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LAMPIRAN

Lampiran 1. Data Hasil Analisis, ANOVA, dan Uji Tuckey Enzim Protease Isolat BAL

Isolat	Ulangan 1 (U/mL)	Ulangan 2 (U/mL)	Ulangan 3 (U/mL)	Rata-Rata (U/mL)
Lactobacillus plantarum strain CAU:227	0.050	0.049	0.049	0.049
Lactobacillus plantarum strain IMAU20905	0.049	0.048	0.048	0.048
Weissella cibaria strain MG5327	0.041	0.041	0.041	0.041
Leuconostoc pseudomesenteroides strain: CF102	0.050	0.050	0.051	0.050
Leuconostoc pseudomesenteroides strain: Ni1324	0.051	0.050	0.051	0.051

ANOVA

Protease

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	4	.000	178.375	.000
Within Groups	.000	10	.000		
Total	.000	14			

Multiple Comparisons

Dependent Variable: Protease

Tukey HSD

(I) Jenis isolat	(J) Jenis isolat	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Lactobacillus plantarum strain CAU:227	Lactobacillus plantarum strain IMAU20905	.001000	.000422	.200	-.00039	.00239
	Weissella cibaria strain MG5327	.008333*	.000422	.000	.00695	.00972
	Leuconostoc pseudomesenteroides strain: CF102	-.001000	.000422	.200	-.00239	.00039
	Leuconostoc pseudomesenteroides strain: Ni1324	-.001333	.000422	.061	-.00272	.00005
Lactobacillus plantarum strain IMAU20905	Lactobacillus plantarum strain CAU:227	-.001000	.000422	.200	-.00239	.00039
	Weissella cibaria strain MG5327	.007333*	.000422	.000	.00595	.00872
	Leuconostoc pseudomesenteroides strain: CF102	-.002000*	.000422	.005	-.00339	-.00061
	Leuconostoc pseudomesenteroides strain: Ni1324	-.002333*	.000422	.002	-.00372	-.00095
Weissella cibaria strain MG5327	Lactobacillus plantarum strain CAU:227	-.008333*	.000422	.000	-.00972	-.00695
	Lactobacillus plantarum strain IMAU20905	-.007333*	.000422	.000	-.00872	-.00595
	Leuconostoc pseudomesenteroides strain: CF102	-.009333*	.000422	.000	-.01072	-.00795
	Leuconostoc pseudomesenteroides strain: Ni1324	-.009667*	.000422	.000	-.01105	-.00828
Leuconostoc pseudomesenteroides strain: CF102	Lactobacillus plantarum strain CAU:227	.001000	.000422	.200	-.00039	.00239
	Lactobacillus plantarum strain IMAU20905	.002000*	.000422	.005	.00061	.00339
	Weissella cibaria strain MG5327	.009333*	.000422	.000	.00795	.01072
	Leuconostoc pseudomesenteroides strain: Ni1324	-.000333	.000422	.928	-.00172	.00105
Leuconostoc pseudomesenteroides strain: Ni1324	Lactobacillus plantarum strain CAU:227	.001333	.000422	.061	-.00005	.00272
	Lactobacillus plantarum strain IMAU20905	.002333*	.000422	.002	.00095	.00372
	Weissella cibaria strain MG5327	.009667*	.000422	.000	.00828	.01105
	Leuconostoc pseudomesenteroides strain: CF102	.000333	.000422	.928	-.00105	.00172

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

Lampiran 2. Data Hasil Analisis, ANOVA, dan Uji Tuckey Enzim Selulase Isolat BAL

Isolat	Ulangan 1 (U/mL)	Ulangan 2 (U/mL)	Ulangan 3 (U/mL)	Rata-Rata (U/mL)
Lactobacillus plantarum strain CAU:227	0.031	0.032	0.031	0.032
Lactobacillus plantarum strain IMAU20905	0.031	0.031	0.031	0.031
Weissella cibaria strain MG5327	0.038	0.040	0.039	0.039
Leuconostoc pseudomesenteroides strain: CF102	0.028	0.029	0.029	0.029
Leuconostoc pseudomesenteroides strain: Ni1324	0.030	0.029	0.030	0.030

ANOVA

Selulase

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	4	.000	125.583	.000
Within Groups	.000	10	.000		
Total	.000	14			

Multiple Comparisons

Dependent Variable: Selulase

Tukey HSD

(I) Jenis isolat	(J) Jenis isolat	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Lactobacillus plantarum strain CAU:227	Lactobacillus plantarum strain IMAU20905	.000333	.000516	.964	-.00137	.00203
	Weissella cibaria strain MG5327	-.007667*	.000516	.000	-.00937	-.00597
	Leuconostoc pseudomesenteroides strain: CF102	.002667*	.000516	.003	.00097	.00437
	Leuconostoc pseudomesenteroides strain: Ni1324	.001667	.000516	.055	-.00003	.00337
Lactobacillus plantarum strain IMAU20905	Lactobacillus plantarum strain CAU:227	-.000333	.000516	.964	-.00203	.00137
	Weissella cibaria strain MG5327	-.008000*	.000516	.000	-.00970	-.00630
	Leuconostoc pseudomesenteroides strain: CF102	.002333*	.000516	.008	.00063	.00403
	Leuconostoc pseudomesenteroides strain: Ni1324	.001333	.000516	.148	-.00037	.00303
Weissella cibaria strain MG5327	Lactobacillus plantarum strain CAU:227	.007667*	.000516	.000	.00597	.00937
	Lactobacillus plantarum strain IMAU20905	.008000*	.000516	.000	.00630	.00970
	Leuconostoc pseudomesenteroides strain: CF102	.010333*	.000516	.000	.00863	.01203
	Leuconostoc pseudomesenteroides strain: Ni1324	.009333*	.000516	.000	.00763	.01103
Leuconostoc pseudomesenteroides strain: CF102	Lactobacillus plantarum strain CAU:227	-.002667*	.000516	.003	-.00437	-.00097
	Lactobacillus plantarum strain IMAU20905	-.002333*	.000516	.008	-.00403	-.00063
	Weissella cibaria strain MG5327	-.010333*	.000516	.000	-.01203	-.00863
	Leuconostoc pseudomesenteroides strain: Ni1324	-.001000	.000516	.359	-.00270	.00070
Leuconostoc pseudomesenteroides strain: Ni1324	Lactobacillus plantarum strain CAU:227	-.001667	.000516	.055	-.00337	.00003
	Lactobacillus plantarum strain IMAU20905	-.001333	.000516	.148	-.00303	.00037
	Weissella cibaria strain MG5327	-.009333*	.000516	.000	-.01103	-.00763
	Leuconostoc pseudomesenteroides strain: CF102	.001000	.000516	.359	-.00070	.00270

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

Lampiran 3. Data Hasil Analisis, ANOVA, dan Uji Tuckey Enzim Lipase Isolat BAL

Isolat	Ulangan 1 (U/mL)	Ulangan 2 (U/mL)	Ulangan 3 (U/mL)	Rata-Rata (U/mL)
Lactobacillus plantarum strain CAU:227	0.500	0.333	0.333	0.389
Lactobacillus plantarum strain IMAU20905	0.417	0.500	0.417	0.444
Weissella cibaria strain MG5327	0.250	0.417	0.250	0.306
Leuconostoc pseudomesenteroides strain: CF102	0.667	0.583	0.500	0.583
Leuconostoc pseudomesenteroides strain: Ni1324	0.667	0.583	0.667	0.639

ANOVA

Lipase

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.227	4	.057	9.388	.002
Within Groups	.060	10	.006		
Total	.287	14			

Multiple Comparisons

Dependent Variable: Lipase

Tukey HSD

(I) Jenis isolat	(J) Jenis isolat	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Lactobacillus plantarum strain CAU:227	Lactobacillus plantarum strain IMAU20905	-.056000	.063470	.897	-.26489	.15289
	Weissella cibaria strain MG5327	.083000	.063470	.693	-.12589	.29189
	Leuconostoc pseudomesenteroides strain: CF102	-.194667	.063470	.071	-.40355	.01422
	Leuconostoc pseudomesenteroides strain: Ni1324	-.250333*	.063470	.018	-.45922	-.04145
Lactobacillus plantarum strain IMAU20905	Lactobacillus plantarum strain CAU:227	.056000	.063470	.897	-.15289	.26489
	Weissella cibaria strain MG5327	.139000	.063470	.258	-.06989	.34789
	Leuconostoc pseudomesenteroides strain: CF102	-.138667	.063470	.260	-.34755	.07022
	Leuconostoc pseudomesenteroides strain: Ni1324	-.194333	.063470	.071	-.40322	.01455
Weissella cibaria strain MG5327	Lactobacillus plantarum strain CAU:227	-.083000	.063470	.693	-.29189	.12589
	Lactobacillus plantarum strain IMAU20905	-.139000	.063470	.258	-.34789	.06989
	Leuconostoc pseudomesenteroides strain: CF102	-.277667*	.063470	.009	-.48655	-.06878
	Leuconostoc pseudomesenteroides strain: Ni1324	-.333333*	.063470	.003	-.54222	-.12445
Leuconostoc pseudomesenteroides strain: CF102	Lactobacillus plantarum strain CAU:227	.194667	.063470	.071	-.01422	.40355
	Lactobacillus plantarum strain IMAU20905	.138667	.063470	.260	-.07022	.34755
	Weissella cibaria strain MG5327	.277667*	.063470	.009	.06878	.48655
	Leuconostoc pseudomesenteroides strain: Ni1324	-.055667	.063470	.899	-.26455	.15322
Leuconostoc pseudomesenteroides strain: Ni1324	Lactobacillus plantarum strain CAU:227	.250333*	.063470	.018	.04145	.45922
	Lactobacillus plantarum strain IMAU20905	.194333	.063470	.071	-.01455	.40322
	Weissella cibaria strain MG5327	.333333*	.063470	.003	.12445	.54222
	Leuconostoc pseudomesenteroides strain: CF102	.055667	.063470	.899	-.15322	.26455

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

Lampiran 4. Data Hasil Analisis, ANOVA, dan T-test Total Asam Laktat Kopi Fermentasi

Lama Fermentasi (Jam)	Starter 1% (%)	Rata-Rata (%)	Starter 2% (%)	Rata-Rata (%)
0 (1)	1.186	1.19	1.186	1.19
0 (2)	1.194		1.194	
6 (1)	1.895	1.879	1.505	1.522
6 (2)	1.862		1.540	
12 (1)	1.949	1.927	1.687	1.662
12 (2)	1.904		1.638	
18 (1)	1.959	1.939	1.817	1.836
18 (2)	1.919		1.855	
24 (1)	1.950	1.977	1.957	1.962
24 (2)	2.003		1.966	

Starter 1%

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.886	4	.222	292.036	.000
Within Groups	.004	5	.001		
Total	.890	9			

Multiple Comparisons

Dependent Variable:
Starter 1%

	(I) Waktu (jam)		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	0 jam	6 jam	-.68850*	.02754	.000	-.7990	-.5780
		12 jam	-.73650*	.02754	.000	-.8470	-.6260
		18 jam	-.74900*	.02754	.000	-.8595	-.6385
		24 jam	-.78650*	.02754	.000	-.8970	-.6760
	6 jam	0 jam	.68850*	.02754	.000	.5780	.7990
		12 jam	-.04800	.02754	.487	-.1585	.0625
		18 jam	-.06050	.02754	.312	-.1710	.0500
		24 jam	-.09800	.02754	.077	-.2085	.0125
	12 jam	0 jam	.73650*	.02754	.000	.6260	.8470
		6 jam	.04800	.02754	.487	-.0625	.1585
		18 jam	-.01250	.02754	.989	-.1230	.0980
		24 jam	-.05000	.02754	.455	-.1605	.0605
	18 jam	0 jam	.74900*	.02754	.000	.6385	.8595
		6 jam	.06050	.02754	.312	-.0500	.1710
		12 jam	.01250	.02754	.989	-.0980	.1230
		24 jam	-.03750	.02754	.672	-.1480	.0730
	24 jam	0 jam	.78650*	.02754	.000	.6760	.8970
		6 jam	.09800	.02754	.077	-.0125	.2085
		12 jam	.05000	.02754	.455	-.0605	.1605
		18 jam	.03750	.02754	.672	-.0730	.1480

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

Starter 2%

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.717	4	.179	343.662	.000
Within Groups	.003	5	.001		
Total	.719	9			

Multiple Comparisons

Dependent Variable:
Starter 2%

(I) Waktu (jam)			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	0 jam	6 jam	-.33250*	.02284	.000	-.4241	-.2409
		12 jam	-.47250*	.02284	.000	-.5641	-.3809
		18 jam	-.64600*	.02284	.000	-.7376	-.5544
		24 jam	-.77150*	.02284	.000	-.8631	-.6799
	6 jam	0 jam	.33250*	.02284	.000	.2409	.4241
		12 jam	-.14000*	.02284	.009	-.2316	-.0484
		18 jam	-.31350*	.02284	.000	-.4051	-.2219
		24 jam	-.43900*	.02284	.000	-.5306	-.3474
	12 jam	0 jam	.47250*	.02284	.000	.3809	.5641
		6 jam	.14000*	.02284	.009	.0484	.2316
		18 jam	-.17350*	.02284	.003	-.2651	-.0819
		24 jam	-.29900*	.02284	.000	-.3906	-.2074
	18 jam	0 jam	.64600*	.02284	.000	.5544	.7376
		6 jam	.31350*	.02284	.000	.2219	.4051
		12 jam	.17350*	.02284	.003	.0819	.2651
		24 jam	-.12550*	.02284	.014	-.2171	-.0339
	24 Jam	0 jam	.77150*	.02284	.000	.6799	.8631
		6 jam	.43900*	.02284	.000	.3474	.5306
		12 jam	.29900*	.02284	.000	.2074	.3906
		18 jam	.12550*	.02284	.014	.0339	.2171

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

T-test Asam Laktat Starter 1% dan Starter 2%

Group Statistics

0 Jam		N	Mean	Std. Deviation	Std. Error Mean
perlakuan	starter 1%	2	1.1900	.00566	.00400
	starter 2%	2	1.1900	.00566	.00400

Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
perlakuan	Equal variances assumed	0.000	2	1.000	0.00000	.00566	-.02434	.02434
	Equal variances not assumed	0.000	2.000	1.000	0.00000	.00566	-.02434	.02434

Group Statistics

6 Jam		N	Mean	Std. Deviation	Std. Error Mean
perlakuan	starter 1%	2	1.8785	.02333	.01650
	starter 2%	2	1.5225	.02475	.01750

Independent Samples Test

		t-test for Equality of Means						
		T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
perlakuan	Equal variances assumed	14.801	2	.004	.35600	.02405	.25251	.45949
	Equal variances not assumed	14.801	1.993	.004	.35600	.02405	.25217	.45983

Group Statistics

12 Jam		N	Mean	Std. Deviation	Std. Error Mean
perlakuan	starter 1%	2	1.9265	.03182	.02250
	starter 2%	2	1.6625	.03465	.02450

Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
perlakuan	Equal variances assumed	7.936	2	.016	.26400	.03326	.12088	.40712
	Equal variances not assumed	7.936	1.986	.016	.26400	.03326	.11988	.40812

Group Statistics

18 Jam		N	Mean	Std. Deviation	Std. Error Mean
perlakuan	starter 1%	2	1.9390	.02828	.02000
	starter 2%	2	1.8360	.02687	.01900

Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
perlakuan	Equal variances assumed	3.734	2	.065	.10300	.02759	-.01569	.22169
	Equal variances not assumed	3.734	1.995	.065	.10300	.02759	-.01599	.22199

Group Statistics

24 Jam		N	Mean	Std. Deviation	Std. Error Mean
perlakuan	starter 1%	2	1.9765	.03748	.02650
	starter 2%	2	1.9615	.00636	.00450

Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
perlakuan	Equal variances assumed	.558	2	.633	.01500	.02688	-.10065	.13065
	Equal variances not assumed	.558	1.058	.672	.01500	.02688	-.28555	.31555

Lampiran 5. Data Hasil Analisa, ANOVA, dan T-test pH Kopi Fermentasi

Lama Fermentasi (Jam)	Starter 1%	Rata-Rata	Starter 2%	Rata-Rata
0 (1)	6.37	6.38	6.37	6.38
0 (2)	6.39		6.39	
6 (1)	6.05	6.05	6.25	6.25
6 (2)	6.04		6.25	
12 (1)	5.89	5.89	6.15	6.18
12 (2)	5.89		6.2	
18 (1)	5.83	5.86	6.03	6.04
18 (2)	5.89		6.04	
24 (1)	5.73	5.77	5.84	5.84
24 (2)	5.8		5.84	

Starter 1%

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.465	4	.116	129.239	.000
Within Groups	.004	5	.001		
Total	.470	9			

Dependent Variable:
Starter 1%

	(I) waktu (jam)		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	0 jam	6 jam	.33500*	.03000	.001	.2147	.4553
		12 jam	.49000*	.03000	.000	.3697	.6103
		18 jam	.52000*	.03000	.000	.3997	.6403
		24 jam	.61500*	.03000	.000	.4947	.7353
	6 jam	0 jam	-.33500*	.03000	.001	-.4553	-.2147
		12 jam	.15500*	.03000	.018	.0347	.2753
		18 jam	.18500*	.03000	.009	.0647	.3053
		24 jam	.28000*	.03000	.001	.1597	.4003
	12 jam	0 jam	-.49000*	.03000	.000	-.6103	-.3697
		6 jam	-.15500*	.03000	.018	-.2753	-.0347
		18 jam	.03000	.03000	.846	-.0903	.1503
		24 jam	.12500*	.03000	.043	.0047	.2453
	18 jam	0 jam	-.52000*	.03000	.000	-.6403	-.3997
		6 jam	-.18500*	.03000	.009	-.3053	-.0647
		12 jam	-.03000	.03000	.846	-.1503	.0903
		24 jam	.09500	.03000	.114	-.0253	.2153
	24 jam	0 jam	-.61500*	.03000	.000	-.7353	-.4947
		6 jam	-.28000*	.03000	.001	-.4003	-.1597
		12 jam	-.12500*	.03000	.043	-.2453	-.0047
		18 jam	-.09500	.03000	.114	-.2153	.0253

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

Starter 2%

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.344	4	.086	286.450	.000
Within Groups	.001	5	.000		
Total	.345	9			

Dependent Variable:
Starter 2%

(I) Waktu (jam)			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	0 jam	6 jam	.13000*	.01732	.004	.0605	.1995
		12 jam	.20500*	.01732	.000	.1355	.2745
		18 jam	.34500*	.01732	.000	.2755	.4145
		24 jam	.54000*	.01732	.000	.4705	.6095
	6 jam	0 jam	-.13000*	.01732	.004	-.1995	-.0605
		12 jam	.07500*	.01732	.037	.0055	.1445
		18 jam	.21500*	.01732	.000	.1455	.2845
		24 jam	.41000*	.01732	.000	.3405	.4795
	12 jam	0 jam	-.20500*	.01732	.000	-.2745	-.1355
		6 jam	-.07500*	.01732	.037	-.1445	-.0055
		18 jam	.14000*	.01732	.003	.0705	.2095
		24 jam	.33500*	.01732	.000	.2655	.4045
	18 jam	0 jam	-.34500*	.01732	.000	-.4145	-.2755
		6 jam	-.21500*	.01732	.000	-.2845	-.1455
		12 jam	-.14000*	.01732	.003	-.2095	-.0705
		24 jam	.19500*	.01732	.001	.1255	.2645
	24 jam	0 jam	-.54000*	.01732	.000	-.6095	-.4705
		6 jam	-.41000*	.01732	.000	-.4795	-.3405
		12 jam	-.33500*	.01732	.000	-.4045	-.2655
		18 jam	-.19500*	.01732	.001	-.2645	-.1255

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

T-test pH Starter 1% dan 2%

Group Statistics

0 Jam		N	Mean	Std. Deviation	Std. Error Mean
perlakuan	starter 1%	2	6.3800	.01414	.01000
	starter 2%	2	6.3800	.01414	.01000

Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
perlakuan	Equal variances assumed	0.000	2	1.000	0.00000	.01414	-.06085	.06085
	Equal variances not assumed	0.000	2.000	1.000	0.00000	.01414	-.06085	.06085

Group Statistics

6 Jam		N	Mean	Std. Deviation	Std. Error Mean
perlakuan	starter 1%	2	6.0450	.00707	.00500
	starter 2%	2	6.2500	0.00000	0.00000

Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
perlakuan	Equal variances assumed	-41.000	2	.001	-.20500	.00500	-.22651	-.18349
	Equal variances not assumed	-41.000	1.000	.016	-.20500	.00500	-.26853	-.14147

Group Statistics

12 Jam		N	Mean	Std. Deviation	Std. Error Mean
perlakuan	starter 1%	2	5.8900	0.00000	0.00000
	starter 2%	2	6.1750	.03536	.02500

Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
perlakuan	Equal variances assumed	-11.400	2	.008	-.28500	.02500	-.39257	-.17743
	Equal variances not assumed	-11.400	1.000	.056	-.28500	.02500	-.60266	.03266

Group Statistics

18 Jam		N	Mean	Std. Deviation	Std. Error Mean
perlakuan	starter 1%	2	5.8600	.04243	.03000
	starter 2%	2	6.0350	.00707	.00500

Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
perlakuan	Equal variances assumed	-5.754	2	.029	-.17500	.03041	-.30586	-.04414
	Equal variances not assumed	-5.754	1.056	.100	-.17500	.03041	-.51657	.16657

Group Statistics

24 Jam		N	Mean	Std. Deviation	Std. Error Mean
perlakuan	starter 1%	2	5.7650	.04950	.03500
	starter 2%	2	5.8400	0.00000	0.00000

Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
perlakuan	Equal variances assumed	-2.143	2	.165	-.07500	.03500	-.22559	.07559
	Equal variances not assumed	-2.143	1.000	.278	-.07500	.03500	-.51972	.36972

Lampiran 6. Hasil Analisis Komposisi Kimia, ANOVA, dan Uji Tuckey Kopi Fermentasi

Kode Sampel	Parameter						
	Air (%)	Abu (%)	Lemak (%)	Protein (%)	Karbohidrat (%)	Total Gula (%)	Kafein (%)
A01 (1)	10.35	4.23	5.84	7.42	82.51	26.44	1.24
A01 (2)	10.45	4.27	7.02	7.24	81.47	25.55	1.28
A02 (1)	9.81	3.86	6.21	7.33	82.60	27.65	1.19
A02 (2)	9.50	3.76	6.55	7.20	82.49	29.36	1.16
A1B3 (1)	7.14	4.21	6.94	7.08	81.78	21.83	0.96
A1B3 (2)	7.74	4.23	7.66	7.18	80.93	19.01	1.01

KADAR AIR

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.482	2	4.741	61.029	.004
Within Groups	.233	3	.078		
Total	9.715	5			

Multiple Comparisons

Dependent Variable: KADAR AIR
Tukey HSD

(I) sampel		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A01	A02	.74500	.27872	.146	-.4197	1.9097
	A1B3	2.96000*	.27872	.004	1.7953	4.1247
A02	A01	-.74500	.27872	.146	-1.9097	.4197
	A1B3	2.21500*	.27872	.008	1.0503	3.3797
A1B3	A01	-2.96000*	.27872	.004	-4.1247	-1.7953
	A02	-2.21500*	.27872	.008	-3.3797	-1.0503

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

KADAR ABU

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.242	2	.121	60.433	.004
Within Groups	.006	3	.002		
Total	.248	5			

Multiple Comparisons

Dependent Variable: KADAR ABU
Tukey HSD

(I) sampel		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A01	A02	.44000*	.04472	.005	.2531	.6269
	A1B3	.03000	.04472	.795	-.1569	.2169
A02	A01	-.44000*	.04472	.005	-.6269	-.2531
	A1B3	-.41000*	.04472	.006	-.5969	-.2231
A1B3	A01	-.03000	.04472	.795	-.2169	.1569
	A02	.41000*	.04472	.006	.2231	.5969

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

LEMAK

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.071	2	.535	1.585	.339
Within Groups	1.013	3	.338		
Total	2.084	5			

Multiple Comparisons

Dependent Variable: LEMAK
Tukey HSD

(I) sampel		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A01	A02	.05000	.58115	.996	-2.3785	2.4785
	A1B3	-.87000	.58115	.407	-3.2985	1.5585
A02	A01	-.05000	.58115	.996	-2.4785	2.3785
	A1B3	-.92000	.58115	.377	-3.3485	1.5085
A1B3	A01	.87000	.58115	.407	-1.5585	3.2985
	A02	.92000	.58115	.377	-1.5085	3.3485

PROTEIN

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.042	2	.021	2.106	.268
Within Groups	.030	3	.010		
Total	.071	5			

Multiple Comparisons

Dependent Variable: PROTEIN
Tukey HSD

(I) sampel		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A01	A02	.06500	.09941	.804	-.3504	.4804
	A1B3	.20000	.09941	.256	-.2154	.6154
A02	A01	-.06500	.09941	.804	-.4804	.3504
	A1B3	.13500	.09941	.461	-.2804	.5504
A1B3	A01	-.20000	.09941	.256	-.6154	.2154
	A02	-.13500	.09941	.461	-.5504	.2804

KARBOHIDRAT

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.418	2	.709	2.343	.244
Within Groups	.908	3	.303		
Total	2.326	5			

Multiple Comparisons

Dependent Variable: KARBOHIDRAT
Tukey HSD

(I) sampel		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A01	A02	-.55500	.55018	.622	-2.8541	1.7441
	A1B3	.63500	.55018	.551	-1.6641	2.9341
A02	A01	.55500	.55018	.622	-1.7441	2.8541
	A1B3	1.19000	.55018	.224	-1.1091	3.4891
A1B3	A01	-.63500	.55018	.551	-2.9341	1.6641
	A02	-1.19000	.55018	.224	-3.4891	1.1091

TOTAL GULA

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	68.499	2	34.249	17.611	.022
Within Groups	5.834	3	1.945		
Total	74.333	5			

Multiple Comparisons

Dependent Variable: TOTAL GULA
Tukey HSD

(I) sampel		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A01	A02	-2.51000	1.39455	.310	-8.3374	3.3174
	A1B3	5.57500	1.39455	.056	-.2524	11.4024
A02	A01	2.51000	1.39455	.310	-3.3174	8.3374
	A1B3	8.08500*	1.39455	.021	2.2576	13.9124
A1B3	A01	-5.57500	1.39455	.056	-11.4024	.2524
	A02	-8.08500*	1.39455	.021	-13.9124	-2.2576

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

KAFEIN

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.079	2	.040	47.580	.005
Within Groups	.003	3	.001		
Total	.082	5			

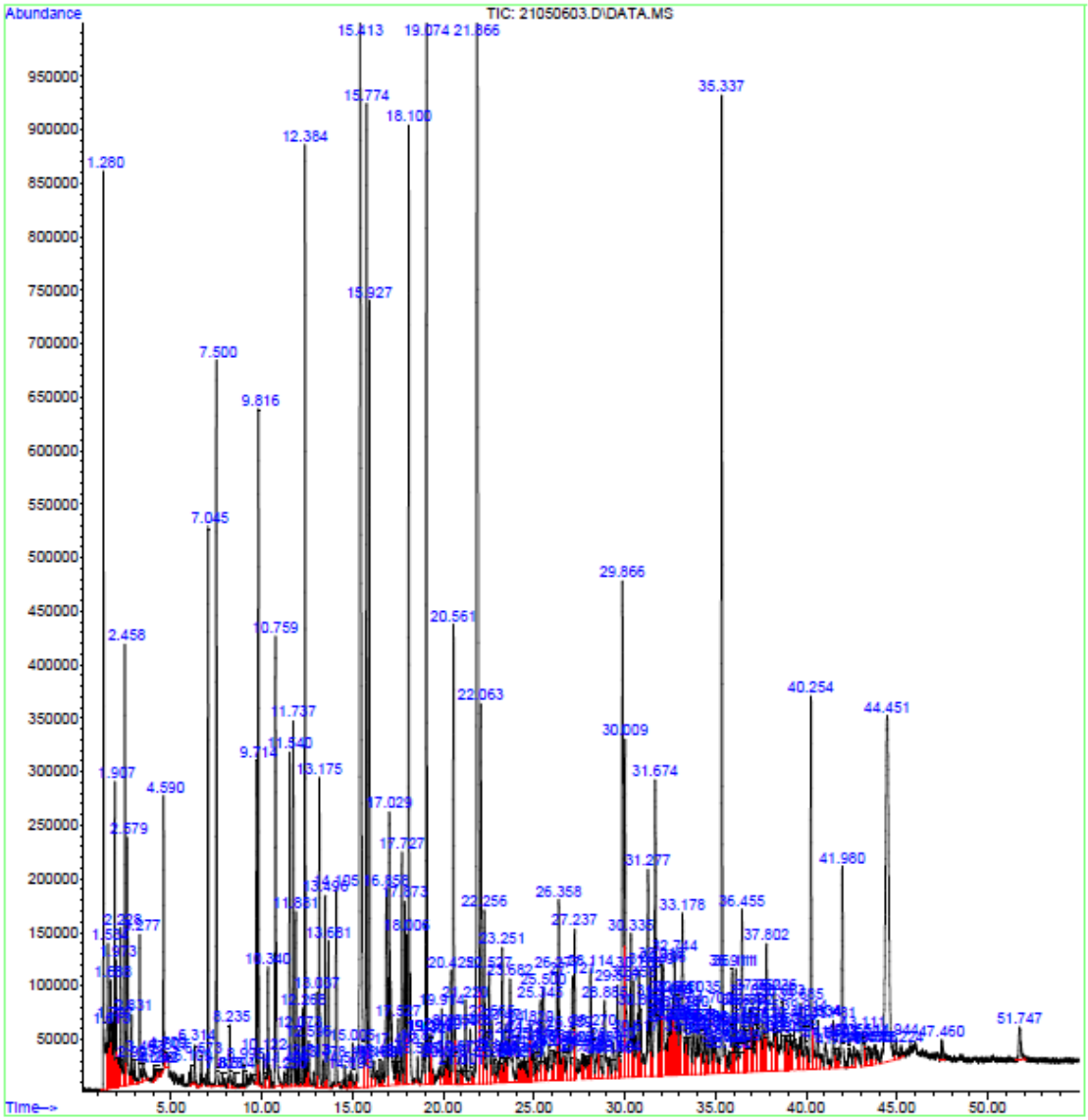
Multiple Comparisons

Dependent Variable: KAFEIN
Tukey HSD

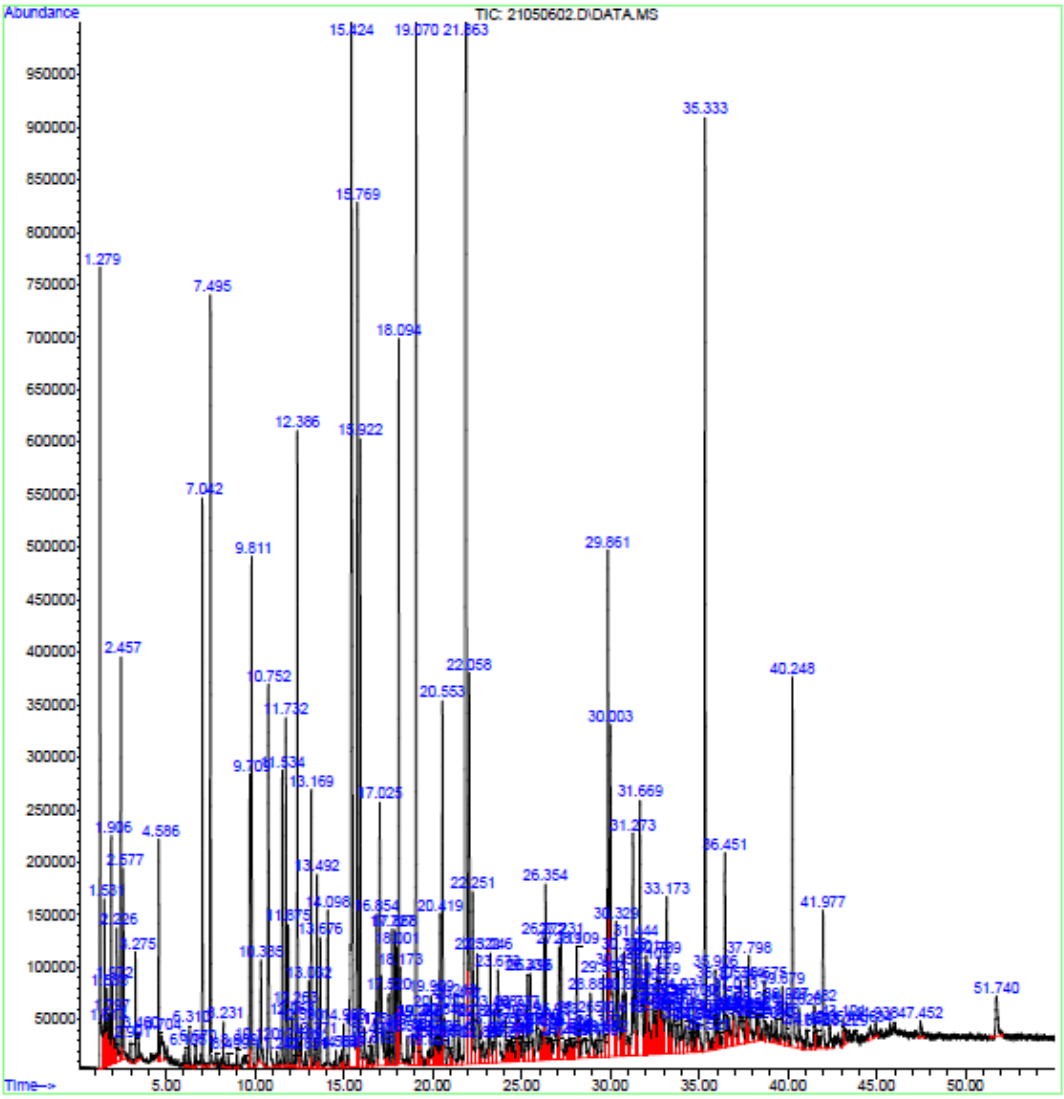
(I) sampel		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A01	A02	.08500	.02887	.118	-.0356	.2056
	A1B3	.27500*	.02887	.005	.1544	.3956
A02	A01	-.08500	.02887	.118	-.2056	.0356
	A1B3	.19000*	.02887	.015	.0694	.3106
A1B3	A01	-.27500*	.02887	.005	-.3956	-.1544
	A02	-.19000*	.02887	.015	-.3106	-.0694

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

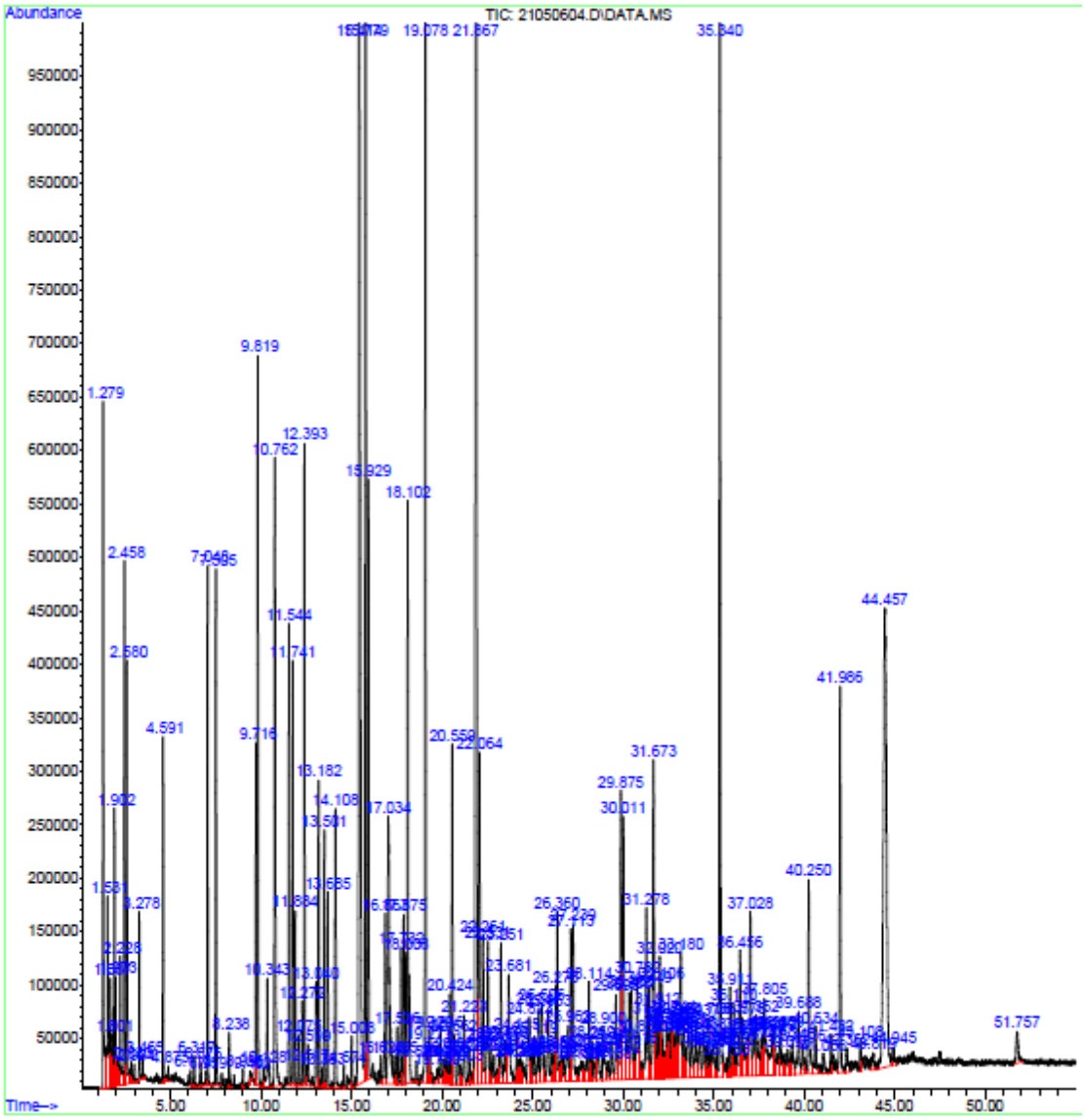
Lampiran 7. Hasil GC-MS Senyawa Aromatik Kopi Arabika Luwak Asli (A01)



Lampiran 8. Hasil GC-MS Senyawa Aromatik Kopi Arabika Natural (A02)



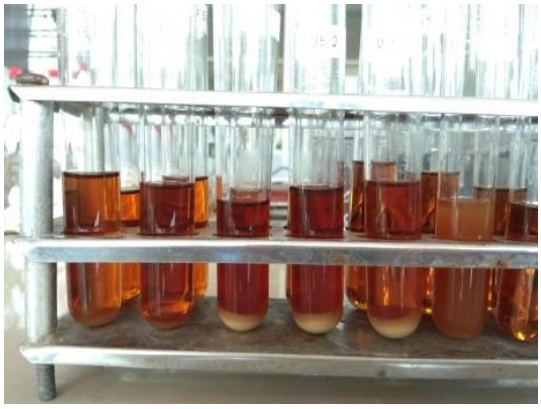
Lampiran 9. Hasil GC-MS Senyawa Aromatik Kopi Arabika BAL Luwak (A1B3)



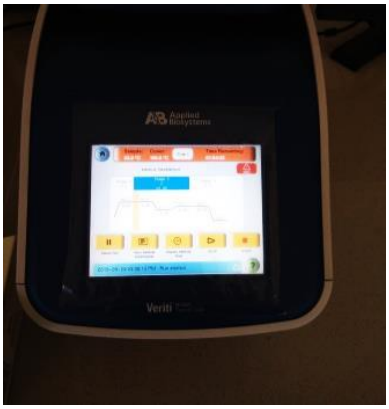
Lampiran 10. Dokumentasi Penelitian

Binatang Luwak

Pengambilan spesimen dari usus besar luwak pada Klinik Hewan Pendidikan UNHAS

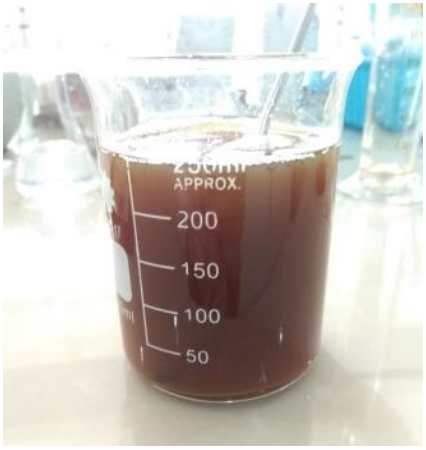


Pengujian ketahanan isolat pada asam dan garam empedu



Amplifikasi DNA isolat pada PCR

Analisa aktivitas enzim isolat



Starter cair kopi luwak

Pengeringan starter menggunakan freeze dryer

Buah kopi Arabika

Perendaman biji kopi pada starter

Pengeringan biji kopi

Green bean kopi