

Lampiran 1. Hasil Determinasi



**KEMENTERIAN RISET TEKNOLOGI DAN PENDIDIKAN TINGGI
UNIVERSITAS LAMBUNG MANGKURAT
LABORATORIUM DASAR FMIPA**

Alamat: Jl. Jend. A. Yani Km. 35.8 Banjarbaru/Telp/Fax (0511) 4772826, website: www.labdasar-unlam.org

**SERTIFIKAT HASIL UJI
Nomor: 164c/LB.LABDASAR/XII/2018**

Nomor Referensi	: XI-18-005	Tanggal Masuk	: 12 November 2018
Nama	: Rizaldi Rahmatullah	Tanggal Selesai	: 7 Desember 2018
Institusi	: STF Bandung	Hasil Analisis	: Determinasi
No. Invoice	: 140/TS-11/2018	Jenis Tumbuhan	: Keratom/Sepat

HABITUS

Pohon Kratom dapat tumbuh pada lahan basah atau lembab, tanah subur, dengan media paparan sinar matahari penuh di daerah yang terlindung dari angin kencang, ketinggian normal mencapai 4–9 m dan lebar 5 m.

DAUN

Daun berwarna hijau gelap mengkilap, panjang lebih dari 18 cm dan lebar 10 cm dengan bentuk oval dan ujung meruncing.

BATANG

Batang tegak dan bercabang.

AKAR

Akar tunggang.

BUAH

-

BUNGA

Bunga berwarna kuning tua, berbentuk gugus bola melekat pada bagian atas daun pada batang panjang.

NAMA LOKAL

Purik (Karo), *Biak-biak* (Malaysia), dan *Ithang* (Thailand).





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KLASIFIKASI

Kingdom : Plantae
Subkingdom : Tracheobionta
Superdivisi : Spermatophyta
Divisi : Magnoliophyta
Kelas : Magnoliopsida
Subkelas : Asteridae
Ordo : Rubiales
Famili : Rubiaceae
Genus : *Mitragyna*
Spesies : *Mitragyna speciosa* Korth.



Banjarbaru, 11 Desember 2018
Manager Puncak,

Dr. Totok Wianto, S.Si., M.Si.
NIP.19780504 200312 1 004

Lampiran 2. Kode Etik Hewan



KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI
UNIVERSITAS PADJADJARAN
KOMISI ETIK PENELITIAN
RESEARCH ETHICS COMMITTEE

Jl. Prof. Eyckman No. 38 Bandung 40161
Telp. & Fax: 022-2038697 email: kepik.unpad@gmail.com website: kepik.unpad.ac.id

No. Reg.: 0219020257

PERSETUJUAN ETIK
ETHICAL APPROVAL

Nomor: /UN6.KEP/EC/2019

Komisi Etik Penelitian Universitas Padjadjaran Bandung, telah mengkaji dengan teliti proposal penelitian yang menggunakan subjek Hewan Coba dalam penelitian yang berjudul:

The Research Ethics Committee Universitas Padjadjaran Bandung, has been throughly reviewed proposal for reaserch with animal subjects in reaserach entitled:

"UJI AKTIVITAS ANTIDIARE EKSRAK ETANOL DAUN KRATOM (*MITRAGYNA SPECIOSA*) PADA MENCIT GALUR SWISS WEBSTER"

Nama Peneliti Utama : Rizaldi Rahmatullah
Principal Researcher

Pembimbing/Peneliti Lain : Ari Yuniarto, M.Si., Apt.
Supervisor/Other Researcher Aulia, M.Si.

Nama Institusi : Program Sarjana
Institution Program Studi Farmasi
Sekolah Tinggi Farmasi Bandung

proposal tersebut dapat disetujui pelaksanaannya.
hereby declare that the proposal is approved.



Ditetapkan di : Bandung
Issued in
Tanggal : 02-04-2019
Date

Ketua
Chairman

Dr. Melita Dhamayanti, dr., SpAK., M.Kes
NIP. 19630519 198712 2 001

Keterangan/notes:

Persetujuan etik ini berlaku selama satu tahun sejak tanggal ditetapkan.
This ethical clearance is effective for one year from the due date.

Pada akhir penelitian, laporan pelaksanaan penelitian harus diserahkan ke Komisi Etik Penelitian.

In the end of the research, progress and final summary report should be submitted to the Research Ethics Committee.

Jika ada perubahan atau penyimpangan protokol dan/atau perpanjangan penelitian, harus mengajukan kembali permohonan kajian etik penelitian.

If there be any protocol modification or deviation and/or extension of the study, the Principal Investigator is required to resubmit the protocol for approval.

Jika ada kejadian serius yang tidak diinginkan (KTD) harus segera dilaporkan ke Komisi Etik Penelitian.

If there are Serious Adverse Events (SAE) should be immediately reported to the Research Ethics Committee

Lampiran 3. Daun Kratom



Lampiran 4. Karakterisasi Simplisia Daun Sepat

Identifikasi	Gambar	Keterangan
Susut pengeringan		15,11 %
Kadar abu total		5 %
Kadar air		8%

Kadar sari larut air		10 %
Kadar sari larut etanol		16 %

Lampiran 5. Proses Ekstraksi



Lampiran 6. Skrining Fitokimia Daun Sepat

Identifikasi Golongan Senyawa	Gambar		Hasil
Alkaloid	 Simplisia	 Ekstrak	Simplisia : (+) Ekstrak : (+)
Flavonoid	 Simplisia	 Ekstrak	Simplisia : (+) Ekstrak : (+)

Kuinon	 Simplisia  Ekstrak	Simplisia : (+) Ekstrak : (+)
Tanin	 Simplisia  Ekstrak  Simplisia  Ekstrak	Simplisia : (+)Fenol Ekstrak : (+)Fenol

Saponin	Simplisia Ekstrak	Simplisia : (+) Ekstrak : (+)
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Lampiran 7. Uji proteksi oleum ricini



Lampiran 8. Uji transit intestinal



Lampiran 9. Hasil Statistik SPSS Uji Proteksi Oleum Ricini

Statistik SPSS Data frekuensi defekasi

Kelompok	30"	60"	90"	120"	150"	180"	210"	240"
Na CMC	6	2	1	3	5	3	4	0
Na CMC	4	4	3	1	4	3	1	2
Na CMC	1	2	2	7	2	3	2	1
Na CMC	1	4	1	3	5	3	4	1
Na CMC	5	2	4	4	2	2	0	0
Mean	3.4	2.8	2.2	3.6	3.6	2.8	2.2	0.8
St.Dev.	2.302	1.095	1.304	2.191	1.517	0.447	1.789	0.837
Loperamid	0	0	1	2	4	0	3	0
Loperamid	1	1	3	0	3	2	0	0
Loperamid	0	2	1	3	1	2	0	0
Loperamid	0	0	1	2	3	4	0	0
Loperamid	1	0	2	2	1	2	0	0
Mean	0.4	0.6	1.6	1.8	2.4	2	0.6	0
St.Dev.	0.548	0.894	0.894	1.095	1.342	1.414	1.342	0
Dosis 50 mg/kgbb	1	4	2	1	4	1	2	0
Dosis 50 mg/kgbb	0	2	3	1	2	1	3	2
Dosis 50 mg/kgbb	0	4	2	4	2	2	1	0
Dosis 50 mg/kgbb	3	2	1	2	3	3	0	0
Dosis 50 mg/kgbb	4	2	2	2	2	2	0	0
Mean	1.6	2.8	2	2	2.6	1.8	1.2	0.4
St.Dev.	1.817	1.095	0.707	1.225	0.894	0.837	1.304	0.894
Dosis 100 mg/kgbb	0	1	2	1	4	0	2	0
Dosis 100 mg/kgbb	0	3	3	3	2	1	1	0
Dosis 100 mg/kgbb	0	2	1	3	1	2	1	1
Dosis 100 mg/kgbb	0	0	2	2	2	4	1	0
Dosis 100 mg/kgbb	1	2	2	1	2	1	2	0
Mean	0.2	1.6	2	2	2.2	1.6	1.4	0.2
St.Dev.	0.447	1.14	0.707	1	1.095	1.517	0.548	0.447
Dosis 200 mg/kgbb	0	1	2	4	4	1	1	0
Dosis 200 mg/kgbb	0	2	2	0	3	0	1	1
Dosis 200 mg/kgbb	0	3	1	4	3	2	0	0
Dosis 200 mg/kgbb	0	3	1	2	3	2	1	0
Dosis 200 mg/kgbb	3	1	3	2	0	1	0	0
Mean	0.6	2	1.8	2.4	2.6	1.2	0.6	0.2
St.Dev.	1.342	1	0.837	1.673	1.517	0.837	0.548	0.447

Statistik ANOVA data frekuensi defekasi

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
30"	Between Groups	34.960	4	8.740	4.009	.015
	Within Groups	43.600	20	2.180		
	Total	78.560	24			
60"	Between Groups	16.960	4	4.240	3.855	.018
	Within Groups	22.000	20	1.100		
	Total	38.960	24			
90"	Between Groups	1.040	4	.260	.310	.868
	Within Groups	16.800	20	.840		
	Total	17.840	24			
120"	Between Groups	10.560	4	2.640	1.168	.355
	Within Groups	45.200	20	2.260		
	Total	55.760	24			
150"	Between Groups	5.840	4	1.460	.869	.500
	Within Groups	33.600	20	1.680		
	Total	39.440	24			
180"	Between Groups	7.040	4	1.760	1.492	.242
	Within Groups	23.600	20	1.180		
	Total	30.640	24			
210"	Between Groups	8.800	4	2.200	1.507	.238
	Within Groups	29.200	20	1.460		
	Total	38.000	24			
240"	Between Groups	1.840	4	.460	1.211	.337
	Within Groups	7.600	20	.380		
	Total	9.440	24			

Statistik SPSS Data Konsistensi Feses

Kelompok	30"	60"	90"	120"	150"	180"	210"	240"
Na CMC	4	2	2	4	3	3	3	0
Na CMC	4	3	3	4	4	3	1	1
Na CMC	2	2	3	4	2	4	1	1
Na CMC	2	4	2	3	4	3	2	1
Na CMC	4	2	3	4	3	4	0	0
Mean	3.2	2.6	2.6	3.8	3.2	3.4	1.4	0.6
St.Dev.	1.095	0.894	0.548	0.447	0.837	0.548	1.14	0.548
Loperamid	0	0	2	4	3	0	3	0
Loperamid	2	1	3	0	4	2	0	0
Loperamid	0	1	2	4	2	3	0	0
Loperamid	0	0	1	4	4	4	0	0
Loperamid	2	0	2	4	2	3	0	0
Mean	0.8	0.4	2	3.2	3	2.4	0.6	0
St.Dev.	1.095	0.548	0.707	1.789	1	1.517	1.342	0
Dosis 50 mg/kgbb	2	3	2	2	4	1	2	0
Dosis 50 mg/kgbb	0	3	3	1	2	1	4	1
Dosis 50 mg/kgbb	0	4	1	4	2	4	0	0
Dosis 50 mg/kgbb	3	2	2	2	4	3	0	0
Dosis 50 mg/kgbb	4	1	3	3	3	4	0	0
Mean	1.8	2.6	2.2	2.4	3	2.6	1.2	0.2
St.Dev.	1.789	1.14	0.837	1.14	1	1.517	1.789	0.447
Dosis 100 mg/kgbb	0	1	3	2	3	0	2	0
Dosis 100 mg/kgbb	0	2	3	4	2	2	2	0
Dosis 100 mg/kgbb	0	2	2	3	2	4	2	1
Dosis 100 mg/kgbb	0	0	1	4	4	4	2	0
Dosis 100 mg/kgbb	1	2	2	2	2	2	2	0
Mean	0.2	1.4	2.2	3	2.6	2.4	2	0.2
St.Dev.	0.447	0.894	0.837	1	0.894	1.673	0	0.447
Dosis 200 mg/kgbb	0	2	2	4	3	2	1	0
Dosis 200 mg/kgbb	0	2	4	0	4	0	2	1
Dosis 200 mg/kgbb	0	3	2	3	4	3	0	0
Dosis 200 mg/kgbb	0	3	2	2	4	2	2	0
Dosis 200 mg/kgbb	3	1	2	4	0	2	0	0
Mean	0.6	2.2	2.4	2.6	3	1.8	1	0.2
St.Dev.	1.342	0.837	0.894	1.673	1.732	1.095	1	0.447

Statistik ANOVA data konsistensi feses

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
30"	Between Groups	29.040	4	7.260	4.776	.007
	Within Groups	30.400	20	1.520		
	Total	59.440	24			
60"	Between Groups	17.760	4	4.440	5.692	.003
	Within Groups	15.600	20	.780		
	Total	33.360	24			
90"	Between Groups	1.040	4	.260	.433	.783
	Within Groups	12.000	20	.600		
	Total	13.040	24			
120"	Between Groups	6.000	4	1.500	.882	.492
	Within Groups	34.000	20	1.700		
	Total	40.000	24			
150"	Between Groups	.960	4	.240	.185	.944
	Within Groups	26.000	20	1.300		
	Total	26.960	24			
180"	Between Groups	6.640	4	1.660	.933	.465
	Within Groups	35.600	20	1.780		
	Total	42.240	24			
210"	Between Groups	5.360	4	1.340	.918	.473
	Within Groups	29.200	20	1.460		
	Total	34.560	24			
240"	Between Groups	.960	4	.240	1.333	.292
	Within Groups	3.600	20	.180		
	Total	4.560	24			

Statistik SPSS Data Bobot Feses

Kelompok	30 "	60 "	90 "	120 "	150 "	180 "	210 "	240 "
Na CMC	0.28	0.14	0.04	0.08	0.17	0.06	0.15	0
Na CMC	0.15	0.27	0.13	0.04	0.23	0.09	0.03	0.01
Na CMC	0.05	0.12	0.09	0.44	0.1	0.09	0.02	0.01
Na CMC	0.07	0.26	0.04	0.1	0.27	0.09	0.07	0.01
Na CMC	0.31	0.18	0.16	0.16	0.07	0.12	0	0
Mean	0.172	0.194	0.092	0.164	0.168	0.09	0.054	0.006
St.Dev.	0.119	0.068	0.054	0.16	0.084	0.021	0.059	0.005
Loperamid	0	0	0.04	0.08	0.2	0	0.12	0
Loperamid	0.04	0.02	0.15	0	0.16	0.06	0	0
Loperamid	0	0.08	0.03	0.16	0.04	0.05	0	0
Loperamid	0	0	0.04	0.13	0.09	0.12	0	0
Loperamid	0.03	0	0.09	0.12	0.03	0.07	0	0
Mean	0.014	0.02	0.07	0.098	0.104	0.06	0.024	0
St.Dev.	0.019	0.035	0.05	0.062	0.074	0.043	0.054	0
Dosis 50 mg/kgbb	0.06	0.23	0.08	0.05	0.14	0.02	0.03	0
Dosis 50 mg/kgbb	0	0.13	0.13	0.03	0.08	0.04	0.12	0.01
Dosis 50 mg/kgbb	0	0.23	0.01	0.24	0.14	0.07	0	0
Dosis 50 mg/kgbb	0.19	0.09	0.05	0.04	0.21	0.1	0	0
Dosis 50 mg/kgbb	0.32	0.06	0.05	0.05	0.09	0.1	0	0
Mean	0.114	0.148	0.064	0.082	0.132	0.066	0.03	0.002
St.Dev.	0.139	0.079	0.044	0.089	0.052	0.036	0.052	0.004
Dosis 100 mg/kgbb	0	0.03	0.12	0.04	0.17	0	0.12	0
Dosis 100 mg/kgbb	0	0.09	0.09	0.16	0.07	0.03	0.05	0
Dosis 100 mg/kgbb	0	0.1	0.05	0.17	0.03	0.07	0.04	0.01
Dosis 100 mg/kgbb	0	0	0.08	0.14	0.06	0.16	0.02	0
Dosis 100 mg/kgbb	0.01	0.02	0.11	0.12	0.11	0.02	0.08	0
Mean	0.002	0.048	0.09	0.126	0.088	0.056	0.062	0.002
St.Dev.	0.004	0.044	0.027	0.052	0.054	0.063	0.039	0.004
Dosis 200 mg/kgbb	0	0.04	0.1	0.11	0.09	0.05	0.06	0
Dosis 200 mg/kgbb	0	0.09	0.15	0	0.09	0	0.03	0.04
Dosis 200 mg/kgbb	0	0.15	0.07	0.1	0.08	0.06	0	0
Dosis 200 mg/kgbb	0	0.17	0.04	0.03	0.11	0.09	0.02	0
Dosis 200 mg/kgbb	0.18	0.04	0.07	0.12	0	0.03	0	0
Mean	0.036	0.098	0.086	0.072	0.074	0.046	0.022	0.008
St.Dev.	0.08	0.061	0.042	0.054	0.043	0.034	0.025	0.018

Statistik ANOVA data bobot feses

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
30°	Between Groups	.106	4	.027	3.294	.032
	Within Groups	.161	20	.008		
	Total	.267	24			
60°	Between Groups	.101	4	.025	7.129	.001
	Within Groups	.071	20	.004		
	Total	.172	24			
90°	Between Groups	.003	4	.001	.402	.805
	Within Groups	.040	20	.002		
	Total	.043	24			
120°	Between Groups	.028	4	.007	.805	.536
	Within Groups	.172	20	.009		
	Total	.199	24			
150°	Between Groups	.028	4	.007	1.748	.179
	Within Groups	.080	20	.004		
	Total	.108	24			
180°	Between Groups	.005	4	.001	.775	.555
	Within Groups	.035	20	.002		
	Total	.040	24			
210°	Between Groups	.007	4	.002	.748	.571
	Within Groups	.045	20	.002		
	Total	.052	24			
240°	Between Groups	.000	4	.000	.692	.606
	Within Groups	.002	20	.000		
	Total	.002	24			

Lampiran 10. Hasil Statistik SPSS Uji Transit Intestinal

Test of Homogeneity of Variances

% Marker tinta cina

Levene Statistic	df1	df2	Sig.
1.352	4	20	.286

ANOVA

% Marker tinta cina

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7324.132	4	1831.033	14.305	.000
Within Groups	2559.994	20	128.000		
Total	9884.127	24			

Multiple Comparisons

% Marker tinta cina
LSD

		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
(I) Kelompok	(J) Kelompok				Lower Bound	Upper Bound
CMCNa	Loperamid	42.65537 [*]	7.15541	.000	27.7294	57.5813
	Ekstrak 50mg	8.64920	7.15541	.241	-6.2767	23.5751
	Ekstrak 100mg	30.47746 [*]	7.15541	.000	15.5515	45.4034
	Ekstrak 200mg	40.24882 [*]	7.15541	.000	25.3229	55.1747
Loperamid	CMCNa	-42.65537 [*]	7.15541	.000	-57.5813	-27.7294
	Ekstrak 50mg	-34.00616 [*]	7.15541	.000	-48.9321	-19.0802
	Ekstrak 100mg	-12.17790	7.15541	.104	-27.1038	2.7480
	Ekstrak 200mg	-2.40655	7.15541	.740	-17.3325	12.5194
Ekstrak 50mg	CMCNa	-8.64920	7.15541	.241	-23.5751	6.2767
	Loperamid	34.00616 [*]	7.15541	.000	19.0802	48.9321
	Ekstrak 100mg	21.82826 [*]	7.15541	.006	6.9023	36.7542
	Ekstrak 200mg	31.59962 [*]	7.15541	.000	16.6737	46.5255
Ekstrak 100mg	CMCNa	-30.47746 [*]	7.15541	.000	-45.4034	-15.5515
	Loperamid	12.17790	7.15541	.104	-2.7480	27.1038
	Ekstrak 50mg	-21.82826 [*]	7.15541	.006	-36.7542	-6.9023
	Ekstrak 200mg	9.77136	7.15541	.187	-5.1546	24.6973
Ekstrak 200mg	CMCNa	-40.24882 [*]	7.15541	.000	-55.1747	-25.3229
	Loperamid	2.40655	7.15541	.740	-12.5194	17.3325
	Ekstrak 50mg	-31.59962 [*]	7.15541	.000	-46.5255	-16.6737
	Ekstrak 100mg	-9.77136	7.15541	.187	-24.6973	5.1546

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

Perlakuan	Panjang usus (cm)	Lintasan marker (cm)	Persen lintasan (%)	Mean ± SD
Kontrol	60	57	95,00	78,37 ± 14,59
	47	43	91,49	
	45	27	60,00	
	49	36	73,47	
	57	41	71,93	
Pembanding	47	19,5	41,49	35,72 ± 8,14*
	50,5	17	33,66	
	41	17	41,46	
	47	19	22,34	
	58	23	39,66	
Dosis 50mg	51	45	88,24	69,72 ± 13,37
	47,5	25,7	54,11	
	47	29	61,70	
	58	39	67,24	
	53	41	77,36	
Dosis 100mg	42	22	52,38	47,90 ± 6,64*
	55	20,5	37,27	
	58	29,5	50,86	
	46	21	45,65	
	45	24	53,33	
Dosis 200mg	49	18	36,73	38,12 ± 11,74*
	57	11,5	21,05	
	60	29	48,33	
	42,3	14,5	34,52	
	48	24	50,00	