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LAMPIRAN

Lampiran 1. Surat Izin Penelitian

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN,
RISET, DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN
FAKULTAS KEDOKTERAN
PROGRAM STUDI SARJANA KEDOKTERAN
Jl. Perintis Kemerdekaan Km. 10 Tamalanrea, Makassar 90245, Telp. (0411) 587436, Fax. (0411) 586297

Nomor : 2577/UN4.6.8/PT.01.04/2022 31 Januari 2022
Lamp : ---
Hal : Permohonan Izin Penelitian

Kepada Yth. :
Kepala Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu
Provinsi Sulawesi Selatan
Di
Tempat

Dengan hormat, disampaikan bahwa mahasiswa Program Studi Sarjana Kedokteran Fakultas Kedokteran Universitas Hasanuddin di bawah ini :

N a m a : Imam Adrian Rakhman
N i m : C011191014

bermaksud melakukan penelitian di Laboratorium Biokimia Fakultas Kedokteran dengan judul penelitian **"Pengaruh Asam Askorbat Terhadap Kristalisasi Kalsium Oksalat Secara In Vitro".**

Sehubungan hal tersebut kiranya yang bersangkutan dapat diberi izin untuk melakukan Penelitian dalam rangka penyelesaian studinya.

Demikian permohonan kami, atas bantuan dan kerjasamanya disampaikan terima kasih.

Ketua,
Program Studi Sarjana Kedokteran
Fakultas Kedokteran Unhas

Dr. dr. Sitti Rafiah,MSi
NIP 196805301997032001

Tembusan Yth :
1. Arsip

Lampiran 2. Surat Rekomendasi Etik

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN KESEHATAN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
Contact Person: dr. Agussalim Bukhari.,MMed,PhD, SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431

REKOMENDASI PERSETUJUAN ETIK

Nomor : 112/UN4.6.4.5.31/ PP36/ 2022

Tanggal: 10 Maret 2022

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH22020087	No Sponsor Protokol	
Peneliti Utama	**Imam Adrian Rakhman**	Sponsor	
Judul Peneliti	PENGARUH ASAM ASKORBAT TERHADAP KRISTALISASI KALSIUM OKSALAT SECARA IN VITRO		
No Versi Protokol	**1**	Tanggal Versi	**23 Pebruari 2022**
No Versi PSP		Tanggal Versi	
Tempat Penelitian	Laboratorium Biokimia Fakultas Kedokteran Universitas Hasanuddin Makassar		
Jenis Review	[X] Exempted [ ] Expedited [ ] Fullboard Tanggal	Masa Berlaku **10 Maret 2022** sampai **10 Maret 2023**	Frekuensi review lanjutan
Ketua KEPK FKUH RSUH dan RSWS	Nama **Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)**	Tanda tangan	
Sekretaris KEPK FKUH RSUH dan RSWS	Nama **dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)**	Tanda tangan	

Kewajiban Peneliti Utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Lapor SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan

Lampiran 3. Data Densitas Optik, Laju Nukleasi, Laju Agregasi, Waktu Maksimum, Suhuh awal, pH awal dan akhir.

Waktu	Kontrol Negatif			Kontrol Positif			Vitamin C		
	A1	A2	A3	A1	A2	A3	A1	A2	A3
0,000	0,918	0,885	0,889	0,065	0,069	0,070	0,276	0,427	0,288
1,000	1,133	1,055	1,121				0,555	0,520	0,508
2,000	1,147	1,062	1,132	0,067	0,070	0,074	0,568	0,530	0,522
3,000	1,145	1,061	1,130				0,573	0,534	0,520
4,000	1,139	1,056	1,125	0,069	0,073	0,077	0,573	0,536	0,520
5,000	1,135	1,052	1,121				0,570	0,533	0,518
6,000	1,131	1,049	1,115	0,072	0,076	0,081	0,567	0,530	0,518
7,000	1,124	1,045	1,109				0,566	0,527	0,522
8,000	1,119	1,041	1,106	0,075	0,080	0,084	0,565	0,524	0,518
9,000	1,116	1,038	1,103				0,563	0,521	0,515
10,000	1,110	1,035	1,097	0,077	0,083	0,087	0,559	0,518	0,515
11,000	1,104	1,030	1,092				0,555	0,517	0,512
12,000	1,100	1,028	1,089	0,079	0,085	0,089	0,554	0,514	0,510
13,000	1,094	1,025	1,084				0,552	0,509	0,506
14,000	1,087	1,019	1,077	0,082	0,087	0,090	0,550	0,506	0,504
15,000	1,082	1,015	1,072				0,549	0,505	0,505
16,000	1,078	1,011	1,069	0,084	0,089	0,092	0,547	0,502	0,501
17,000	1,071	1,006	1,061				0,540	0,496	0,495
18,000	1,065	1,000	1,052	0,086	0,090	0,094	0,535	0,489	0,490
19,000	1,059	0,994	1,048				0,529	0,478	0,477
20,000	1,053	0,991	1,039	0,089	0,093	0,097	0,521	0,467	0,465
21,000	1,047	0,985	1,029				0,517	0,456	0,455
22,000	1,042	0,977	1,021	0,093	0,098	0,088	0,503	0,442	0,440
23,000	1,036	0,971	1,016				0,491	0,425	0,425
24,000	1,029	0,966	1,004	0,081	0,075	0,088	0,479	0,408	0,410
25,000	1,022	0,958	0,994				0,467	0,393	0,394
26,000	1,015	0,952	0,983	0,065	0,056	0,072	0,453	0,379	0,379
27,000	1,010	0,945	0,968				0,439	0,361	0,364
28,000	1,001	0,935	0,955	0,058	0,043	0,066	0,426	0,346	0,349
29,000	0,986	0,923	0,941				0,412	0,333	0,336
30,000	0,971	0,912	0,921	0,051	0,041	0,059	0,399	0,319	0,323
31,000	0,951	0,904	0,897				0,385	0,306	0,311
32,000	0,930	0,892	0,871	0,045	0,037	0,056	0,374	0,293	0,298
33,000	0,908	0,877	0,848				0,361	0,282	0,286
34,000	0,885	0,859	0,826	0,039	0,033	0,053	0,350	0,272	0,273
35,000	0,857	0,841	0,797				0,340	0,261	0,263
36,000	0,834	0,819	0,773	0,033	0,029	0,050	0,329	0,250	0,253
37,000	0,809	0,800	0,746				0,318	0,239	0,243
38,000	0,785	0,776	0,721	0,027	0,025	0,047	0,308	0,230	0,235
39,000	0,760	0,754	0,694				0,298	0,220	0,227
40,000	0,737	0,733	0,673	0,021	0,021	0,044	0,289	0,212	0,219
ODMax	1,147	1,062	1,132	0,093	0,098	0,097	0,573	0,536	0,522
Tmax	2,000	2,000	2,000	22,000	22,000	20,000	4,000	4,000	7,000
SN*	114,500	88,500	121,500	1,238	1,281	1,286	61,2	23,2	0,02
SA*	9,700	7,800	11,400	3,467	2,875	2,530	8,7	10,3	10,7
pH Awal	6,2	6,3	5,6	5,6	5,4	5,3	3,6	3,6	3,5
pH Akhir	6,1	5,8	6,2	5,7	5,6	5,1	3,2	3,1	3,1
Suhu Awal							26	26	24

Lampiran 4. Profil Kuantitatif Parameter Kristalisasi Kalsium Oksalat

Parameter	KN	KP	Asam Askorbat
SN*	108,67±17,39	1,268±0,026	34,8±22,92
SA**	9,67±1,53	2,957±0,474	9,9±1,06

*Laju Nukleasi (x 10^{-3}/menit)

**Laju Agregasi (x 10^{-3}/menit)

Lampiran 5. Analisis Deskriptif Hasil Penelitian Menggunakan SPSS 26

Descriptives

	kategori			Statistic	Std. Error
Laju Nukleasi	Kontrol (-)	Mean		.10867	.010039
		95% Confidence Interval for Mean	Lower Bound	.06547	
			Upper Bound	.15186	
		5% Trimmed Mean		.	
		Median		.11500	
		Variance		.000	
		Std. Deviation		.017388	
		Minimum		.089	
		Maximum		.122	
		Range		.033	
		Interquartile Range		.	
		Skewness		-1.422	1.225
		Kurtosis		.	.
	Kontrol (+)	Mean		.00127	.000015
		95% Confidence Interval for Mean	Lower Bound	.00120	
			Upper Bound	.00133	
		5% Trimmed Mean		.	
		Median		.00128	
		Variance		.000	
		Std. Deviation		.000026	
		Minimum		.001	
		Maximum		.001	
		Range		.000	
		Interquartile Range		.	
		Skewness		-1.662	1.225
		Kurtosis		.	.
	Asam Askorbat	Mean		.03467	.013195
		95% Confidence Interval for Mean	Lower Bound	-.02211	

			Upper Bound	.09144	
		5% Trimmed Mean		.	
		Median		.02300	
		Variance		.001	
		Std. Deviation		.022855	
		Minimum		.020	
		Maximum		.061	
		Range		.041	
		Interquartile Range		.	
		Skewness		1.699	1.225
		Kurtosis		.	.
Laju Agregasi	Kontrol (-)	Mean		.00967	.000882
		95% Confidence Interval for Mean	Lower Bound	.00587	
			Upper Bound	.01346	
		5% Trimmed Mean		.	
		Median		.01000	
		Variance		.000	
		Std. Deviation		.001528	
		Minimum		.008	
		Maximum		.011	
		Range		.003	
		Interquartile Range		.	
		Skewness		-.935	1.225
		Kurtosis		.	.
	Kontrol (+)	Mean		.00296	.000274
		95% Confidence Interval for Mean	Lower Bound	.00178	
			Upper Bound	.00413	
		5% Trimmed Mean		.	
		Median		.00288	
		Variance		.000	
		Std. Deviation		.000474	
		Minimum		.003	
		Maximum		.003	
		Range		.001	

		Interquartile Range		.	
		Skewness		.758	1.225
		Kurtosis		.	.
	Asam Askorbat	Mean		.00990	.000493
		95% Confidence Interval for Mean	Lower Bound	.00778	
			Upper Bound	.01202	
		5% Trimmed Mean		.	
		Median		.01000	
		Variance		.000	
		Std. Deviation		.000854	
		Minimum		.009	
		Maximum		.011	
		Range		.002	
		Interquartile Range		.	
		Skewness		-.519	1.225
		Kurtosis		.	.

Lampiran 6. Uji Normalitas Hasil Penelitian Menggunakan *Shapiro-Wilk Test*

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	kategori	Statistic	df	Sig.	Statistic	df	Sig.
Laju Nukleasi	Kontrol (-)	.309	3	.	.900	3	.387
	Kontrol (+)	.351	3	.	.827	3	.181
	Asam Askorbat	.362	3	.	.805	3	.125
Laju Agregasi	Kontrol (-)	.253	3	.	.964	3	.637
	Kontrol (+)	.236	3	.	.977	3	.712
	Asam Askorbat	.213	3	.	.990	3	.806

a. Lilliefors Significance Correction

Lampiran 7. Uji Komparasi Hasil Penelitian Menggunakan *One-Way Anova* yang Diteruskan dengan *Dunnett's Multiple Comparison Test*

Control Category: First

One-Way Anova

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Laju Nukleasi	Between Groups	.018	2	.009	32.969	.001
	Within Groups	.002	6	.000		
	Total	.020	8			
Laju Agregasi	Between Groups	.000	2	.000	42.551	.000
	Within Groups	.000	6	.000		
	Total	.000	8			

Post Hoc Tests Dibandingkan dengan Kontrol Negatif

Multiple Comparisons

Dunnett t (2-sided)[a]

Dependent Variable	(I) kategori	(J) kategori	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Laju Nukleasi	Kontrol (+)	Kontrol (-)	-.107398*	.013537	.000	-.14615	-.06864
	Asam Askorbat	Kontrol (-)	-.074000*	.013537	.003	-.11275	-.03525
Laju Agregasi	Kontrol (+)	Kontrol (-)	-.006709*	.000855	.000	-.00916	-.00426
	Asam Askorbat	Kontrol (-)	.000233	.000855	.948	-.00221	.00268

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

a. Dunnett t-tests treat one group as a control, and compare all other groups against it.

Control Category: Last

Post Hoc Test Dibandingkan dengan Kontrol Positif

Multiple Comparisons

Dunnett t (2-sided)[a]

Dependent Variable	(I) kategori	(J) kategori	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Laju Nukleasi	Kontrol (-)	Asam Askorbat	.074000*	.013537	.003	.03525	.11275
	Kontrol (+)	Asam Askorbat	-.033398	.013537	.084	-.07215	.00536
Laju Agregasi	Kontrol (-)	Asam Askorbat	-.000233	.000855	.948	-.00268	.00221
	Kontrol (+)	Asam Askorbat	-.006943*	.000855	.000	-.00939	-.00450

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

a. Dunnett t-tests treat one group as a control, and compare all other groups against it.

Lampiran 8. Dokumentasi Penelitian 11 Maret – 22 April 2022

Gambar 8.1. Larutan yang digunakan dalam penelitian

Gambar 8.2. Spektrofotometer Genesys 150 UV VIS

Gambar 8.3. Tampilan hasil pengukuran salah satu kelompok perlakuan

Gambar 8.4. Tampilan salah satu hasil pengukuran kontrol negatif

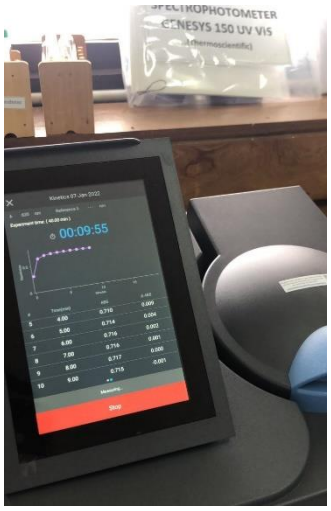
Gambar 8.5. Penimbangan Reagen

Gambar 8.6. Pengukuran Suhu Reagen

Gambar 8.6. Pengukuran pH Reagen dengan pH meter HANNA

Gambar 8.7. Pencampuran Larutan A dengan Variabel Independen di dalam tabung reaksi menggunakan vibrator

Gambar 8.8. Pengukuran Absorbansi Menggunakan Spektrofotometer



Gambar 8.9. Tampakan Proses Pengukuran Absorbansi Menggunakan Spektrofotometer

BIODATA PENELITI

Nama Lengkap	: Imam Adrian Rakhman
Jenis Kelamin	: Laki-laki
Program Studi	: Pendidikan Dokter
NIM	: C011181080
Tempat, Tanggal Lahir	: Makassar, 22 April 2001
Email	: aimam.22@yahoo.com
Agama	: Islam
Hobi	: Melukis
Alamat Sungguminasa	: BTN. Citra Mangalli Permai B2 No.27
Nomor HP	: 082293536810
Riwayat Pendidikan	: SDN Centre Mangalli
	SMP Negeri 6 Makassar
	SMA 2 Makassar

Semua data yang saya isikan dan tercantum dalam biodata ini adalah benar dan dapat dipertanggungjawabkan secara hukum. Demikian biodata ini saya buat dengan sebenarnya untuk dipergunakan sebagaimana mestinya

Makassar, 1 Februari 2022

Imam Adrian Rakhman
C011191014