

**LAMPIRAN 3. Nilai absorbansi**

KOMPOSISI	SAMPel	NILAI ABSORBANSI											TOTAL
		1	3	6	24	48	72	96	HCl1	HCl3	HCl6	HCl24	
5:5	1	0,102	0,001	0,061	0,168	0,300	0,488	0,332	0,341	0,151	0,107	0,088	2,140
	2	0,076	0,045	0,018	0,125	0,364	0,386	0,453	0,350	0,154	0,121	0,127	2,220
	3	0,102	0,043	0,072	0,120	0,321	0,412	0,387	0,311	0,143	0,067	0,116	2,094
4:6	1	0,070	0,050	0,053	0,191	0,331	0,433	0,343	0,409	-	-	-	1,880
	2	0,085	0,067	0,064	0,206	0,341	0,384	0,358	0,343	0,162	-	-	2,011
	3	0,096	0,045	0,045	0,183	0,447	0,373	0,324	0,338	0,152	-	-	2,003
Gelatin	1	0,090	0,047	0,073	0,137	0,305	0,367	0,354	0,172	0,221	0,123	0,162	2,051
	2	0,128	0,049	0,066	0,149	0,347	0,509	0,357	0,154	0,157	0,104	0,172	2,191
	3	0,096	0,036	0,001	0,160	0,299	0,319	0,440	0,159	0,169	0,147	0,169	1,994

#### LAMPIRAN 4. Persentase degradasi

KOMPOSISI	SAMPEL	Persentase Degradasi membran (%)										
		1	3	6	24	48	72	96	HCl1	HCl3	HCl6	HCl24
5:5	1	4,77	4,81	7,65	15,50	29,54	52,36	67,88	83,83	90,87	95,89	100
	2	3,44	5,47	6,29	11,92	28,33	45,74	66,13	81,88	88,81	94,28	100
	3	4,89	6,94	10,39	16,13	31,45	51,11	69,58	84,43	91,28	94,46	100
Mean		4,36	5,74	8,11	14,52	29,78	49,74	67,86	83,38	90,32	94,88	100
SD		0,80	1,09	2,09	2,27	1,57	3,52	1,73	1,34	1,32	0,88	0
4:6	1	3,72	6,38	9,22	19,39	36,98	59,99	78,25	100,00			
	2	4,23	7,57	10,74	21,00	37,95	57,04	74,86	91,93	100,00		
	3	4,79	7,06	9,29	18,44	40,75	59,37	75,53	92,43	100,00		
Mean		4,25	7,00	9,75	19,61	38,56	58,80	76,21	94,79	100,00		
SD		0,54	0,60	0,86	1,29	1,96	1,55	1,79	4,52	0		
Gelatin	1	4,39	6,66	10,22	16,89	31,76	49,65	66,93	75,31	86,09	92,10	100
	2	5,83	8,05	11,06	17,86	33,70	56,95	73,22	80,27	87,43	92,16	100
	3	4,81	6,62	6,65	14,68	29,66	45,65	67,74	75,69	84,15	91,51	100
Mean		5,01	7,11	9,31	16,47	31,70	50,75	69,30	77,09	85,89	91,92	100
SD		0,74	0,81	2,34	1,63	2,02	5,73	3,43	2,76	1,65	0,36	0

## LAMPIRAN 5. Analisa data

### 1. Uji Normalitas

Tests of Normality<sup>b,c,d,e</sup>

KOMPOSISI	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
PBS 1 JAM	5 : 5	,179	3	.	,999	3	,948
	4 : 6	,359	3	.	,812	3	,143
	Gelatin 100%	,273	3	.	,945	3	,549
PBS 3 JAM	5 : 5	,204	3	.	,993	3	,843
	4 : 6	,264	3	.	,954	3	,587
	Gelatin 100%	,374	3	.	,776	3	,059
PBS 6 JAM	5 : 5	,371	3	.	,784	3	,078
	4 : 6	,254	3	.	,964	3	,633
	Gelatin 100%	,319	3	.	,885	3	,340
PBS 24 JAM	5 : 5	,334	3	.	,859	3	,266
	4 : 6	,234	3	.	,978	3	,718
	Gelatin 100%	,267	3	.	,952	3	,577
PBS 48 JAM	5 : 5	,226	3	.	,983	3	,754
	4 : 6	,289	3	.	,927	3	,478
	Gelatin 100%	,179	3	.	,999	3	,951
PBS 72 JAM	5 : 5	,319	3	.	,886	3	,341
	4 : 6	,310	3	.	,899	3	,383
	Gelatin 100%	,242	3	.	,973	3	,685
PBS 96 JAM	5 : 5	,176	3	.	1,000	3	,984
	4 : 6	,315	3	.	,891	3	,358
	Gelatin 100%	,344	3	.	,842	3	,219
HCI 1 JAM	5 : 5	,299	3	.	,915	3	,433
	4 : 6	,366	3	.	,796	3	,106
	Gelatin 100%	,363	3	.	,802	3	,118
HCI 3 JAM	5 : 5	,328	3	.	,871	3	,297
	4 : 6	,385	3	.	,750	3	,000
	Gelatin 100%	,221	3	.	,986	3	,772
HCI 6 JAM	5 : 5	,348	3	.	,833	3	,195
	Gelatin 100%	,355	3	.	,819	3	,160

a. Lilliefors Significance Correction

b. HCI 6 JAM is constant when KOMPOSISI = 4 : 6. It has been omitted.

c. HCI 24 JAM is constant when KOMPOSISI = 5 : 5. It has been omitted.

d. HCI 24 JAM is constant when KOMPOSISI = 4 : 6. It has been omitted.

e. HCI 24 JAM is constant when KOMPOSISI = Gelatin 100%. It has been omitted.

## 2. Uji Homogenitas

**Test of Homogeneity of Variances**

	Levene Statistic	df 1	df 2	Sig.
PBS 1 JAM	,591	2	6	,583
PBS 3 JAM	,833	2	6	,479
PBS 6 JAM	1,765	2	6	,250
PBS 24 JAM	,971	2	6	,431
PBS 48 JAM	,112	2	6	,896
PBS 72 JAM	2,111	2	6	,202
PBS 96 JAM	1,951	2	6	,222
HCI 1 JAM	3,988	2	6	,079
HCI 6 JAM	9,544	2	6	,014

## 3. Uji ANOVA Satu Jalur

**ANOVA**

		Sum of Squares	df	Mean Square	F	Sig.
PBS 1 JAM	Between Groups	1,011	2	,505	1,023	,415
	Within Groups	2,965	6	,494		
	Total	3,976	8			
PBS 3 JAM	Between Groups	3,494	2	1,747	2,378	,174
	Within Groups	4,408	6	,735		
	Total	7,902	8			
PBS 6 JAM	Between Groups	4,328	2	2,164	,613	,572
	Within Groups	21,179	6	3,530		
	Total	25,508	8			
PBS 24 JAM	Between Groups	39,601	2	19,801	6,261	,034
	Within Groups	18,974	6	3,162		
	Total	58,576	8			
PBS 48 JAM	Between Groups	127,879	2	63,939	18,462	,003
	Within Groups	20,780	6	3,463		
	Total	148,658	8			
PBS 72 JAM	Between Groups	147,880	2	73,940	4,660	,060
	Within Groups	95,196	6	15,866		
	Total	243,076	8			
PBS 96 JAM	Between Groups	119,508	2	59,754	10,050	,012
	Within Groups	35,674	6	5,946		
	Total	155,181	8			
HCI 1 JAM	Between Groups	482,209	2	241,104	24,294	,001
	Within Groups	59,548	6	9,925		
	Total	541,757	8			

## 4. Uji Post Hoc Least Significant Difference (LSD)

## Multiple Comparisons

LSD

Dependent Variable	(I) KOMPOSISI	(J) KOMPOSISI	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PBS 1 JAM	5 : 5	4 : 6	-,12000	,57397	,841	-1,5244	1,2844
		Gelatin 100%	-,76333	,57397	,232	-2,1678	,6411
	4 : 6	5 : 5	,12000	,57397	,841	-1,2844	1,5244
		Gelatin 100%	-,64333	,57397	,305	-2,0478	,7611
	Gelatin 100%	5 : 5	,76333	,57397	,232	-,6411	2,1678
		4 : 6	,64333	,57397	,305	-,7611	2,0478
PBS 3 JAM	5 : 5	4 : 6	1,26333	,69984	,121	-,4491	2,9758
		Gelatin 100%	-,11000	,69984	,880	-1,8224	1,6024
	4 : 6	5 : 5	-1,26333	,69984	,121	-2,9758	,4491
		Gelatin 100%	-1,37333	,69984	,097	-3,0858	,3391
	Gelatin 100%	5 : 5	,11000	,69984	,880	-1,6024	1,8224
		4 : 6	1,37333	,69984	,097	-,3391	3,0858
PBS 6 JAM	5 : 5	4 : 6	1,64000	1,53404	,326	-2,1137	5,3937
		Gelatin 100%	,43667	1,53404	,785	-3,3170	4,1903
	4 : 6	5 : 5	-1,64000	1,53404	,326	-5,3937	2,1137
		Gelatin 100%	-1,20333	1,53404	,463	-4,9570	2,5503
	Gelatin 100%	5 : 5	-,43667	1,53404	,785	-4,1903	3,3170
		4 : 6	1,20333	1,53404	,463	-2,5503	4,9570
PBS 24 JAM	5 : 5	4 : 6	-5,09333*	1,45198	,013	-8,6462	-1,5405
		Gelatin 100%	-1,96000	1,45198	,226	-5,5129	1,5929
	4 : 6	5 : 5	5,09333*	1,45198	,013	1,5405	8,6462
		Gelatin 100%	3,13333	1,45198	,074	-,4195	6,6862
	Gelatin 100%	5 : 5	1,96000	1,45198	,226	-1,5929	5,5129
		4 : 6	-3,13333	1,45198	,074	-6,6862	,4195
PBS 48 JAM	5 : 5	4 : 6	-8,78667*	1,51949	,001	-12,5047	-5,0686
		Gelatin 100%	-1,93667	1,51949	,250	-5,6547	1,7814
	4 : 6	5 : 5	8,78667*	1,51949	,001	5,0686	12,5047
		Gelatin 100%	6,85000*	1,51949	,004	3,1319	10,5681
	Gelatin 100%	5 : 5	1,93667	1,51949	,250	-1,7814	5,6547
		4 : 6	-6,85000*	1,51949	,004	-10,5681	-3,1319
PBS 72 JAM	5 : 5	4 : 6	-9,06333*	3,25228	,032	-17,0214	-1,1053
		Gelatin 100%	-1,02000	3,25228	,764	-8,9781	6,9381
	4 : 6	5 : 5	9,06333*	3,25228	,032	1,1053	17,0214
		Gelatin 100%	8,04333*	3,25228	,048	,0853	16,0014
	Gelatin 100%	5 : 5	1,02000	3,25228	,764	-6,9381	8,9781
		4 : 6	-8,04333*	3,25228	,048	-16,0014	-,0853
PBS 96 JAM	5 : 5	4 : 6	-8,35000*	1,99091	,006	-13,2216	-3,4784
		Gelatin 100%	-1,44333	1,99091	,496	-6,3149	3,4283
	4 : 6	5 : 5	8,35000*	1,99091	,006	3,4784	13,2216
		Gelatin 100%	6,90667*	1,99091	,013	2,0351	11,7783
	Gelatin 100%	5 : 5	1,44333	1,99091	,496	-3,4283	6,3149
		4 : 6	-6,90667*	1,99091	,013	-11,7783	-2,0351
HCI 1 JAM	5 : 5	4 : 6	-11,40667*	2,57224	,004	-17,7007	-5,1126
		Gelatin 100%	6,27667	2,57224	,050	-,0174	12,5707
	4 : 6	5 : 5	11,40667*	2,57224	,004	5,1126	17,7007
		Gelatin 100%	17,68333*	2,57224	,000	11,3893	23,9774
	Gelatin 100%	5 : 5	-6,27667	2,57224	,050	-12,5707	,0174
		4 : 6	-17,68333*	2,57224	,000	-23,9774	-11,3893

\*. The mean difference is significant at the .05 level.

5. Uji *Kruskal Wallis***Test Statistics<sup>a,b</sup>**

	HCI 3 JAM	HCI 6 JAM
Chi-Square	2,420	7,448
df	2	2
Asy mp. Sig.	,298	,024

a. Kruskal Wallis Test

b. Grouping Variable: KOMPOSISI

**LAMPIRAN 6. Alat dan Bahan**

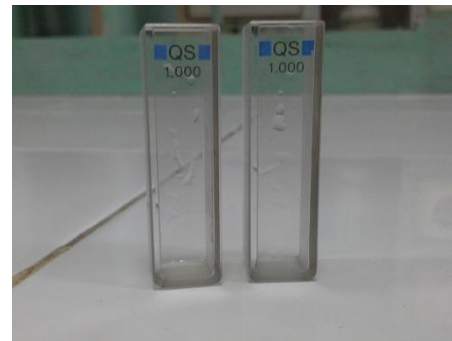
Mikrotube



Bluetip



Mikropipet

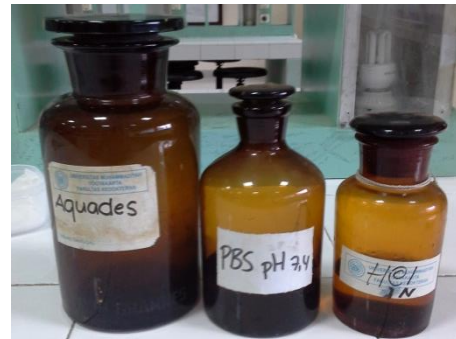


Kuvet kaca

*Centrifuge Rotina 35R**Uv-vis Spectrophotometers  
UVmini-1240 Shimadzu*



Inkubator *Memmert*



Larutan Aquades; PBS pH 7,4; dan HCl 1N

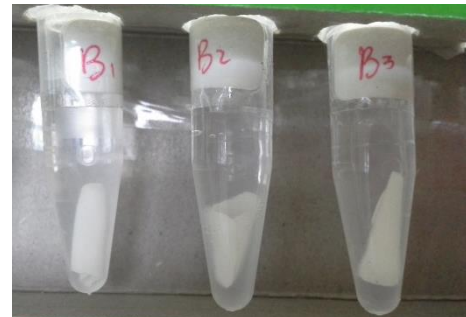
### LAMPIRAN 7. Jalannya Penelitian



Keadaan seluruh sampel perancah ketika perendaman pada larutan PBS pH 7,4 dimulai.

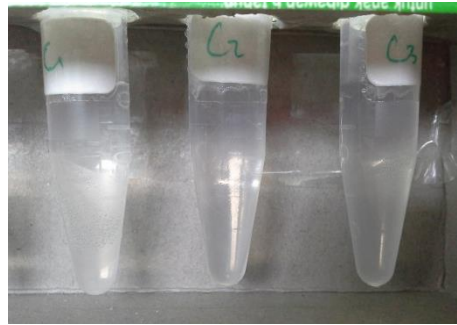


Keadaan sampel perancah konsentrasi gelatin- $\text{CaCO}_3$  5:5 ketika perendaman pada larutan PBS pH 7,4 dimulai.

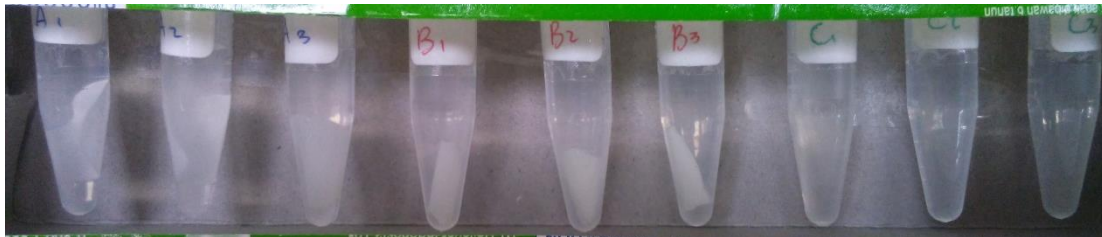


Keadaan sampel perancah konsentrasi gelatin- $\text{CaCO}_3$  4:6 ketika perendaman pada larutan PBS pH 7,4 dimulai.

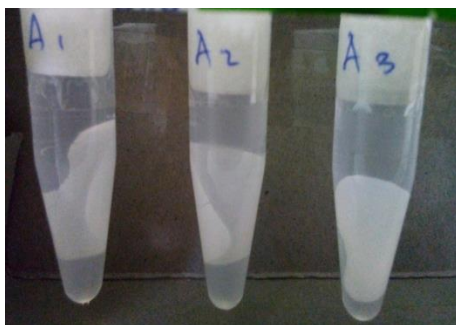




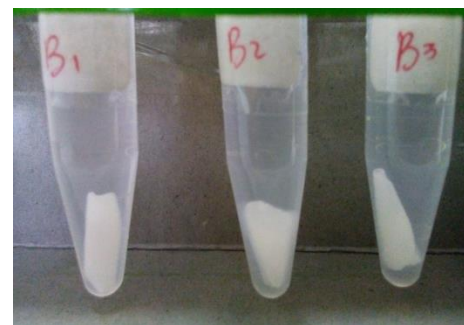
Keadaan sampel perancah konsentrasi gelatin 10% ketika perendaman pada larutan PBS pH 7,4 dimulai.



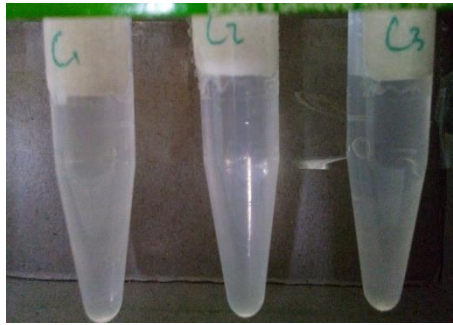
Keadaan seluruh sampel perancah ketika perendaman pada larutan PBS pH 7,4 setelah inkubasi 24 jam. Seluruh sample telah mengalami *swelling*.



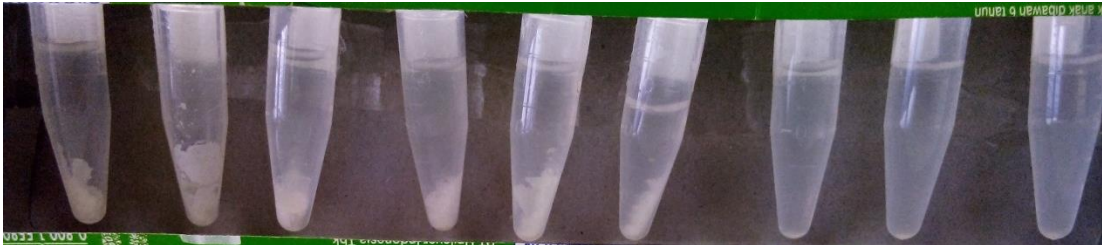
Keadaan sampel perancah konsentrasi gelatin-CaCO<sub>3</sub> 5:5 ketika perendaman pada larutan PBS pH 7,4 setelah inkubasi 24 jam.



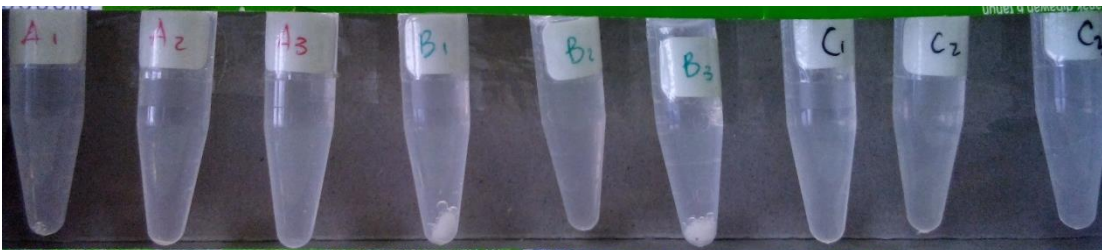
Keadaan sampel perancah konsentrasi gelatin-CaCO<sub>3</sub> 4:6 ketika perendaman pada larutan PBS pH 7,4 setelah inkubasi 24 jam.



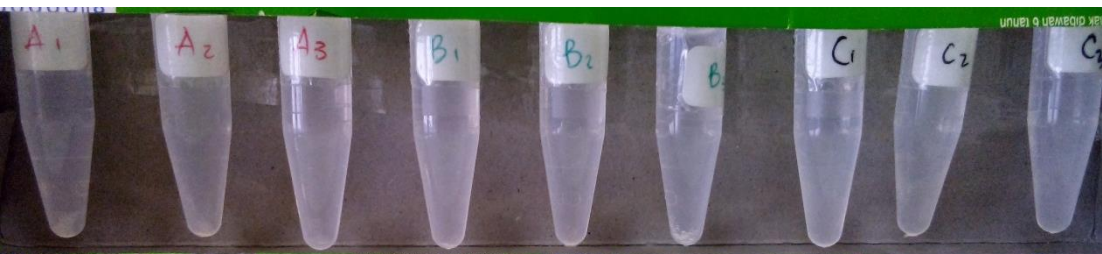
Keadaan sampel perancah konsentrasi gelatin-10% ketika perendaman pada larutan PBS pH 7,4 setelah inkubasi 24 jam.



Keadaan seluruh sampel perancah ketika perendaman pada larutan PBS pH 7,4 setelah inkubasi 72 jam. Seluruh sample telah pacah dan rontok.



Keadaan seluruh sampel perancah ketika perendaman pada larutan HCl 1N dimulai. Karakteristik sampel perancah komposisi 5:5 dan gelatin-10% menyerupai membran transparan tipis.



Keadaan seluruh sampel perancah ketika perendaman pada larutan HCl 1N setelah inkubasi 1 jam. Karakteristik seluruh sampel menyerupai membran tipis transparan, dan salah satu sampel telah habis yaitu pada B1.