000

a. Lilliefors Significance Correction

ANOVA

Uji pH

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,059	5	,012	,037	,999
Within Groups	3,825	12	,319		
Total	3,885	17			

Multiple Comparisons

Dependent Variable: Uji pH

	(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Tukey HSD	F1	F2	-,04000	,46100	1,000	-1,5885	1,5085
		F3	-,12000	,46100	1,000	-1,6685	1,4285
		F4	-,09000	,46100	1,000	-1,6385	1,4585
		F5	-,13000	,46100	1,000	-1,6785	1,4185
		F6	,02000	,46100	1,000	-1,5285	1,5685
	F2	F1	,04000	,46100	1,000	-1,5085	1,5885
		F3	-,08000	,46100	1,000	-1,6285	1,4685
		F4	-,05000	,46100	1,000	-1,5985	1,4985
		F5	-,09000	,46100	1,000	-1,6385	1,4585
		F6	,06000	,46100	1,000	-1,4885	1,6085
	F3	F1	,12000	,46100	1,000	-1,4285	1,6685
		F2	,08000	,46100	1,000	-1,4685	1,6285
		F4	,03000	,46100	1,000	-1,5185	1,5785
		F5	-,01000	,46100	1,000	-1,5585	1,5385
		F6	,14000	,46100	1,000	-1,4085	1,6885
	F4	F1	,09000	,46100	1,000	-1,4585	1,6385
		F2	,05000	,46100	1,000	-1,4985	1,5985
		F3	-,03000	,46100	1,000	-1,5785	1,5185
		F5	-,04000	,46100	1,000	-1,5885	1,5085

	F6	,11000	,46100	1,000	-1,4385	1,6585
F5	F1	,13000	,46100	1,000	-1,4185	1,6785
	F2	,09000	,46100	1,000	-1,4585	1,6385
	F3	,01000	,46100	1,000	-1,5385	1,5585
	F4	,04000	,46100	1,000	-1,5085	1,5885
	F6	,15000	,46100	,999	-1,3985	1,6985
F6	F1	-,02000	,46100	1,000	-1,5685	1,5285
	F2	-,06000	,46100	1,000	-1,6085	1,4885
	F3	-,14000	,46100	1,000	-1,6885	1,4085
	F4	-,11000	,46100	1,000	-1,6585	1,4385
	F5	-,15000	,46100	,999	-1,6985	1,3985

Lampiran 6.2 Analisis Statistik Uji Viskositas
Lampiran 6.2.1 Uji Viskositas (Suhu 4°C)

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Uji Viskositas Suhu 4°C	F1	,175	3	.	1,000	3	1,000
	F2	,175	3	.	1,000	3	1,000
	F3	,175	3	.	1,000	3	1,000
	F4	,175	3	.	1,000	3	1,000
	F5	,175	3	.	1,000	3	1,000
	F6	,175	3	.	1,000	3	1,000

a. Lilliefors Significance Correction

ANOVA

Uji Viskositas Suhu 4°C

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9285,343	5	1857,069	4,367	,017
Within Groups	5103,507	12	425,292		
Total	14388,850	17			

Multiple Comparisons

Dependent Variable: Uji Viskositas Suhu 4°C

	(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Tukey HSD	F1	F2	3,31660	16,83829	1,000	-53,2419	59,8751
		F3	33,68100	16,83829	,395	-22,8775	90,2395
		F4	-1,92610	16,83829	1,000	-58,4846	54,6324
		F5	-10,27940	16,83829	,988	-66,8379	46,2791
		F6	-43,57930	16,83829	,174	-100,1378	12,9792
	F2	F1	-3,31660	16,83829	1,000	-59,8751	53,2419
		F3	30,36440	16,83829	,498	-26,1941	86,9229
		F4	-5,24270	16,83829	,999	-61,8012	51,3158
		F5	-13,59600	16,83829	,961	-70,1545	42,9625
		F6	-46,89590	16,83829	,128	-103,4544	9,6626
	F3	F1	-33,68100	16,83829	,395	-90,2395	22,8775
		F2	-30,36440	16,83829	,498	-86,9229	26,1941
		F4	-35,60710	16,83829	,342	-92,1656	20,9514
		F5	-43,96040	16,83829	,168	-100,5189	12,5981
		F6	-77,26030*	16,83829	,006	-133,8188	-20,7018
		F1	1,92610	16,83829	1,000	-54,6324	58,4846
		F2	5,24270	16,83829	,999	-51,3158	61,8012
		F3	35,60710	16,83829	,342	-20,9514	92,1656
		F5	-8,35330	16,83829	,995	-64,9118	48,2052

	F6	-41,65320	16,83829	,206	-98,2117	14,9053
F5	F1	10,27940	16,83829	,988	-46,2791	66,8379
	F2	13,59600	16,83829	,961	-42,9625	70,1545
	F3	43,96040	16,83829	,168	-12,5981	100,5189
	F4	8,35330	16,83829	,995	-48,2052	64,9118
	F6	-33,29990	16,83829	,407	-89,8584	23,2586
F6	F1	43,57930	16,83829	,174	-12,9792	100,1378
	F2	46,89590	16,83829	,128	-9,6626	103,4544
	F3	77,26030*	16,83829	,006	20,7018	133,8188
	F4	41,65320	16,83829	,206	-14,9053	98,2117
	F5	33,29990	16,83829	,407	-23,2586	89,8584

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

Lampiran 6.3 Analisis Statistik Uji Kekuatan Mukhoadhesif

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Uji Kekuatan Mukoadhesif	F1	,175	3	.	1,000	3	1,000
	F2	,175	3	.	1,000	3	1,000
	F3	,175	3	.	1,000	3	,998
	F4	,175	3	.	1,000	3	,998
	F5	,175	3	.	1,000	3	,999
	F6	,385	3	.	,750	3	,000

a. Lilliefors Significance Correction

ANOVA

Uji Kekuatan Mukoadhesif

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12860,527	5	2572,105	274,200	,000
Within Groups	112,565	12	9,380		
Total	12973,092	17			

Multiple Comparisons

Dependent Variable: Uji Kekuatan Mukoadhesif

	(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Tukey HSD	F1	F2	-1,25000	2,50072	,995	-9,6497	7,1497
		F3	1,00173	2,50072	,998	-7,3980	9,4015
		F4	-7,99667	2,50072	,065	-16,3964	,4031
		F5	-37,44667*	2,50072	,000	-45,8464	-29,0469
		F6	-71,45000*	2,50072	,000	-79,8497	-63,0503
	F2	F1	1,25000	2,50072	,995	-7,1497	9,6497
		F3	2,25173	2,50072	,939	-6,1480	10,6515
		F4	-6,74667	2,50072	,147	-15,1464	1,6531
		F5	-36,19667*	2,50072	,000	-44,5964	-27,7969
		F6	-70,20000*	2,50072	,000	-78,5997	-61,8003
	F3	F1	-1,00173	2,50072	,998	-9,4015	7,3980
		F2	-2,25173	2,50072	,939	-10,6515	6,1480
		F4	-8,99840*	2,50072	,033	-17,3981	-,5987
		F5	-38,44840*	2,50072	,000	-46,8481	-30,0487
		F6	-72,45173*	2,50072	,000	-80,8515	-64,0520
	F4	F1	7,99667	2,50072	,065	-,4031	16,3964
		F2	6,74667	2,50072	,147	-1,6531	15,1464
		F3	8,99840*	2,50072	,033	,5987	17,3981
		F5	-29,45000*	2,50072	,000	-37,8497	-21,0503

	F6	-63,45333*	2,50072	,000	-71,8531	-55,0536
F5	F1	37,44667*	2,50072	,000	29,0469	45,8464
	F2	36,19667*	2,50072	,000	27,7969	44,5964
	F3	38,44840*	2,50072	,000	30,0487	46,8481
	F4	29,45000*	2,50072	,000	21,0503	37,8497
	F6	-34,00333*	2,50072	,000	-42,4031	-25,6036
F6	F1	71,45000*	2,50072	,000	63,0503	79,8497
	F2	70,20000*	2,50072	,000	61,8003	78,5997
	F3	72,45173*	2,50072	,000	64,0520	80,8515
	F4	63,45333*	2,50072	,000	55,0536	71,8531
	F5	34,00333*	2,50072	,000	25,6036	42,4031

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

Lampiran 6.4 Analisis Statistik Uji Mukoadhesif dalam Simulasi Pernapasan

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Uji Kekuatan Mukoadhesif Stimulasi Pernafasan	F1	,175	3	.	1,000	3	1,000
	F2	,175	3	.	1,000	3	1,000
	F3	,175	3	.	1,000	3	1,000
	F4	,175	3	.	1,000	3	1,000
	F5	,175	3	.	1,000	3	1,000
	F6	,175	3	.	1,000	3	1,000

a. Lilliefors Significance Correction

ANOVA

Uji Kekuatan Mukoadhesif Stimulasi Pernapasan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4185,922	5	837,184	20,568	,000
Within Groups	488,431	12	40,703		
Total	4674,353	17			

Multiple Comparisons

Dependent Variable: Uji Kekuatan Mukoadhesif Stimulasi Pernafasan

			Mean Difference			95% Confidence Interval	
	(I) Formula	(J) Formula	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Tukey HSD	F1	F2	-,37000	5,20913	1,000	-17,8671	17,1271
		F3	10,53000	5,20913	,385	-6,9671	28,0271
		F4	1,44000	5,20913	1,000	-16,0571	18,9371
		F5	-28,06000*	5,20913	,002	-45,5571	-10,5629
		F6	-28,96000*	5,20913	,001	-46,4571	-11,4629
	F2	F1	,37000	5,20913	1,000	-17,1271	17,8671
		F3	10,90000	5,20913	,352	-6,5971	28,3971
		F4	1,81000	5,20913	,999	-15,6871	19,3071
		F5	-27,69000*	5,20913	,002	-45,1871	-10,1929
		F6	-28,59000*	5,20913	,001	-46,0871	-11,0929
	F3	F1	-10,53000	5,20913	,385	-28,0271	6,9671
		F2	-10,90000	5,20913	,352	-28,3971	6,5971
		F4	-9,09000	5,20913	,531	-26,5871	8,4071
		F5	-38,59000*	5,20913	,000	-56,0871	-21,0929
		F6	-39,49000*	5,20913	,000	-56,9871	-21,9929
	F4	F1	-1,44000	5,20913	1,000	-18,9371	16,0571
		F2	-1,81000	5,20913	,999	-19,3071	15,6871
		F3	9,09000	5,20913	,531	-8,4071	26,5871
		F5	-29,50000*	5,20913	,001	-46,9971	-12,0029

	F6	-30,40000*	5,20913	,001	-47,8971	-12,9029
F5	F1	28,06000*	5,20913	,002	10,5629	45,5571
	F2	27,69000*	5,20913	,002	10,1929	45,1871
	F3	38,59000*	5,20913	,000	21,0929	56,0871
	F4	29,50000*	5,20913	,001	12,0029	46,9971
	F6	-,90000	5,20913	1,000	-18,3971	16,5971
F6	F1	28,96000*	5,20913	,001	11,4629	46,4571
	F2	28,59000*	5,20913	,001	11,0929	46,0871
	F3	39,49000*	5,20913	,000	21,9929	56,9871
	F4	30,40000*	5,20913	,001	12,9029	47,8971
	F5	,90000	5,20913	1,000	-16,5971	18,3971

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

Lampiran 6.5 Analisis Statistik Uji Suhu Gelasi

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Uji Suhu Gelasi	F1	,175	3	.	1,000	3	1,000
	F2	,175	3	.	1,000	3	1,000
	F3	,211	3	.	,991	3	,814
	F4	,175	3	.	1,000	3	1,000
	F5	,175	3	.	1,000	3	1,000
	F6	,178	3	.	,999	3	,953

a. Lilliefors Significance Correction

ANOVA

Uji Suhu Gelasi

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	955,199	5	191,040	26,524	,000
Within Groups	86,431	12	7,203		
Total	1041,630	17			

Multiple Comparisons

Dependent Variable: Uji Suhu Gelasi

	(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Tukey HSD	F1	F2	-12,00000*	2,19129	,002	-19,3604	-4,6396
		F3	-21,13667*	2,19129	,000	-28,4970	-13,7763
		F4	-12,34000*	2,19129	,001	-19,7004	-4,9796
		F5	-11,47000*	2,19129	,002	-18,8304	-4,1096
		F6	-,86000	2,19129	,998	-8,2204	6,5004
	F2	F1	12,00000*	2,19129	,002	4,6396	19,3604
		F3	-9,13667*	2,19129	,013	-16,4970	-1,7763
		F4	-,34000	2,19129	1,000	-7,7004	7,0204
		F5	,53000	2,19129	1,000	-6,8304	7,8904
		F6	11,14000*	2,19129	,003	3,7796	18,5004
	F3	F1	21,13667*	2,19129	,000	13,7763	28,4970
		F2	9,13667*	2,19129	,013	1,7763	16,4970
		F4	8,79667*	2,19129	,017	1,4363	16,1570
		F5	9,66667*	2,19129	,009	2,3063	17,0270
		F6	20,27667*	2,19129	,000	12,9163	27,6370
	F4	F1	12,34000*	2,19129	,001	4,9796	19,7004
		F2	,34000	2,19129	1,000	-7,0204	7,7004
		F3	-8,79667*	2,19129	,017	-16,1570	-1,4363
		F5	,87000	2,19129	,998	-6,4904	8,2304

	F6	11,48000*	2,19129	,002	4,1196	18,8404
F5	F1	11,47000*	2,19129	,002	4,1096	18,8304
	F2	-,53000	2,19129	1,000	-7,8904	6,8304
	F3	-9,66667*	2,19129	,009	-17,0270	-2,3063
	F4	-,87000	2,19129	,998	-8,2304	6,4904
	F6	10,61000*	2,19129	,004	3,2496	17,9704
F6	F1	,86000	2,19129	,998	-6,5004	8,2204
	F2	-11,14000*	2,19129	,003	-18,5004	-3,7796
	F3	-20,27667*	2,19129	,000	-27,6370	-12,9163
	F4	-11,48000*	2,19129	,002	-18,8404	-4,1196
	F5	-10,61000*	2,19129	,004	-17,9704	-3,2496

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

Lampiran 6.6 Analisis Statistik Uji Retensi secara *Ex Vivo*

Jam ke-24

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Uji Retensi	NE-TG-AmB	.211	3	.	.991	3	.817
	TG-AmB	.255	3	.	.963	3	.630

a. Lilliefors Significance Correction

Group Statistics

	Formula	N	Mean	Std. Deviation	Std. Error Mean
Uji Retensi	NE-TG-AmB	3	479.22967	84.960626	49.052040
	TG-AmB	3	3.58767	1.686507	.973705

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
Uji Retensi	Equal variances assumed	5.346	.082	9.695	4	.001	475.642000	49.061703	339.424874	611.859126
				9.695	2.002	.010	475.642000	49.061703	264.705744	686.578256


PDF
Optimization Software:
www.balesio.com

Lampiran 7. Hasil Uji Kinetika Model Pelepasan Obat secara *Ex Vivo* menggunakan *add-ins* Microsoft Excel (DDsolver)

NE-TG-AmB (*Zero Order*)

Time (h)	No.1 F(%)	Mean	SD	RSD(%)
0,5	001	001		
1	001	001		
2	007	007		
3	011	011		
4	021	021		
5	029	029		
6	039	039		
7	057	057		
8	069	069		
12	098	098		
24	147	147		

Best-fit Values

Parameter	No.1	Mean	SD	RSD(%)
k0	0.007	0.007		

Secondary Parameter

Parameter	No.1	Mean	SD	RSD(%)
T25	0.004	0.004		
T50	0.007	0.007		
T75	0.011	0.011		
T80	0.012	0.012		
T90	0.013	0.013		

Goodness of Fit

Parameter	No.1
N_observed	11
DF	10
R_obs-pre	00.001
Rsqr	00.001
Rsqr_adj	00.001
MSE	00.105
MSE_root	00.010
Weighting	1
SS	01.054
WSS	01.054
AIC	00.079
MSC	00.003

TG-AmB (*Zero Order*)

Time (h)	No.1 F(%)	Mean	SD	RSD(%)
0,5	000	000		
1	001	001		
2	003	003		
3	005	005		
4	008	008		
5	013	013		
6	019	019		
7	027	027		
8	031	031		
12	038	038		
24	061	061		

Best-fit Values

Parameter	No.1	Mean	SD	RSD(%)
k0	0.003	0.003		

Secondary Parameter

Parameter	No.1	Mean	SD	RSD(%)
T25	0.009	0.009		
T50	0.018	0.018		
T75	0.027	0.027		
T80	0.029	0.029		
T90	0.032	0.032		

Goodness of Fit

Parameter	No.1
N_observed	11
DF	10
R_obs-pre	00.001
Rsqr	00.001
Rsqr_adj	00.001
MSE	00.023
MSE_root	00.005
Weighting	1
SS	00.228
WSS	00.228
AIC	00.062
MSC	00.003

Lampiran 8. Dokumentasi

Gambar 12. Penimbangan Pluronic®

Gambar 13. Orientasi Pluronic®

Gambar 14. Uji Kekuatan Mukoadhesif

Gambar 15. Pengukuran Spektrofotometer UV-Vis Hasil Uji Mukoadhesif dalam Simulasi Pernapasan

H

Gambar 17. Bubur Jaringan Mukosa Hidung Babi