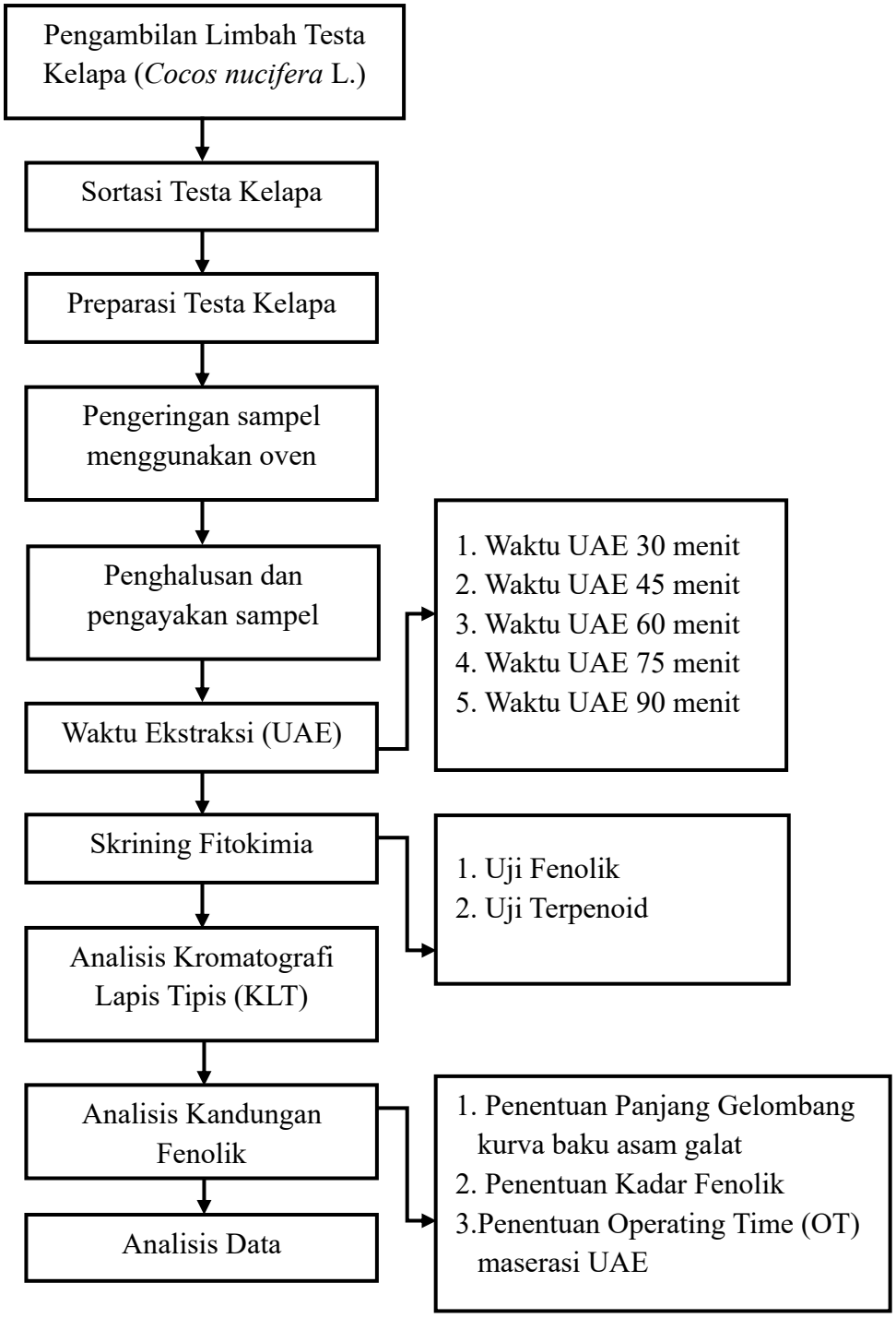
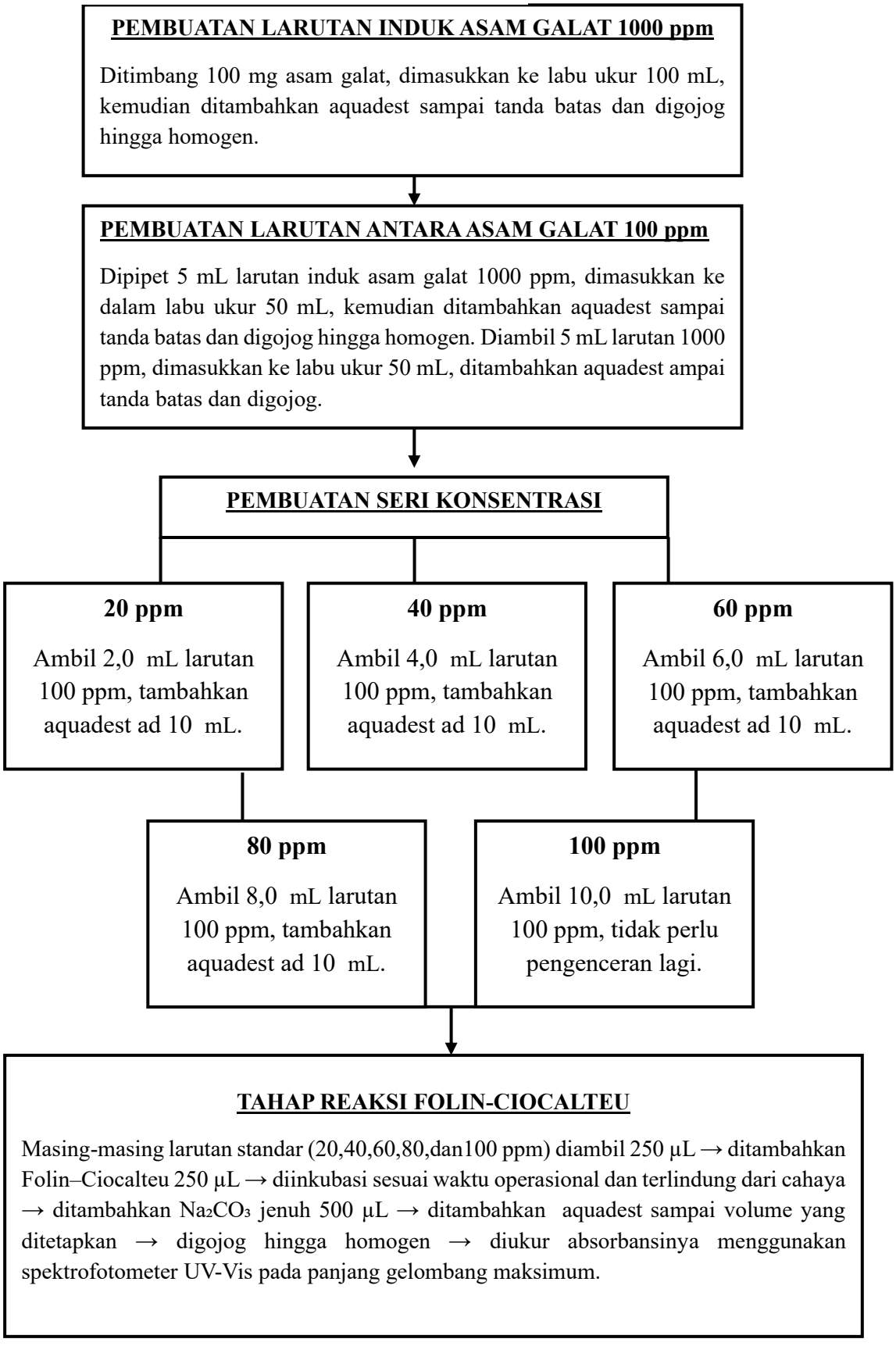
LAMPIRAN

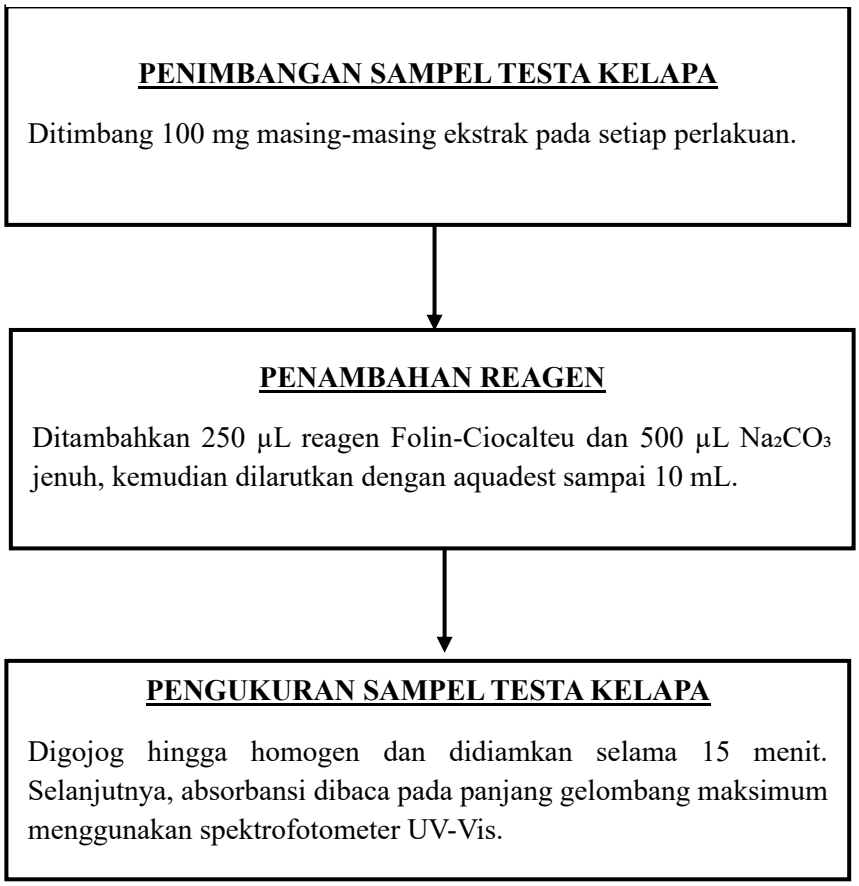
Lampiran 1. Skema Alur Penelitian



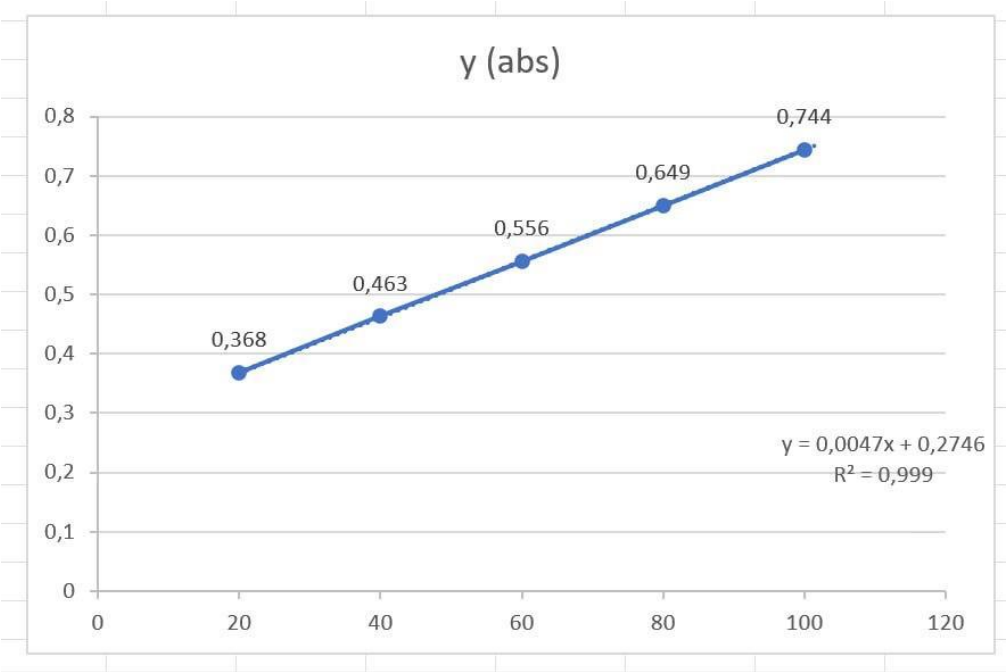
Lampiran 2. Pembuatan kurva baku asam galat



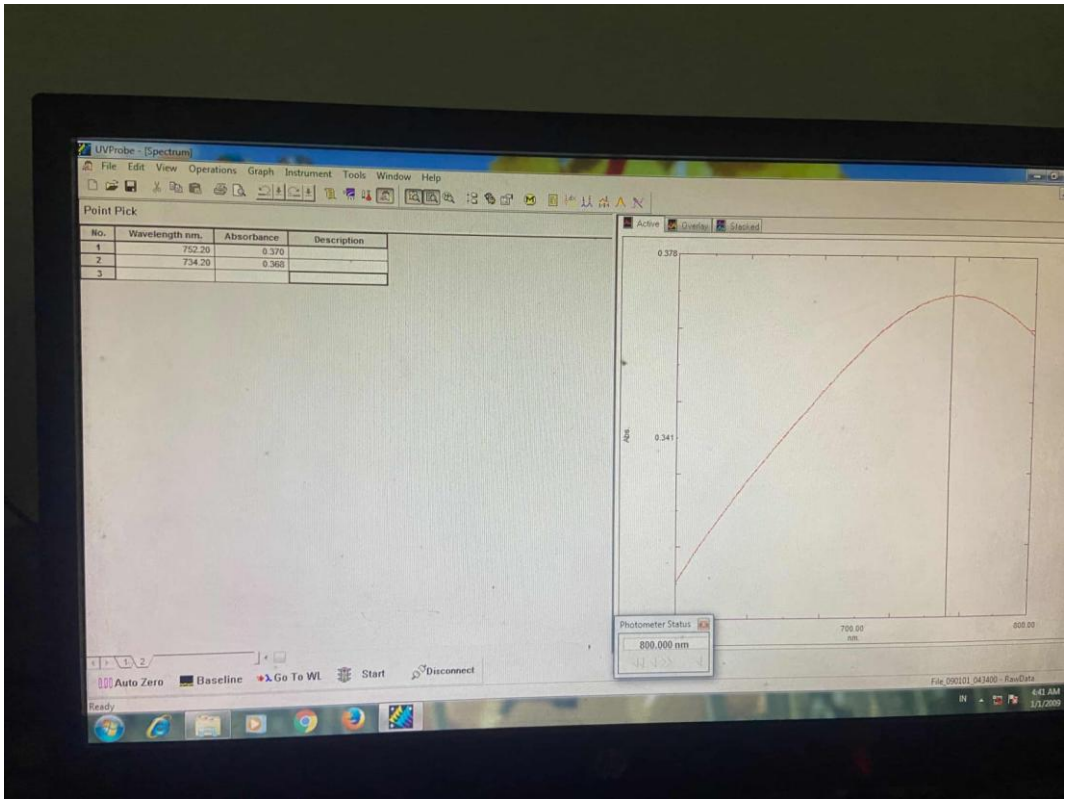
Lampiran 3. Penentuan kadar fenolik



Lampiran 4. Kurva Regresi Linear Asam Galat



Lampiran 5. Panjang Gelombang Maksimum Asam Galat



Lampiran 6. Data Kadar Fenolik

Ekstrak		Abs	X (µg/µL)	X (mg/mL)	mg EAG/g ekstrak	Rata-rata	SD	%RSD
TESTA KELAPA 30 MENIT	Replikasi 1	0,658	81,5744	0,0815744	8,15744	8,2070	0,05354	0,65240%
	Replikasi 2	0,663	82,6382	0,0826382	8,26382			
	Replikasi 3	0,660	82	0,082	8,2			
TESTA KELAPA 45 MENIT	Replikasi 1	0,321	9,8723	0,0098723	0,98723	0,9659	0,02128	2,20249%
	Replikasi 2	0,320	9,6595	0,0096595	0,96595			
	Replikasi 3	0,319	9,4468	0,0094468	0,94468			
TESTA KELAPA 60 MENIT	Replikasi 1	0,334	12,6382	0,0126382	1,26382	1,2283	0,03250	2,64546%
	Replikasi 2	0,332	12,2127	0,0122127	1,22127			
	Replikasi 3	0,331	12	0,012	1,2			
TESTA KELAPA 75 MENIT	Replikasi 1	0,344	14,7659	0,0147659	1,47659	1,4269	0,04429	3,10399%
	Replikasi 2	0,341	14,1276	0,0141276	1,41276			
	Replikasi 3	0,340	13,9148	0,0139148	1,39148			
TESTA KELAPA 90 MENIT	Replikasi 1	0,321	9,8723	0,0098723	0,98723	0,8808	0,09276	10,53062%
	Replikasi 2	0,314	8,3829	0,0083829	0,838229			
	Replikasi 3	0,313	8,1702	0,0081702	0,81702			

- X (µg/µL)
  y = 0,0047x + 0,2746
  $x = \frac{y-0,2746}{0,0047}$

1) TESTA KELAPA 30 MENIT

Replikasi 1	Replikasi 2	Replikasi 3
$V=\frac{0,658-0,2746}{0,0047}$ $=\frac{0,3834}{0,0047}=81,5744$	$V=\frac{0,663-0,2746}{0,0047}$ $=\frac{0,3884}{0,0047}=82,6382$	$V=\frac{0,660-0,2746}{0,0047}$ $=\frac{0,3854}{0,0047}=82$

2) TESTA KELAPA 45 MENIT

Replikasi 1	Replikasi 2	Replikasi 3
V= $\frac{0,321-0,2746}{0,0047}$ = $\frac{0,0464}{0,0047}$ = 9,8723	V= $\frac{0,320-0,2746}{0,0047}$ = $\frac{0,0454}{0,0047}$ = 9,6595	V= $\frac{0,319-0,2746}{0,0047}$ = $\frac{0,0444}{0,0047}$ = 9,4468

3) TESTA KELAPA 60 MENIT

Replikasi 1	Replikasi 2	Replikasi 3
V= $\frac{0,334-0,2746}{0,0047}$ = $\frac{0,0594}{0,0047}$ = 12,6382	V= $\frac{0,332-0,2746}{0,0047}$ = $\frac{0,0574}{0,0047}$ = 12,2127	V= $\frac{0,331-0,2746}{0,0047}$ = $\frac{0,0564}{0,0047}$ = 12

4) TESTA KELAPA 75 MENIT

Replikasi 1	Replikasi 2	Replikasi 3
V= $\frac{0,344-0,2746}{0,0047}$ = $\frac{0,0694}{0,0047}$ = 14,7659	V= $\frac{0,341-0,2746}{0,0047}$ = $\frac{0,0664}{0,0047}$ = 14,1276	V= $\frac{0,340-0,2746}{0,0047}$ = $\frac{0,0654}{0,0047}$ = 13,9148

5) TESTA KELAPA 90 MENIT

Replikasi 1	Replikasi 2	Replikasi 3
V= $\frac{0,321-0,2746}{0,0047}$ = $\frac{0,0464}{0,0047}$ = 9,8723	V= $\frac{0,314-0,2746}{0,0047}$ = $\frac{0,0394}{0,0047}$ = 8,3829	V= $\frac{0,313-0,2746}{0,0047}$ = $\frac{0,0384}{0,0047}$ = 8,1702

- **X (mg/ml)**

Sampel uji		**X (µg/mL)**	**X (mg/mL)**
TESTA KELAPA 30 MENIT	Replikasi 1	81,5744 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$ $\frac{81,5744}{1000} = 0,0815744$
	Replikasi 2	82,6382 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$ $\frac{82,6382}{1000} = 0,0826382$

	Replikasi 3	82 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$ $\frac{82}{1000} = 0{,}082$
TESTA KELAPA 45 MENIT	Replikasi 1	9,8723 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$ $\frac{9{,}8723}{1000} = 0{,}0098723$
	Replikasi 2	9,6595 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$ $\frac{9{,}6595}{1000} = 0{,}0096595$
	Replikasi 3	9,4468 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$ $\frac{9{,}4468}{1000} = 0{,}0094468$
TESTA KELAPA 60 MENIT	Replikasi 1	12,6382 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$ $\frac{12{,}6382}{1000} = 0{,}0126382$
	Replikasi 2	12,2127 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$ $\frac{12{,}212}{1000} = 0{,}0122127$
	Replikasi 3	12 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$ $\frac{12}{1000} = 0{,}012$
TESTA KELAPA 75 MENIT	Replikasi 1	14,7659 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$ $\frac{14{,}7659}{1000} = 0{,}0147659$
	Replikasi 2	14,1276 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$ $\frac{14{,}1276}{1000} = 0{,}0141276$
	Replikasi 3	13,9148 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$ $\frac{13{,}9148}{1000} = 0{,}0139148$
	Replikasi 1	9,8723 (µg/mL)	$\frac{x(\mu g/mL)}{1000}$

TESTA KELAPA 90 MENIT			$\frac{9{,}8723}{1000} = 0{,}0098723$
	Replikasi 2	8,3829 (µg/mL)	$\frac{\text{x(µg/mL)}}{1000}$ $\frac{8{,}3829}{1000} = 0{,}0083829$
	Replikasi 3	8,1702 (µg/mL)	$\frac{\text{x(µg/mL)}}{1000}$ $\frac{8{,}1702}{1000} = 0{,}0081702$

- **mg EAG/g ekstrak**

TESTA KELAPA 30 MENIT	Replikasi 1	$\frac{c \times V \times Fp}{m} = \frac{0{,}0815744 \times 10 \times 1}{0{,}1} = 8{,}15744$ mg EAG/g ekstrak
	Replikasi 2	$\frac{c \times V \times Fp}{m} = \frac{0{,}0826382 \times 10 \times 1}{0{,}1} = 8{,}26382$ mg EAG/g ekstrak
	Replikasi 3	$\frac{c \times V \times Fp}{m} = \frac{0{,}082 \times 10 \times 1}{0{,}1} = 8{,}2$ mg EAG/g ekstrak
TESTA KELAPA 45 MENIT	Replikasi 1	$\frac{c \times V \times Fp}{m} = \frac{0{,}0098723 \times 10 \times 1}{0{,}1} = 0{,}98723$ mg EAG/g ekstrak
	Replikasi 2	$\frac{c \times V \times Fp}{m} = \frac{0{,}0096595 \times 10 \times 1}{0{,}1} = 0{,}96595$ mg EAG/g ekstrak
	Replikasi 3	$\frac{c \times V \times Fp}{m} = \frac{0{,}0094468 \times 10 \times 1}{0{,}1} = 0{,}94468$ mg EAG/g ekstrak
TESTA KELAPA 60 MENIT	Replikasi 1	$\frac{c \times V \times Fp}{m} = \frac{0{,}0126382 \times 10 \times 1}{0{,}1} = 1{,}26382$ mg EAG/g ekstrak
	Replikasi 2	$\frac{c \times V \times Fp}{m} = \frac{0{,}0122127 \times 10 \times 1}{0{,}1} = 1{,}22127$ mg EAG/g ekstrak
	Replikasi 3	$\frac{c \times V \times Fp}{m} = \frac{0{,}012 \times 10 \times 1}{0{,}1} = 1{,}2$ mg EAG/g ekstrak
	Replikasi 1	$\frac{c \times V \times Fp}{m} = \frac{0{,}0147659 \times 10 \times 1}{0{,}1} = 1{,}47659$ mg EAG/g ekstrak

TESTA KELAPA 75 MENIT	Replikasi 2	$\frac{c \times V \times Fp}{m} = \frac{0{,}0141276 \times 10 \times 1}{0{,}1} = 1{,}41276$ mg EAG/g ekstrak
	Replikasi 3	$\frac{c \times V \times Fp}{m} = \frac{0{,}0139148 \times 10 \times 1}{0{,}1} = 1{,}39148$ mg EAG/g ekstrak
TESTA KELAPA 90 MENIT	Replikasi 1	$\frac{c \times V \times Fp}{m} = \frac{0{,}0098723 \times 10 \times 1}{0{,}1} = 0{,}98723$ mg EAG/g ekstrak
	Replikasi 2	$\frac{c \times V \times Fp}{m} = \frac{0{,}0083829 \times 10 \times 1}{0{,}1} = 0{,}83829$ mg EAG/g ekstrak
	Replikasi 3	$\frac{c \times V \times Fp}{m} = \frac{0{,}0081702 \times 10 \times 1}{0{,}1} = 0{,}81702$ mg EAG/g ekstrak

Lampiran 7. Skrining Fitokimia

Pemeriksaan	Reagen	Keterangan	Hasil	Gambar
Fenolik	*FeCl ₃1%*	Perubahan warna hijau kehitaman	(+)	
Terpenoid	*Pereaksi Liebermann Burchard*	Perubahan warna ungu kehitaman	(+)	

Lampiran 8. Perhitungan Rendemen

Rumus Rendemen :

$$\%\ \text{Rendemen} = \frac{\text{Berat ekstrak kental}}{\text{Berat sampel yang digunakan}} \times 100\%$$

Sampel	Perhitungan
Sampel 30 Menit	$Rendemen = \frac{20{,}25}{200} x100\% = 10{,}125\%$
Sampel 45 Menit	$Rendemen = \frac{22{,}54}{200} x100\% = 11{,}27\%$
Sampel 60 Menit	$Rendemen = \frac{27{,}21}{200} x100\% = 13{,}605\%$
Sampel 75 Menit	$Rendemen = \frac{32{,}51}{200} x100\% = 16{,}255\%$
Sampel 90 Menit	$Rendemen = \frac{22{,}22}{200} x100\% = 11{,}11\%$

KADAR ABU

Lampiran 9. Hasil Karakteristik

A= 69,28 B= 71,28	**C1= 69,30** $\frac{C-A}{B-A} \times 100\% = \frac{69{,}30-69{,}28}{71{,}28-69{,}28} \times 100\% = 1{,}0\%$
	C2= 69,29 $\frac{C-A}{B-A} \times 100\% = \frac{69{,}29-69{,}28}{71{,}28-69{,}28} \times 100\% = 0{,}5\%$
	C3= 69,29 $\frac{C-A}{B-A} \times 100\% = \frac{69{,}29-69{,}28}{71{,}28-69{,}28} \times 100\% = 0{,}5\%$

KADAR AIR

A= 49,31 B= 51,31	**C1= 51,15** $\frac{B-C}{B-A} \times 100\% = \frac{51{,}31-51{,}15}{51{,}31-49{,}31} \times 100\% = 8\%$
	C2= 51,13 $\frac{B-C}{B-A} \times 100\% = \frac{51{,}31-51{,}13}{51{,}31-49{,}31} \times 100\% = 9\%$
	C3= 51,13 $\frac{B-C}{B-A} \times 100\% = \frac{51{,}31-51{,}13}{51{,}31-49{,}31} \times 100\% = 9\%$

SUSUT PENGERINGAN

A= 73,05 B= 75,05	**C1= 74,87** $\frac{(B-A)-(C-A)}{B-A} \times 100\%$ $= \frac{(75{,}05-73{,}05)-(74{,}87-73{,}05)}{75{,}05-73{,}05} \times 100\% = 9\%$
	C2= 74,85 $\frac{(B-A)-(C-A)}{B-A} \times 100\%$ $= \frac{(75{,}05-73{,}05)-(74{,}85-73{,}05)}{75{,}05-73{,}05} \times 100\% = 10\%$
	C3= 74,85 $\frac{(B-A)-(C-A)}{B-A} \times 100\%$ $= \frac{(75{,}05-73{,}05)-(74{,}85-73{,}05)}{75{,}05-73{,}05} \times 100\% = 10\%$

Lampiran 10. Perhitungan KLT

Rumus Perhitungan Rf :

$$Rf = \frac{Jarak\ tempuh\ noda\ senyawa\ dari\ titik\ awal}{Jarak\ tempyh\ front\ pelarut\ dari\ titik\ awal}$$

Sampel	Perhitungan
Standar Asam Galat	$Rf = \frac{6,0}{8,0} = 0,7500$
Sampel 30 Menit	$Rf = \frac{5,8}{8,0} = 0,7250$
Sampel 45 Menit	$Rf = \frac{6,5}{8,0} = 0,8125$
Sampel 60 Menit	$Rf = \frac{6,8}{8,0} = 0,8500$
Sampel 75 Menit	$Rf = \frac{6,9}{8,0} = 0,8625$
Sampel 90 Menit	$Rf = \frac{6,3}{8,0} = 0,7875$

Keterangan: jarak migrasi bercak dan jarak tempuh eluen dinyatakan dalam cm, sedangkan nilai Rf tidak memiliki satuan.

Lampiran 11. One Way ANOVA Kadar Fenolik

1. Uji Normalitas

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	kelompok perlakuan	Statistic	df	Sig.	Statistic	df	Sig.
kadar EAG/gram ekstrak	T 30 menit	.219	3	.	.987	3	.781
	T 45 menit	.175	3	.	1.000	3	1.000
	T 60 menit	.253	3	.	.964	3	.637
	T 75 menit	.292	3	.	.923	3	.463
	T 90 menit	.344	3	.	.842	3	.219

a. Lilliefors Significance Correction

2. Uji Homogenitas

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
kadar EAG/gram ekstrak	Based on Mean	2.830	4	10	.083
	Based on Median	.434	4	10	.781
	Based on Median and with adjusted df	.434	4	3.802	.780
	Based on trimmed mean	2.521	4	10	.107

3. Anova One Way

ANOVA

kadar EAG/gram ekstrak

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	120.917	4	30.229	10117.927	<,001
Within Groups	.030	10	.003		
Total	120.947	14			

4. Uji Tukey HSD (*Honestly Significant Difference*)

Multiple Comparisons

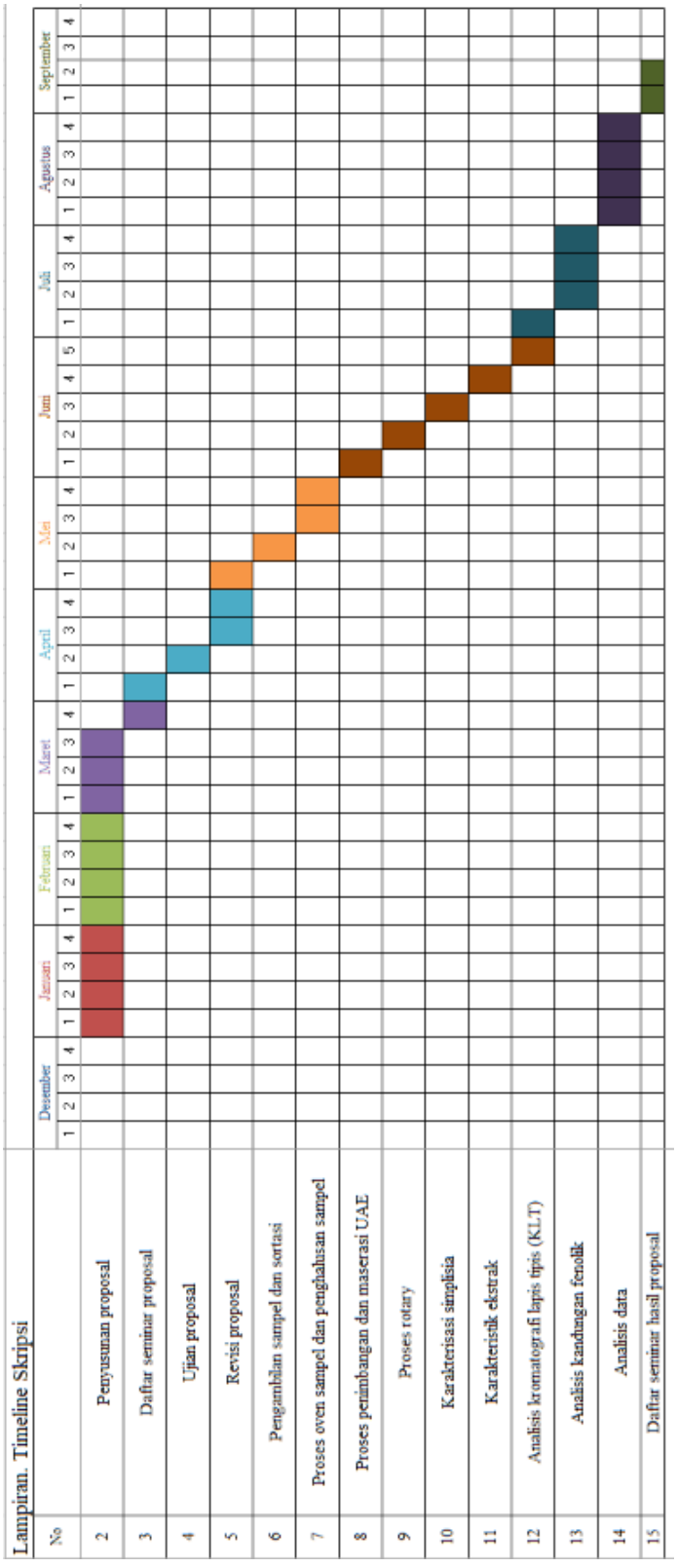
Dependent Variable: kadar EAG/gram ekstrak

Tukey HSD

(I) kelompok perlakuan	(J) kelompok perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
T 30 menit	T 45 menit	7.24113333*	.04462947	<,001	7.0942541	7.3880126
	T 60 menit	6.97872333*	.04462947	<,001	6.8318441	7.1256026
	T 75 menit	6.78014333*	.04462947	<,001	6.6332641	6.9270226
	T 90 menit	7.32624000*	.04462947	<,001	7.1793608	7.4731192
T 45 menit	T 30 menit	-7.24113333*	.04462947	<,001	-7.3880126	-7.0942541
	T 60 menit	-.26241000*	.04462947	.001	-.4092892	-.1155308
	T 75 menit	-.46099000*	.04462947	<,001	-.6078692	-.3141108
	T 90 menit	.08510667	.04462947	.373	-.0617726	.2319859
T 60 menit	T 30 menit	-6.97872333*	.04462947	<,001	-7.1256026	-6.8318441
	T 45 menit	.26241000*	.04462947	.001	.1155308	.4092892
	T 75 menit	-.19858000*	.04462947	.008	-.3454592	-.0517008
	T 90 menit	.34751667*	.04462947	<,001	.2006374	.4943959
T 75 menit	T 30 menit	-6.78014333*	.04462947	<,001	-6.9270226	-6.6332641
	T 45 menit	.46099000*	.04462947	<,001	.3141108	.6078692
	T 60 menit	.19858000*	.04462947	.008	.0517008	.3454592
	T 90 menit	.54609667*	.04462947	<,001	.3992174	.6929759
T 90 menit	T 30 menit	-7.32624000*	.04462947	<,001	-7.4731192	-7.1793608
	T 45 menit	-.08510667	.04462947	.373	-.2319859	.0617726
	T 60 menit	-.34751667*	.04462947	<,001	-.4943959	-.2006374
	T 75 menit	-.54609667*	.04462947	<,001	-.6929759	-.3992174

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

Lampiran 12. Data Pelaksanaan Penelitian



LAMPIRAN GAMBAR

Proses Oven Testa Kelapa



Proses oven sampel



Proses oven yang akan ditutup



Pemasukan sampel kedalam oven



Proses penganturan suhu pada oven



Proses tataletak yang rapi



Proses penutupan oven

Proses Penimbangan Dan Pengahalusan Bahan Sampel Testa Kelapa



Proses penimbangan sampel



Proses pemasukan sampel kedalam bender



Proses pemasangan alat blender



Sampel Testa Kelapa



Proses penimbangan sampel 200 gram



Sampel yang sudah di

Proses Maserasi Ultrasonic-Assisted Extraction



Alat dan bahan yang akan digunakan



Proses pengambilan larutan



Sampel yang sudah di packing



Proses maserasi UAE



Sampel testa kelapa dan etanol 70% yang akan di UAE



Proses memasukan larutan kedalam botol kaca hitam

Proses Penyaringan Dan Rotary



Proses penyaringan testa kelapa



Proses mengatur suhu



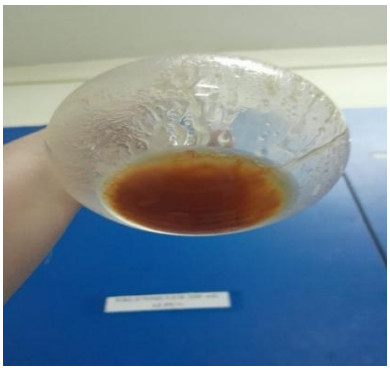
Proses menurunkan labu rotary



Proses pengentalan sampel



Proses pengangkatan labu rotary



Proses hasil ekstrak testa kelapa

Proses microskipik



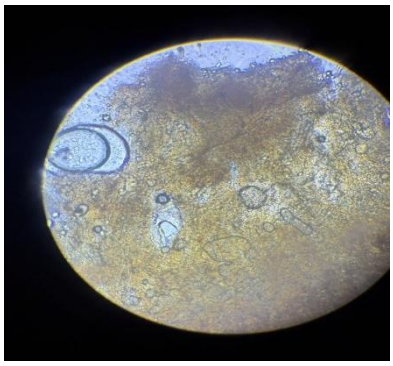
Bahan dan alat



Proses setelah diuji



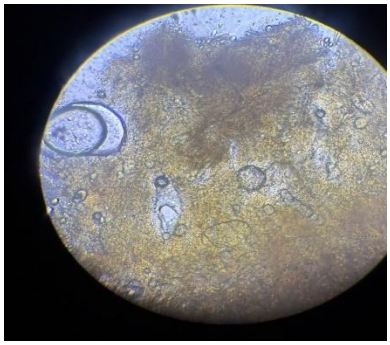
Alat mikroskop



Proses hasil yang diuji



Proses melihat dimikroskop



Proses mikroskop pembesaran 40x

Proses Uji Kadar Abu



Krus perselin kosong setelah dipanaskan



Krus perselin kosong + sampel 2gram



Krus dioven selama 30 menit



Proses dimasukan dalam furnance



Pengaturan suhu furnance



Proses desikator 15 menit



Proses penimbangan akhir uji pertama



Proses penimbangan akhir uji kedua



Proses penimbangan akhir uji ketiga

Proses Kadar air



Proses persiapan alat dan bahan



Krus perselin kosong setelah dipanaskan



Krus perselin kosong + sampel 2gram



Proses dioven selama 3 jam



Proses pengambilan sampel dari oven



Proses desikator 15 menit



Proses penimbangan akhir uji pertama



Proses penimbangan akhir uji kedua



Proses penimbangan akhir uji ketiga

Proses susut pengeringan



Proses persiapan alat dan bahan



Krus perselin kosong setelah dipanaskan



Krus perselin kosong + sampel 2gram



Proses oven 30 menit



Proses pengambilan sampel dari oven



Proses desikator 15 menit



Proses penimbangan akhir uji pertama



Proses penimbangan akhir uji kedua



Proses penimbangan akhir uji ketiga

Proses skrining fenolik



Larutan $FeCl_3$ 1%



Ekstrak Testa Kelapa



Pengujian fenolik menggunakan plat tetes



Alat yang digunakan



Pengujian fenolik menggunakan tabung reaksi



Sampel testa kelapa ditabung reaksi

Proses Skrining Terpenoid



Pengujian senyawa terpenoid ditabung reaksi



Sampel testa kelapa ditabung reaksi



Pengujian senyawa terpenoid diplat tetes



Ekstrak Testa Kelapa



Alat plat tetes

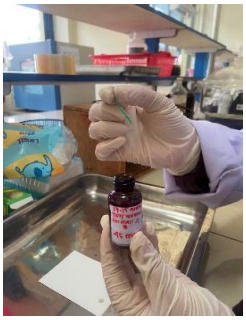


Alat yang digunakan

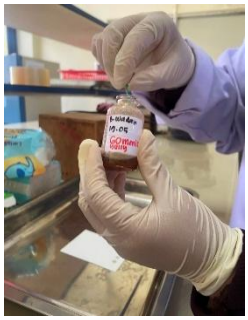
Proses Kerja Plat KLT



Sampel ekstrak 30 menit UAE



Sampel ekstrak 45 menit UAE



Sampel ekstrak 60 menit UAE



Sampel ekstrak 75 menit UAE



Sampel ekstrak 90 menit UAE



Proses mengukur plat klt



Pemotongan plat klt



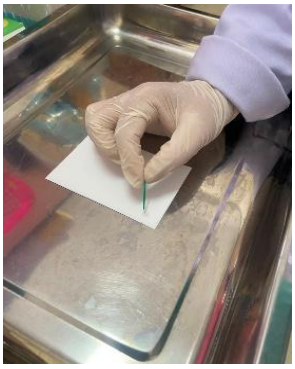
Proses oven plat klt



Proses oven plat klt 15 menit



Proses oven plat klt pada suhu 105^0C



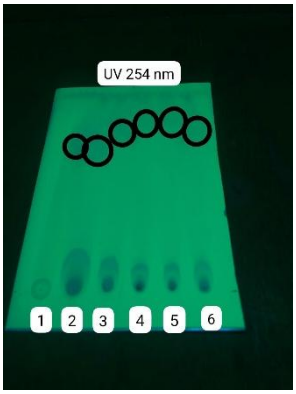
Proses penotolan sampel diplat klt



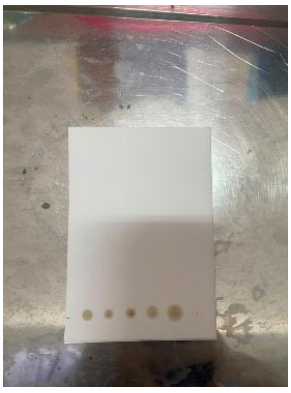
Proses naiknya larutan



Proses dikembangkan dalam fase gerak



Proses sinar UV 254 nm



Proses setelah ditotolkan

Proses spektrofotometri UV-Vis

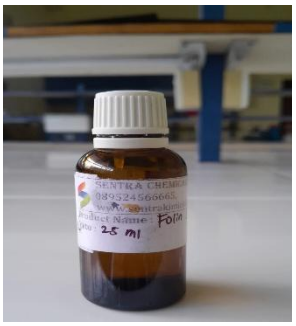
1. Pembuatan kurva baku asam galat



Asam galat



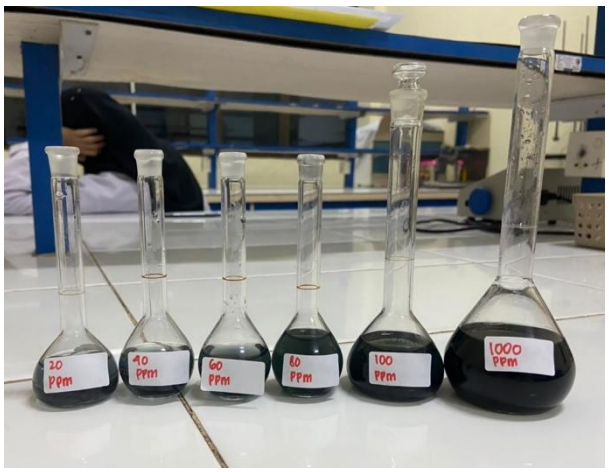
Na2C03 jenuh



Larutan Folin

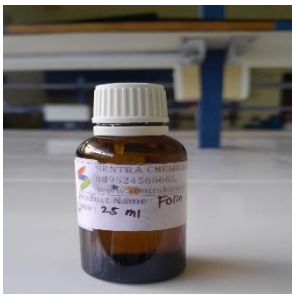


Alat mikropipet



Larutan kurva baku asam galat

2. Penentuan kadar fenolik



Larutan Folin



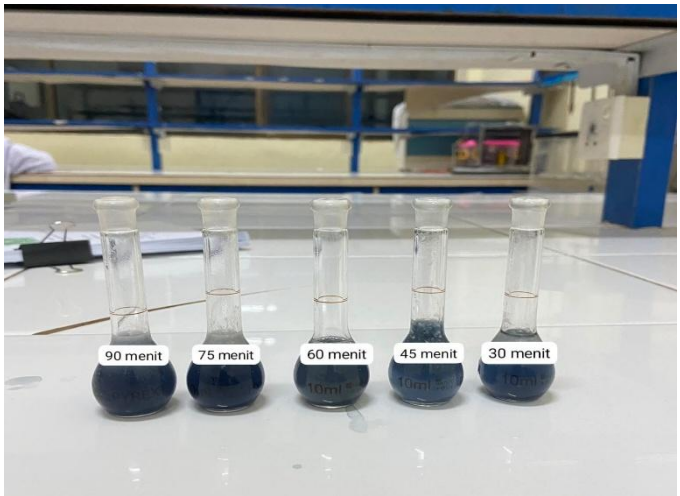
Larutan Na2C03 jenuh



Sampel ekstrak testa kelapa



Alat mikropipet



Uji larutan sampel untuk melihat senyawa fenolik

LAMPIRAN SURAT

Sertifikat alcohol 70%

PT. LIKUID PHARMALAB INDONESIA
Head Office : Kragilan, 03/09, Jetis, Baki, Sukoharjo, Central Java
liquidpharmalab.lpi@gmail.com
www.likuid.co.id ☎ 0811 2641 174

CERTIFICATE OF ANALYSIS

No : 024/QC-LKPI/XII/2025
Subject : MEDIKA Alkohol 70% 1 L
Manufacturing Site : PT. Likuid Pharmalab Indonesia
Country : Indonesia
Manufacturing Date : 02 December 2025
Expired Date : 02 November 2030
Batch No : 25001371
Date Report : 02 December 2025

This sample was analysed in our QC Analysed Laboratory and the following result were obtained.

NO.	PARAMETER	STANDARD	RESULT	CONCLUSION
1	**Organoleptic:** – Form – Color – Odor	 Liquid Clear, colorless Alcohol like	 Liquid Clear, colorless Alcohol like	Pass
2	Assay Methanol	Not detected	Not detected	Pass
3	Assay n-Propanol	Not detected	Not detected	Pass
4	Assay Ethyl Alcohol	70 – 75%	75%	Pass
5	Assay SDA IPA	5%	5%	Pass
6	**Microbiology Test:** – *Pseudomonas aeruginosa* – *Staphylococcus aureus* – *Escherichia coli*	 ≥ 5 log reduction ≥ 5 log reduction ≥ 5 log reduction	 > 5 log reduction > 5 log reduction > 5 log reduction	Pass

Store (Temperature) : Store at 20°C to 35°C

Approved by:
PT. LIKUID PHARMALAB INDONESIA
(apt. Oktaviana Nanda Pratiwi)
Quality Control Dept

Sertifikat etanol pa

Certificate of Analysis

1.00983.2500 Ethanol absolute for analysis EMSURE® ACS,ISO,Reag. Ph Eur
Batch I1239083

	Spec. Values		Batch Values	
Purity (GC)	≥ 99.9	%	99.9	%
Identity (IR)	conforms		conforms	
Appearance	conforms		conforms	
Color	≤ 10	Hazen	< 5	Hazen
Solubility in water	conforms		conforms	
Acidity or alkalinity	≤ 30	ppm	≤ 30	ppm
Titrable acid	≤ 0.0002	meq/g	0.0002	meq/g
Titrable base	≤ 0.0002	meq/g	< 0.0002	meq/g
Density (d 20 °C/20 °C)	0.790 - 0.793		0.791	
UV absorption	conforms		conforms	
Aldehydes (as Acetaldehyd)	≤ 0.001	%	≤ 0.001	%
Fusel oils	conforms		conforms	
Substances reducing potassium permanganate (as O)	≤ 0.0002	%	≤ 0.0002	%
Substances reducing permanganate (ACS)	conforms		conforms	
Carbonyl compounds (as CO)	≤ 0.003	%	≤ 0.003	%
Readily carbonizable substances	conforms		conforms	
Acetone, Isopropyl Alcohol (ACS)	conforms		conforms	
Acetone (GC)	≤ 0.001	%	< 0.001	%
Ethylmethylketone (GC)	≤ 0.02	%	< 0.01	%
Isoamyl alcohol (GC)	≤ 0.05	%	< 0.01	%
2-Propanol (GC)	≤ 0.01	%	< 0.01	%
Higher alcohols (GC)	≤ 0.01	%	< 0.01	%
Volatile impurities (GC) (Acetaldehyde and Acetal)	≤ 10	ppm	< 10	ppm
Volatile impurities (GC) (Benzene)	≤ 2	ppm	< 1	ppm
Volatile impurities (GC) (Methanol)	≤ 100	ppm	< 50	ppm
Volatile impurities (GC) (Total of other impurities)	≤ 300	ppm	< 100	ppm
Volatile impurities (GC) (disregard limit)	≤ 9	ppm	< 9	ppm
Chloride (Cl)	≤ 0.3	ppm	< 0.1	ppm
Nitrate (NO_3)	≤ 0.3	ppm	< 0.1	ppm
Phosphate (PO_4)	≤ 0.3	ppm	< 0.1	ppm
Sulfate (SO_4)	≤ 0.3	ppm	< 0.1	ppm
Ag (Silver)	≤ 0.000002	%	≤ 0.000002	%
Al (Aluminium)	≤ 0.00005	%	≤ 0.00005	%
As (Arsenic)	≤ 0.000002	%	≤ 0.000002	%
Au (Gold)	≤ 0.000002	%	≤ 0.000002	%
Ba (Barium)	≤ 0.00001	%	≤ 0.00001	%
Be (Beryllium)	≤ 0.000002	%	≤ 0.000002	%
Bi (Bismuth)	≤ 0.000002	%	≤ 0.000002	%
Ca (Calcium)	≤ 0.00005	%	≤ 0.00005	%

Merck KGaA
Corporation with General Partners
Frankfurter Straße 250
64293 Darmstadt, Germany

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

Sertifikat etanol pa

Certificate of Analysis

1.00983.2500 Ethanol absolute for analysis EMSURE® ACS,ISO,Reag. Ph Eur
Batch I1239083

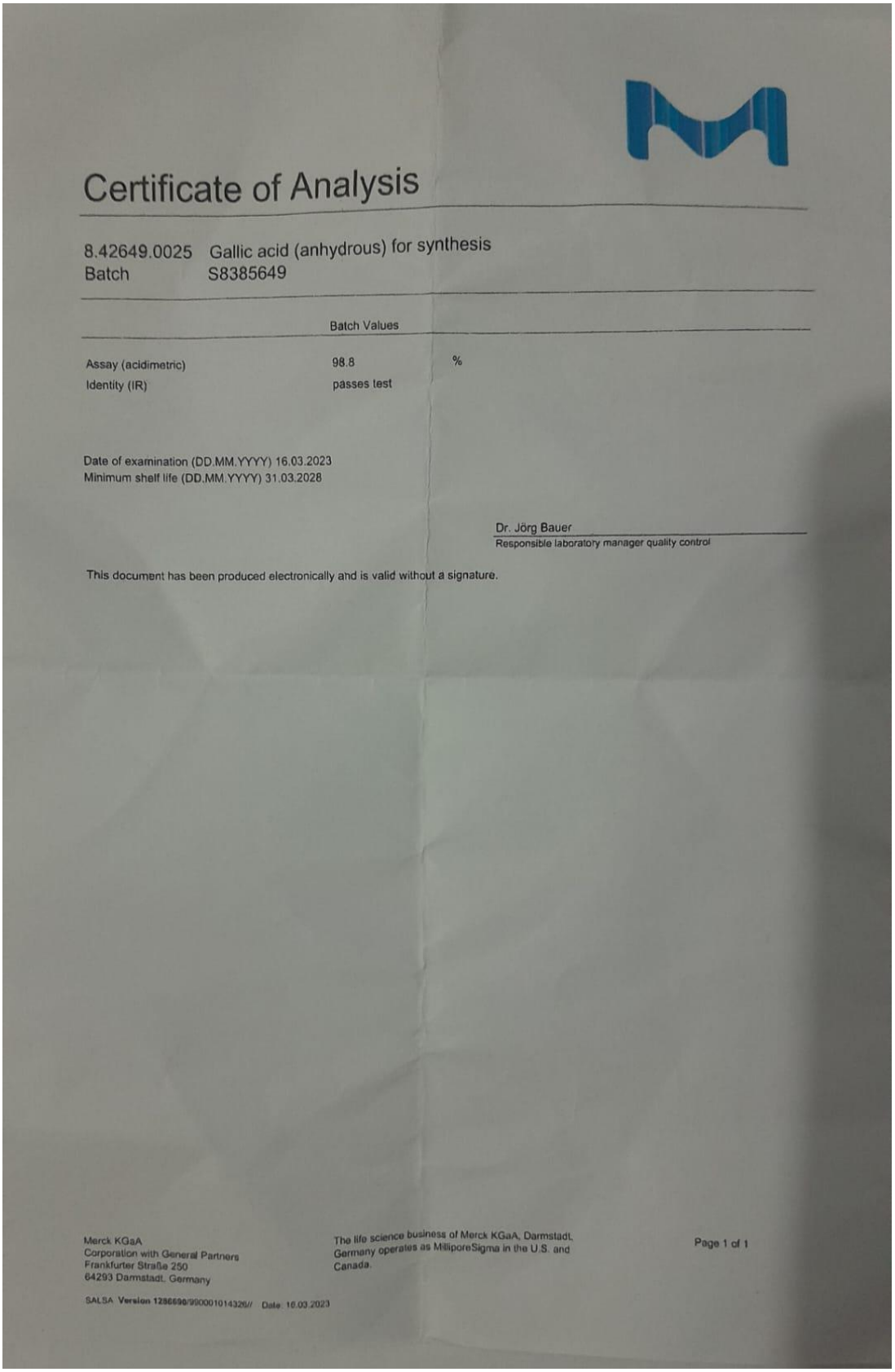
Cd (Cadmium)	≤ 0.000005	%	≤ 0.000005	%
Co (Cobalt)	≤ 0.000002	%	≤ 0.000002	%
Cr (Chromium)	≤ 0.000002	%	≤ 0.000002	%
Cu (Copper)	≤ 0.000002	%	≤ 0.000002	%
Fe (Iron)	≤ 0.00001	%	≤ 0.00001	%
Ga (Gallium)	≤ 0.000002	%	≤ 0.000002	%
In (Indium)	≤ 0.000002	%	≤ 0.000002	%
Li (Lithium)	≤ 0.000002	%	≤ 0.000002	%
Mg (Magnesium)	≤ 0.00001	%	≤ 0.00001	%
Mn (Manganese)	≤ 0.000002	%	≤ 0.000002	%
Mo (Molybdenum)	≤ 0.000002	%	≤ 0.000002	%
Ni (Nickel)	≤ 0.000002	%	≤ 0.000002	%
Pb (Lead)	≤ 0.00001	%	≤ 0.00001	%
Pt (Platinum)	≤ 0.000002	%	≤ 0.000002	%
Sb (Antimony)	≤ 0.000002	%	≤ 0.000002	%
Sn (Tin)	≤ 0.00001	%	≤ 0.00001	%
Ti (Titanium)	≤ 0.000002	%	≤ 0.000002	%
Tl (Thallium)	≤ 0.000002	%	≤ 0.000002	%
V (Vanadium)	≤ 0.000002	%	≤ 0.000002	%
Zn (Zinc)	≤ 0.00001	%	≤ 0.00001	%
Zr (Zirconium)	≤ 0.000002	%	≤ 0.000002	%
Evaporation residue	≤ 0.0005	%	0.0001	%
Water	≤ 0.1	%	< 0.1	%

Date of release (DD.MM.YYYY) 07.09.2022
Minimum shelf life (DD.MM.YYYY) 31.07.2027

Jeannette David
Responsible laboratory manager quality control

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Sertifikat asam galat



Certificate of Analysis

8.42649.0025 Gallic acid (anhydrous) for synthesis
Batch S8385649

	Batch Values	
Assay (acidimetric)	98.8	%
Identity (IR)	passes test	

Date of examination (DD.MM.YYYY) 16.03.2023
Minimum shelf life (DD.MM.YYYY) 31.03.2028

Dr. Jörg Bauer
Responsible laboratory manager quality control

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Merck KGaA
Corporation with General Partners
Frankfurter Straße 250
64293 Darmstadt, Germany

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Page 1 of 1

SALSA Version 1286690/999001014326// Date: 16.03.2023

Sertifikat plat klt

Certificate of Analysis

1.05554.0001 TLC Silica gel 60 F_{254} 25 Aluminium sheets 20 x 20 cm
Batch HX45818454

	Specifications		Batch values	
Specific surface area (according to BET; 5-Pt. measurement)	480 - 540	m^2/g	524	m^2/g
Pore volume (N_2-isotherm)	0.74 - 0.84	ml/g	0.77	ml/g
d 50 (laser diffraction, size distribution)	9.7 - 11.7	µm	10.1	µm
Layer thickness	175 - 225	µm	195	µm
Deviation of layer thickness per plate	≤ 30	µm	30	µm

	hRf-values	hRf-values
A) Colour test		
Bleu VIF Organol	11 - 25	22
Ceres black	34 - 48	44
Ceres violet BRN	52 - 67	59
Separation number	≥ 10.5	12.7

	hRf-values	hRf-values
B) Steroid test		
Hydrocortisone	25 - 37	27
Reichstein S	37 - 49	40
Methyltestosterone	42 - 54	45

Typical value determined on a conditioned sheet
Eluent A) Toluene (45% rel.humidity)
Eluent B) Ethyl acetate/Toluene (95/5 v/v; 20% rel.humidity)

Date of release (DD.MM.YYYY) 16.10.2024
Minimum shelf life (DD.MM.YYYY) 31.10.2034

Sharon Brilmayer
Responsible laboratory manager quality control

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Merck KGaA
Corporation with General Partners
Frankfurter Straße 250
64293 Darmstadt, Germany

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SALSA Version 1442068/990001144210/ Date: 16.10.2024

Sertifikat etil asetat

AIK MOH
A BRENNTAG GROUP COMPANY

PT. AIK MOH CHEMICALS INDONESIA
Kawasan Industri Modern, Industrial Block FG No. 8-9
Batam Centre, Indonesia
Tel : (+62) 778 7431280 / 7431290
Fax : (+62) 778 7431211
Email : contact_id@aikmoh.com.sg

Certificate Of Analysis

CAS : 141-78-6
Batch No. : 24022708
Date Of Manufacture : 27-Feb-2024
Date Of Expiry : 26-Feb-2026
Ref No. : AMICA/2402144/0326

Ethyl Acetate

Parameter	Specification	Result
ACIDITY (AS ACETIC ACID)	Max. 0.005 % WT	0.002 % WT
APPEARANCE	CLEAN, CLEAR & COLOURLESS	CLEAN, CLEAR & COLOURLESS
COLOUR	Max. 10 Hazen	5 Hazen
ODOUR	Characteristic	Characteristic
PURITY	Min. 99.5 %	99.96 %
SPECIFIC GRAVITY @ 20 °C	0.897 – 0.903	0.9023
WATER CONTENT	Max. 0.15 % WT	<0.015 % WT

REMARK : * Nonane Purity is given, Distillation Range may not be available & vice versa.



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Sertifikat n-hexane

AIK MOH
A BRENNTAG GROUP COMPANY

PT. AIK MOH CHEMICALS INDONESIA
Komplex Bintang Makmur Industri Block FG No. 8-9
Batam Centre, Indonesia
Tel: (+62) 778 7431208 / 7431209
Fax: (+62) 778 7431211
Email: contact_us@aikmoh.com.sg

Certificate Of Analysis

CAS :110-54-3
Batch No. :26017022
Date Of Manufacture :13-Jan-2026
Date Of Expiry :13-Jul-2027
Ref No. :AMCOA/093287/0126

Hexane

Properties	Specification	Result
APPEARANCE	Clear Colourless Liquid	Clear Colourless Liquid
AROMATICS CONTENT	Max. 20 WT PPM	<10 WT PPM
COLOUR (SAYBOLT)	Min. +30	+30
DISTILLATION RANGE @ 760MMHG - DP	Max. 75 °C	68 °C
DISTILLATION RANGE @ 760MMHG - IBP	Min. 60 °C	64.9 °C
N-HEXANE	Min. 40 WT%	52 WT%
SPECIFIC GRAVITY @ 15 °C	0.660 - 0.686	0.6717



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