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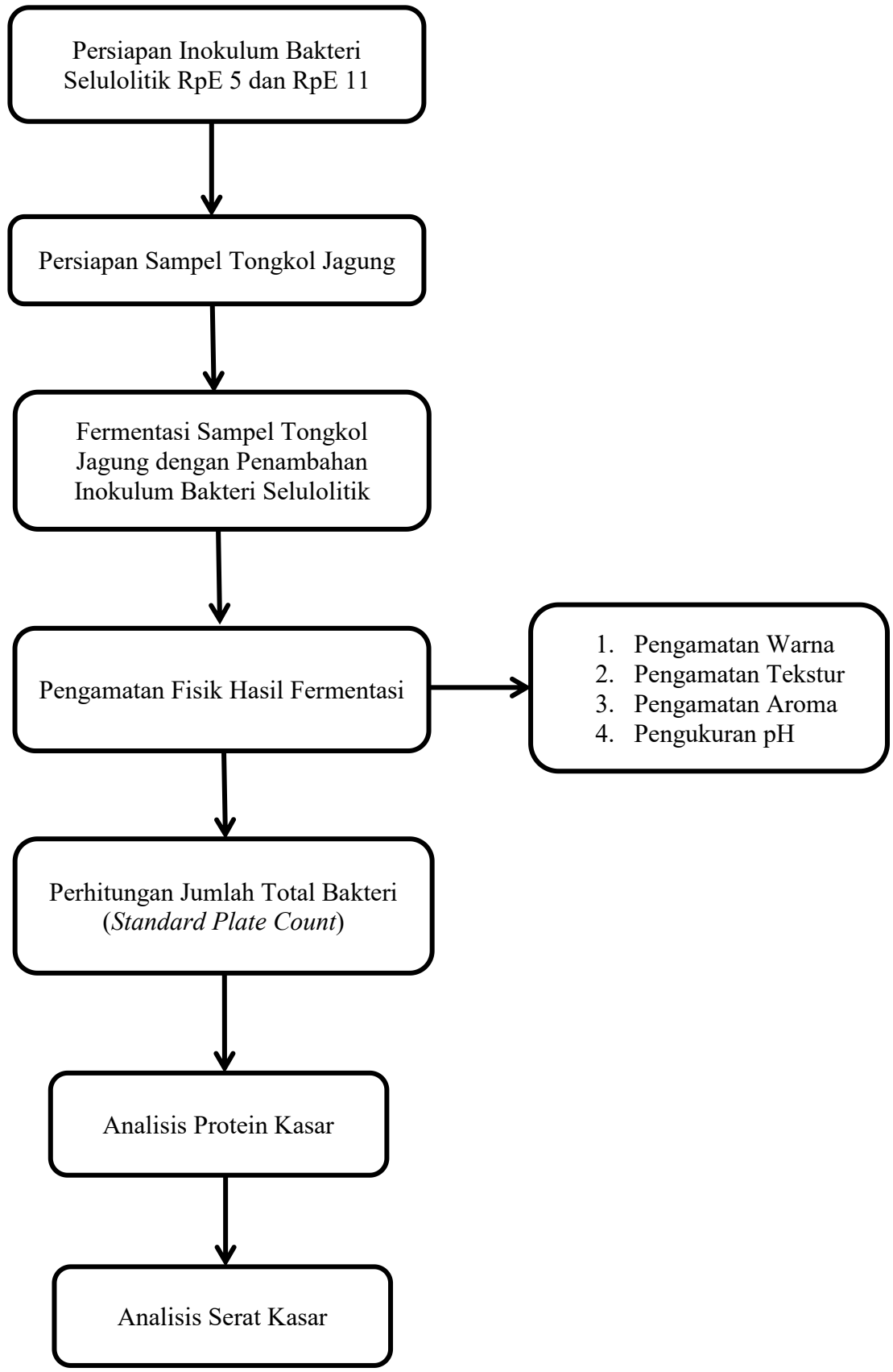
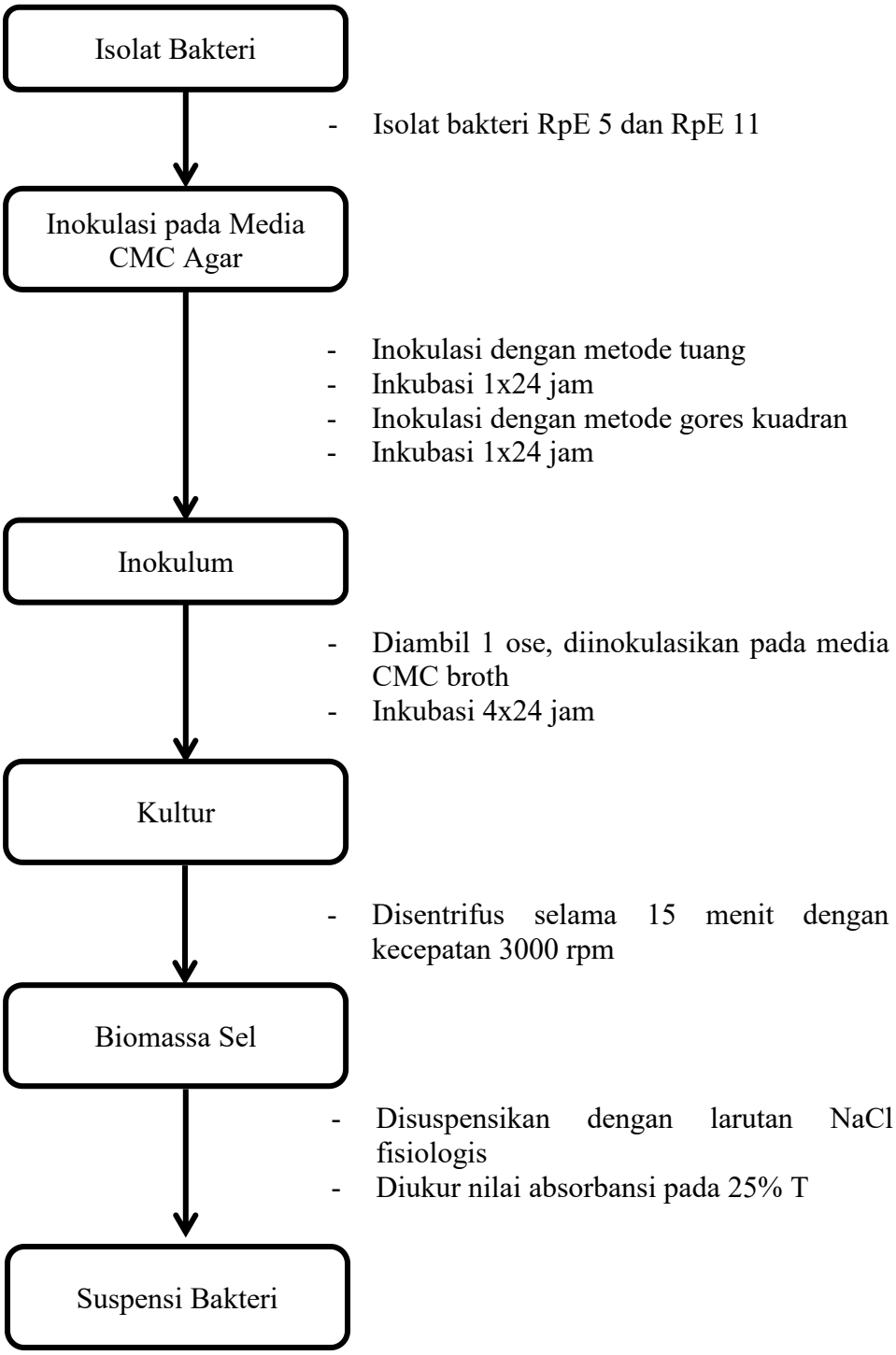
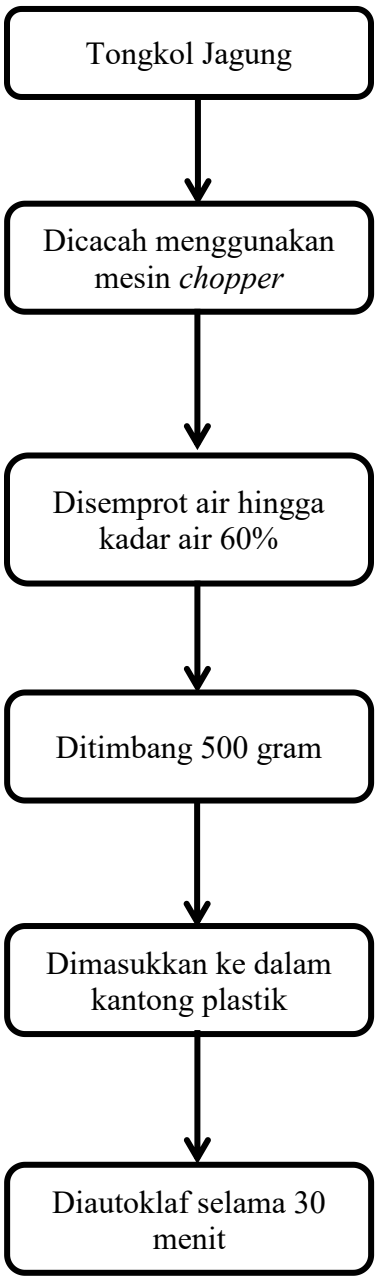
Lampiran 1. Skema Kerja Penelitian



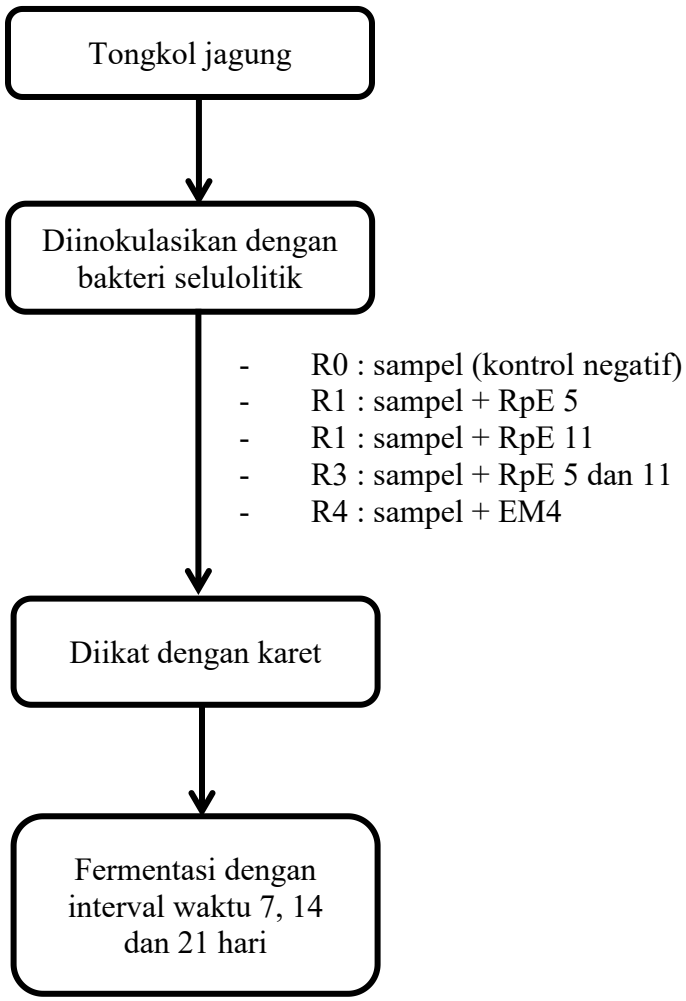
Lampiran 2. Skema Kerja Persiapan Inokulum Bakteri Selulolitik RpE 5 dan RpE 11



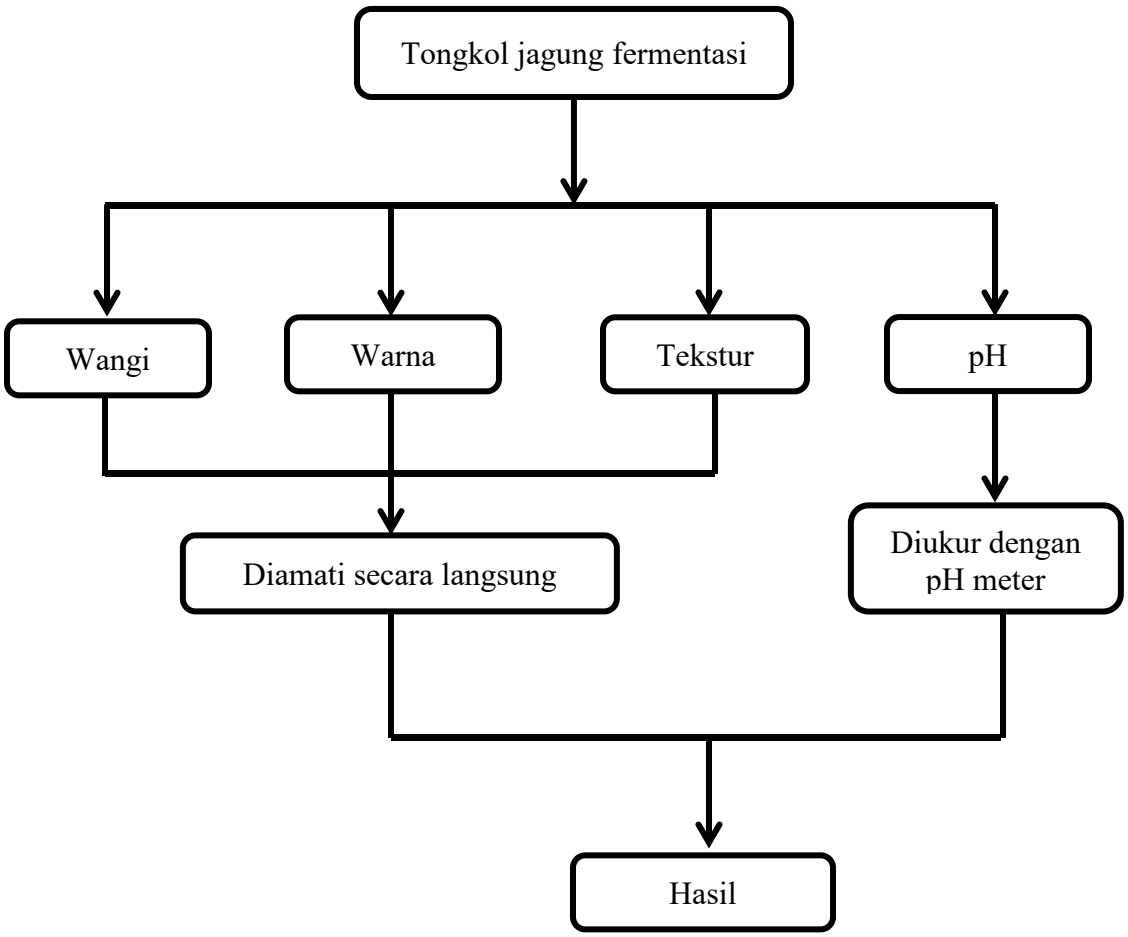
Lampiran 3. Skema Kerja Persiapan Sampel Tongkol Jagung



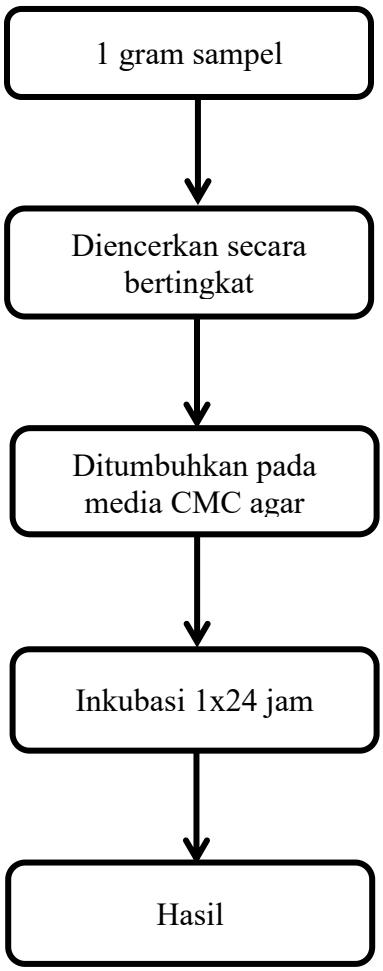
Lampiran 4. Skema Kerja Fermentasi Sampel Tongkol Jagung



Lampiran 5. Skema Kerja Pengamatan Fisik Hasil Fermentasi

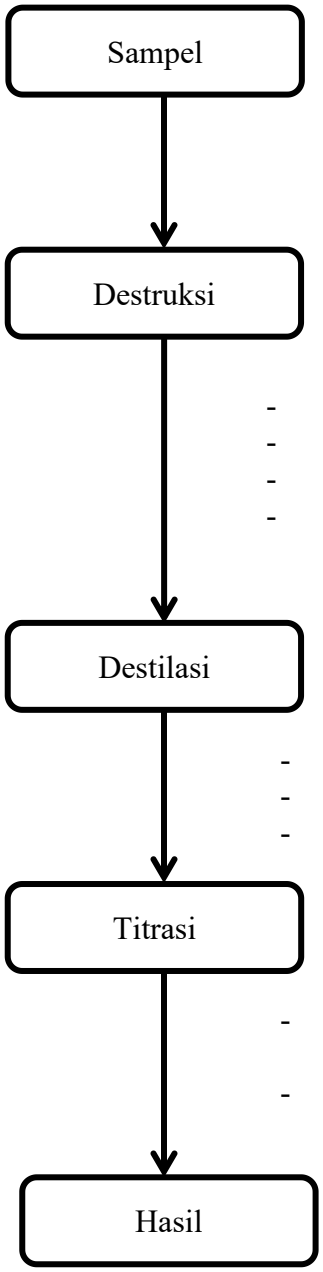


Lampiran 6. Skema Kerja Perhitungan Jumlah Bakteri (*Standard Plate Count*)



- Dihitung dengan metode SPC

Lampiran 7. Skema Kerja Analisis Protein Kasar

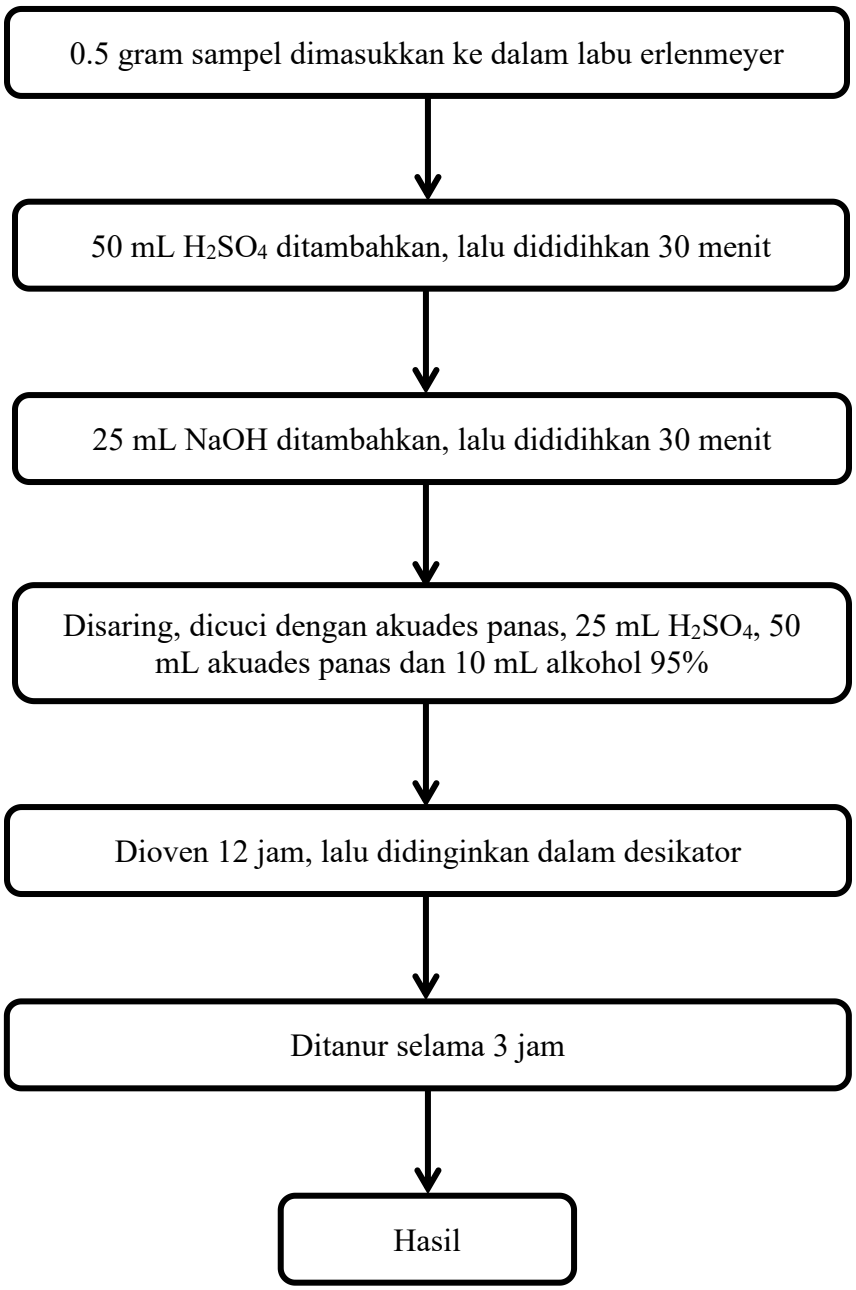


- 0.5 gram sampel dimasukkan ke labu kjedahl
- Ditambahkan selenium mix dan 25 mL H_2SO_4 pekat
- Dilakukan proses destruksi hingga jernih
- Hasil didinginkan, kemudian diencerkan dengan akuades

- Dimasukkan 10 mL H_3BO_3 ke dalam labu Erlenmeyer
- Ditambahkan 10 mL NaOH dan akuades 10 mL
- Alat destilasi dijalankan

- Dititrasi dengan larutan NaOH yang telah distandarisasi dengan H_2SO_4
- Titik akhir titrasi ditandai dengan warna merah menjadi hijau

Lampiran 8. Skema Kerja Analisis Serat Kasar



Lampiran 9. Analisis Statistik SPSS Pengukuran pH Hasil Fermentasi

Descriptives

ulangan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
R0A1	3	6.933	.0577	.0333	6.790	7.077	6.9	7.0
R0A2	3	6.933	.0577	.0333	6.790	7.077	6.9	7.0
R0A3	3	6.933	.0577	.0333	6.790	7.077	6.9	7.0
R1A1	3	6.233	.1528	.0882	5.854	6.613	6.1	6.4
R1A2	3	5.900	.6000	.3464	4.410	7.390	5.3	6.5
R1A3	3	4.467	.1528	.0882	4.087	4.846	4.3	4.6
R2A1	3	6.633	.1528	.0882	6.254	7.013	6.5	6.8
R2A2	3	6.267	.0577	.0333	6.123	6.410	6.2	6.3
R2A3	3	5.567	.2517	.1453	4.942	6.192	5.3	5.8
R3A1	3	6.833	.2887	.1667	6.116	7.550	6.5	7.0
R3A2	3	6.467	.4163	.2404	5.432	7.501	6.0	6.8
R3A3	3	4.500	.0000	.0000	4.500	4.500	4.5	4.5
R4A2	3	6.200	.5000	.2887	4.958	7.442	5.7	6.7
R4A1	3	6.633	.0577	.0333	6.490	6.777	6.6	6.7
R4A3	3	5.367	.1155	.0667	5.080	5.654	5.3	5.5
Total	45	6.124	.8318	.1240	5.875	6.374	4.3	7.0

ANOVA

ulangan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	28.383	14	2.027	29.525	.000
Within Groups	2.060	30	.069		
Total	30.443	44			

Duncan[a]

perlakua		Subset for alpha = 0.05					
n	N	1	2	3	4	5	6
R1A3	3	4.467					
R3A3	3	4.500					
R4A3	3		5.367				
R2A3	3		5.567	5.567			
R1A2	3			5.900	5.900		
R4A2	3				6.200	6.200	
R1A1	3				6.233	6.233	
R2A2	3				6.267	6.267	
R3A2	3					6.467	6.467
R2A1	3					6.633	6.633
R4A1	3					6.633	6.633
R3A1	3						6.833
R0A1	3						6.933
R0A2	3						6.933
R0A3	3						6.933
Sig.		.877	.357	.130	.127	.083	.066

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 10. Analisis Statistik SPSS Perhitungan Total Bakteri (SPC)

Descriptives

0

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
R0A1	3	,00	,000	,000	,00	,00
R0A2	3	,00	,000	,000	,00	,00
R0A3	3	,00	,000	,000	,00	,00
R1A1	3	233333333,33	92915732,432	53644923,131	2517858,38	464148808,28
R1A2	3	200000000,00	72111025,509	41633319,989	20866282,10	379133717,90
R1A3	3	253333333,33	25166114,784	14529663,145	190817238,54	315849428,13
R2A1	3	53333,33	15275,252	8819,171	15387,50	91279,16
R2A2	3	105000000,00	77620873,481	44814432,199	-87820939,03	297820939,03
R2A3	3	116666666,67	41633319,989	24037008,503	13243766,42	220089566,92
R3A1	3	640000,00	372692,903	215174,348	-285820,50	1565820,50
R3A2	3	33666666,67	5859465,277	3382963,855	19110948,00	48222385,33
R3A3	3	76333333,33	72459183,913	41834329,337	-103665257,99	256331924,65
R4A1	3	4666666,67	907377,173	523874,455	2412616,81	6920716,52
R4A2	3	370000000,00	236431808,351	136503968,196	-217329171,38	957329171,38
R4A3	3	270000000,00	20000000,000	11547005,384	220317245,76	319682754,24
Total	45	110912888,89	136028773,203	20277972,252	70045321,14	151780456,64

ANOVA

0

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6465471358577 77790,000	14	4618193827555 5560,000	8,265	,000
Within Groups	1676212582666 66592,000	30	5587375275555 555,000		
Total	8141683941244 44540,000	44			

0

Waller-Duncan[a,b]

		Subset for alpha = 0.05			
Perlakuan	N	1	2	3	4
R0A1	3	,00			
R0A2	3	,00			
R0A3	3	,00			
R2A1	3	53333,33			
R3A1	3	640000,00			
R4A1	3	4666666,67			
R3A2	3	33666666,67			
R3A3	3	76333333,33	76333333,33		
R2A2	3	105000000,00	105000000,00	105000000,00	
R2A3	3	116666666,67	116666666,67	116666666,67	
R1A2	3		200000000,00	200000000,00	200000000,00
R1A1	3			233333333,33	233333333,33
R1A3	3			253333333,33	253333333,33
R4A3	3				270000000,00
R4A2	3				

0

Waller-Duncan[a,b]

	Subset for alpha = 0.05
Perlakuan	5
R0A1	
R0A2	
R0A3	
R2A1	
R3A1	
R4A1	
R3A2	
R3A3	
R2A2	
R2A3	
R1A2	
R1A1	233333333,33
R1A3	253333333,33
R4A3	270000000,00
R4A2	370000000,00

Lampiran 11. Hasil Analisis Protein Kasar dan Serat Kasar

No Uji	Kode Sampel	Jenis Sampel	Air (%)		Abu (%)		Protein Kasar (%)		Lemak Kasar (%)		Serat Kasar (%)		Ca (%)	
			Sampel	SNI/PTM Maks	Sampel	SNI/PTM Maks	Sampel	SNI/PTM Min	Sampel	SNI/PTM Maks	Sampel	SNI/PTM Maks	Sampel	SNI/ PTM
6	P. 12 . 05 . 006 /PK	Tongkol Jagung Kontrol Negatif (A)	-	-	-	-	3,01	-	-	-	33,93	-	-	-
			-	-	-	-	3,01	-	-	-	39,17	-	-	-
			-	-	-	-	3,01	-	-	-	33,94	-	-	-
7	P. 12 . 05 . 007 /PK	Tongkol Jagung Sampel + Bakteri Rpe S (B)	-	-	-	-	2,83	-	-	-	33,59	-	-	-
			-	-	-	-	3,54	-	-	-	32,73	-	-	-
			-	-	-	-	3,54	-	-	-	31,26	-	-	-
8	P. 12 . 05 . 008 /PK	Tongkol Jagung Sampel + Bakteri Rpe S & II (C)	-	-	-	-	3,72	-	-	-	32,84	-	-	-
			-	-	-	-	3,72	-	-	-	32,87	-	-	-
			-	-	-	-	3,72	-	-	-	34,97	-	-	-
9	P. 12 . 05 . 009 /PK	Tongkol Jagung Sampel + Bakteri Rpe II (D)	-	-	-	-	2,83	-	-	-	33,78	-	-	-
			-	-	-	-	2,66	-	-	-	33,33	-	-	-
			-	-	-	-	2,84	-	-	-	34,53	-	-	-
10	P. 12 . 05 . 010 /PK	Tongkol Jagung Kontrol Positif (E)	-	-	-	-	3,36	-	-	-	34,30	-	-	-
			-	-	-	-	3,55	-	-	-	33,56	-	-	-
			-	-	-	-	3,9	-	-	-	34,50	-	-	-
Metode			SNI 01-2891-1992 Butir 5.1		SNI 01-2891-1992.Butir 6		AOAC 2005, Bab 4 Butir 4.2.11		AOAC 2005 Bab 4.B.4.5.06		SNI 01-2891-1992.Butir.11		AOAC,2005, Bab 4 hal 31	

Keterangan :

- Hasil Pengujian ini hanya berlaku untuk sampel yang di uji

Penyelia

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Lampiran 12. Analisis Statistik SPSS Kandungan Protein Kasar

Descriptives

ulangan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
R0	3	3.0100	.00000	.00000	3.0100	3.0100	3.01	3.01
R1	3	3.3033	.40992	.23667	2.2850	4.3216	2.83	3.54
R3	3	3.7200	.00000	.00000	3.7200	3.7200	3.72	3.72
R2	3	2.7767	.10116	.05840	2.5254	3.0280	2.66	2.84
R4	3	3.6033	.27392	.15815	2.9229	4.2838	3.36	3.90
Total	15	3.2827	.41242	.10649	3.0543	3.5111	2.66	3.90

ANOVA

ulangan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.875	4	.469	9.251	.002
Within Groups	.507	10	.051		
Total	2.381	14			

ulangan

Duncan[a]

perlakuan	N	Subset for alpha = 0.05		
		1	2	3
R2	3	2.7767		
R0	3	3.0100	3.0100	
R1	3		3.3033	3.3033
R4	3			3.6033
R3	3			3.7200
Sig.		.233	.142	.055

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 13. Analisis Statistik SPSS Kandungan Serat Kasar

Descriptives

ulangan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
R0	3	35.6467	3.05179	1.76195	28.0656	43.2277	33.83	39.17
R1	3	32.5267	1.17823	.68025	29.5998	35.4536	31.26	33.59
R2	3	33.8800	.60622	.35000	32.3741	35.3859	33.33	34.53
R3	3	33.5600	1.22119	.70505	30.5264	36.5936	32.84	34.97
R4	3	34.1200	.49518	.28589	32.8899	35.3501	33.56	34.50
Total	15	33.9467	1.70885	.44122	33.0003	34.8930	31.26	39.17

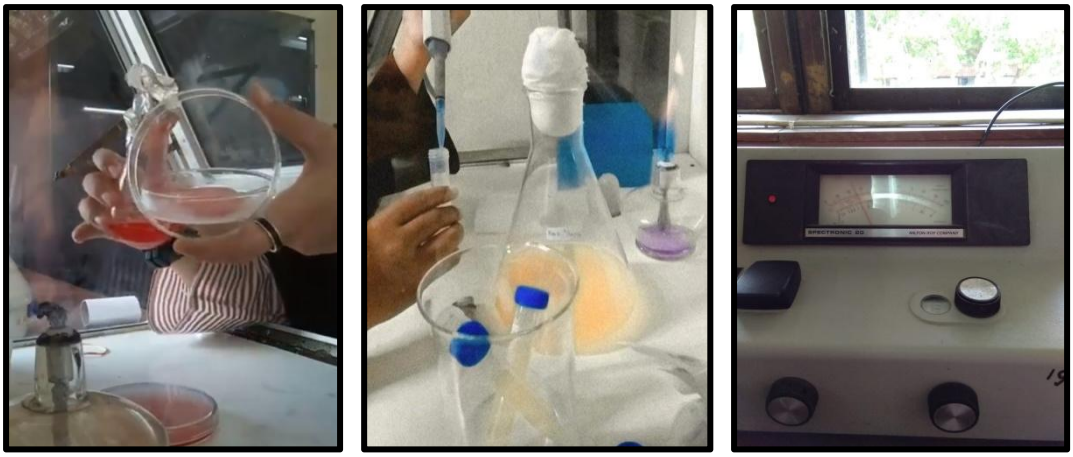
ANOVA

ulangan

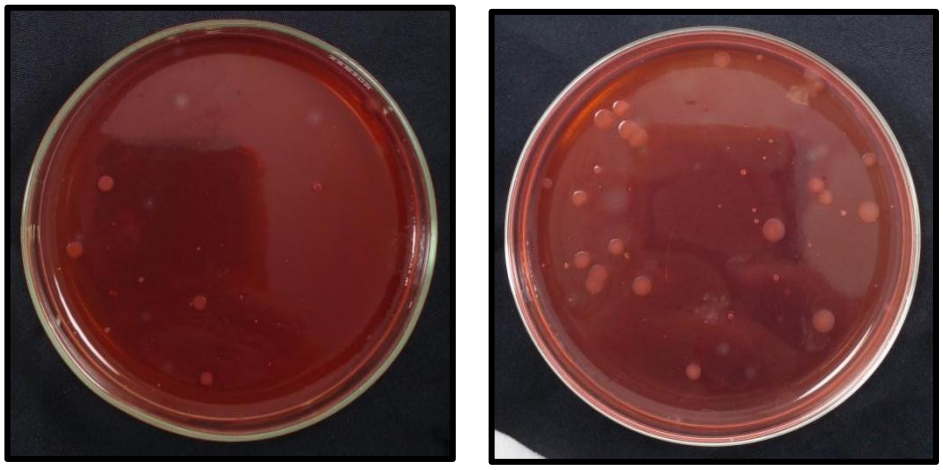
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15.271	4	3.818	1.491	.277
Within Groups	25.611	10	2.561		
Total	40.883	14			

Lampiran 14. Foto Prosedur Penelitian

Persiapan tongkol jagung

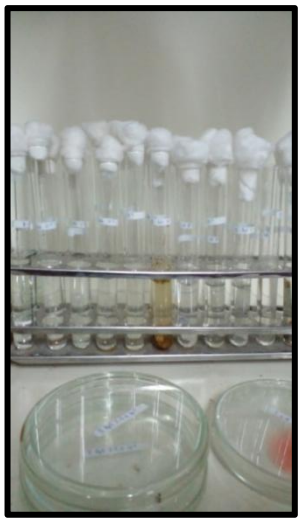


Persiapan inokulum bakteri selulolitik



Inokulasi pada media CMC agar dengan metode tuang


Fermentasi tongkol jagung dengan penambahan bakteri selulolitik




Perhitungan Total Bakteri (SPC)

Perhitungan pH

Penimbangan sampel

Analisis protein kasar

Analisis serat kasar

Tongkol jagung sebelum fermentasi (kiri) dan setelah fermentasi (kanan)