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LAMPIRAN

Lampiran I. *Ethical Clearance*

UNIVERSITAS GADJAH MADA
LABORATORIUM PENELITIAN DAN PENGUJIAN TERPADU
KOMISI ETIK PENELITIAN PRAKLINIK
Jl. Kaliurang Km. 4 Sekip Utara Yogyakarta 55281 Telp. (0274) 548348, 546868 WA. 0811274565
Email. lppt_info@mail.ugm.ac.id Website. https://lppt.ugm.ac.id

KETERANGAN KELAIKAN ETIK

(*Ethical Clearance*)

No. : 00058/XII/UN1/LPPT/EC/2025

Komisi *Ethical Clearance* untuk penelitian praklinik Laboratorium Penelitian dan Pengujian Terpadu, Universitas Gadjah Mada, Yogyakarta, setelah mempelajari dengan seksama rancangan penelitian yang diusulkan, dengan ini menyatakan penelitian:

Judul Penelitian	:	Uji Toksisitas Akut Dermal pada Hidrogel Nano Ekstrak P. major L. dengan Model Uji Tikus Sprague Dawley Betina
Peneliti Utama	:	Prof. Dr.rer.nat. apt. Triana Hertiani, S.Si., M.Si.
Peneliti Anggota	:	1. Drh. Retno Murwanti, M.P., Ph.D. 2. Cindy Tangdilintin
Asal	:	Fakultas Farmasi UGM
Lokasi Penelitian	:	Laboratorium Farmakologi dan Toksikologi Farmasi UGM

Telah dinyatakan memenuhi persyaratan etik untuk penelitian pada hewan coba. Komisi *Ethical Clearance* mempunyai hak untuk melakukan pemantauan selama penelitian berlangsung. Apabila terjadi perubahan dalam hal jenis dan jumlah hewan coba serta metode perlakuan terhadap hewan coba, peneliti wajib mengajukan permohonan amandemen kepada Komisi *Ethical Clearance*.

Yogyakarta, 10 Desember 2025
Komisi Ethical Clearance
Ketua,

ditandatangani secara elektronik

Prof. Dr. drh. Siti Isrina Oktavia Salasia

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Lampiran II. Data *sheets* pengamatan uji pendahuluan dan uji utama



day 1 — BB: 200 | 200 | 208 | 216

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 2

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 3

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 4

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 5

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 6

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 7 — BB: 219.5 | 227 | 223 | 234

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 8

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 9 — garuk garuk

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-



day 1 — BB: 200 | 200 | 208 | 216

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 2

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 3

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 4

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 5

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 6

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 7 — BB: 219.5 | 227 | 223 | 234

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 8

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-

day 9 — garuk garuk

No.	Pengamatan	Dosis (mg/kgBB) 50mg	200mg	10000mg	2000mg
1	Eritema	-	-	-	-
2	Edema	-	-	-	-
3	Piloereksi bulu	-	-	-	-
4	Lakrimasi mata	-	-	-	-
5	Hipersalivasi	-	-	-	-
6	Kejang	-	-	-	-
7	Diare	-	-	-	-
8	Kematian	-	-	-	-



day 1 — BB: 213 | 208.5 | 251 | 233 | 203 | 210

No.	Pengamatan	Perlakuan Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

day 2

No.	Pengamatan	Perlakuan Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

day 3

No.	Pengamatan	Perlakuan Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

day 4

No.	Pengamatan	Perlakuan Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

day 5 — tumbuh bulu

No.	Pengamatan	Perlakuan Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

day 6

No.	Pengamatan	Perlakuan Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

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day 7

		BB	220.5	222	261	245.5	220	227
No.	Pengamatan	Perlakuan						
		Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3	
1	Eritema	-	-	-	-	-	-	
2	Edema	-	-	-	-	-	-	
3	Piloereksi bulu	-	-	-	-	-	-	
4	Lakrimasi mata	-	-	-	-	-	-	
5	Hipersalivasi	-	-	-	-	-	-	
6	Kejang	-	-	-	-	-	-	
7	Diare	-	-	-	-	-	-	
8	Kematian	-	-	-	-	-	-	

day 8

No.	Pengamatan	Perlakuan					
		Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

day 9

No.	Pengamatan	Perlakuan					
		Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

day 10

No.	Pengamatan	Perlakuan					
		Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

day 11

No.	Pengamatan	Perlakuan					
		Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

day 12

No.	Pengamatan	Perlakuan					
		Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

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day 13

No.	Pengamatan	Perlakuan					
		Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

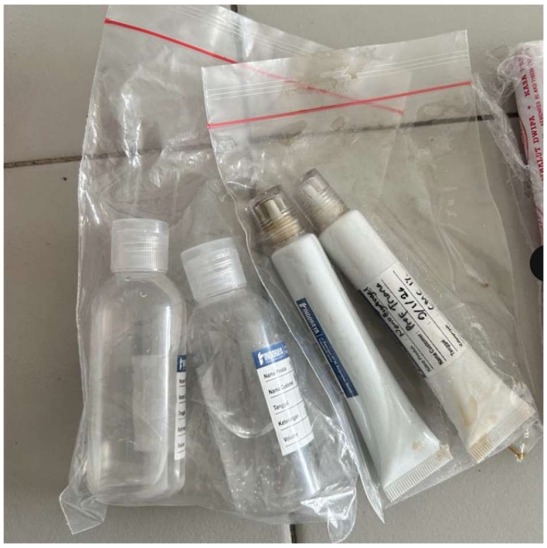
day 14

	BB	224	232	269.5	254	226	234
No.	Pengamatan	Perlakuan					
		Kontrol 1	Kontrol 2	Kontrol 3	Perlakuan 1	Perlakuan 2	Perlakuan 3
1	Eritema	-	-	-	-	-	-
2	Edema	-	-	-	-	-	-
3	Piloereksi bulu	-	-	-	-	-	-
4	Lakrimasi mata	-	-	-	-	-	-
5	Hipersalivasi	-	-	-	-	-	-
6	Kejang	-	-	-	-	-	-
7	Diare	-	-	-	-	-	-
8	Kematian	-	-	-	-	-	-

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Lampiran III. Foto sediaan nanohidrogel ekstrak daun sendok dan basisnya



Lampiran IV. Hasil Uji Normalitas BB

Explore

[DataSet0]

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
BB_H0	4	100.0%	0	0.0%	4	100.0%
BB_H7	4	100.0%	0	0.0%	4	100.0%
BB_H14	4	100.0%	0	0.0%	4	100.0%

Descriptives

			Statistic	Std. Error
BB_H0	Mean		206.0000	3.82971
	95% Confidence Interval for Mean	Lower Bound	193.8122	
		Upper Bound	218.1878	
	5% Trimmed Mean		205.7778	
	Median		204.0000	
	Variance		58.667	
	Std. Deviation		7.65942	
	Minimum		200.00	
	Maximum		216.00	
	Range		16.00	
	Interquartile Range		14.00	
	Skewness		.855	1.014
	Kurtosis		-1.289	2.619
BB_H7	Mean		225.8750	3.11164
	95% Confidence Interval for Mean	Lower Bound	215.9724	
		Upper Bound	235.7776	
	5% Trimmed Mean		225.7778	
	Median		225.0000	
	Variance		38.729	
	Std. Deviation		6.22328	
	Minimum		219.50	
	Maximum		234.00	
	Range		14.50	
	Interquartile Range		11.88	
	Skewness		.705	1.014
	Kurtosis		.011	2.619
BB_H14	Mean		242.2500	5.13363

Page 1

Explore

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
BB_H0	5	100.0%	0	0.0%	5	100.0%
BB_H7	5	100.0%	0	0.0%	5	100.0%
BB_H14	5	100.0%	0	0.0%	5	100.0%

Descriptives

			Statistic	Std. Error
BB_H0	Mean		213.5000	5.13809
	95% Confidence Interval for Mean	Lower Bound	199.2344	
		Upper Bound	227.7656	
	5% Trimmed Mean		213.0000	
	Median		210.0000	
	Variance		132.000	
	Std. Deviation		11.48913	
	Minimum		203.00	
	Maximum		233.00	
	Range		30.00	
	Interquartile Range		17.25	
	Skewness		1.673	.913
	Kurtosis		3.301	2.000
BB_H7	Mean		227.0000	4.78801
	95% Confidence Interval for Mean	Lower Bound	213.7064	
		Upper Bound	240.2936	
	5% Trimmed Mean		226.3611	
	Median		222.0000	
	Variance		114.625	
	Std. Deviation		10.70631	
	Minimum		220.00	
	Maximum		245.50	
	Range		25.50	
	Interquartile Range		16.00	
	Skewness		1.896	.913
	Kurtosis		3.602	2.000
BB_H14	Mean		234.0000	5.32917
	95% Confidence Interval for Mean	Lower Bound	219.2039	
		Upper Bound	248.7961	

Page 1

Descriptives

			Statistic	Std. Error
	95% Confidence Interval for Mean	Lower Bound	225.9125	
		Upper Bound	258.5875	
	5% Trimmed Mean		241.7778	
	Median		238.0000	
	Variance		105.417	
	Std. Deviation		10.26726	
	Minimum		235.50	
	Maximum		257.50	
	Range		22.00	
	Interquartile Range		17.00	
	Skewness		1.885	1.014
	Kurtosis		3.607	2.619

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
BB_H0	.283	4	.	.863	4	.272
BB_H7	.178	4	.	.973	4	.858
BB_H14	.374	4	.	.755	4	.043

a. Lilliefors Significance Correction

Descriptives

		Statistic	Std. Error
	5% Trimmed Mean	233.4444	
	Median	232.0000	
	Variance	142.000	
	Std. Deviation	11.91638	
	Minimum	224.00	
	Maximum	254.00	
	Range	30.00	
	Interquartile Range	19.00	
	Skewness	1.596	.913
	Kurtosis	2.793	2.000

Tests of Normality

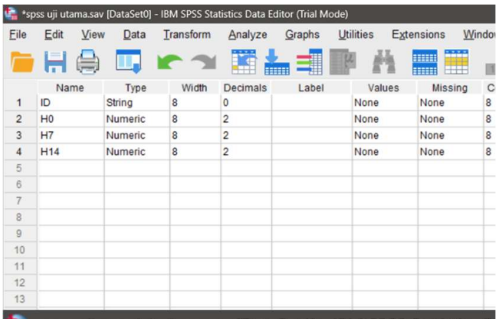
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
BB_H0	.317	5	.111	.837	5	.157
BB_H7	.300	5	.161	.748	5	.028
BB_H14	.300	5	.161	.842	5	.171

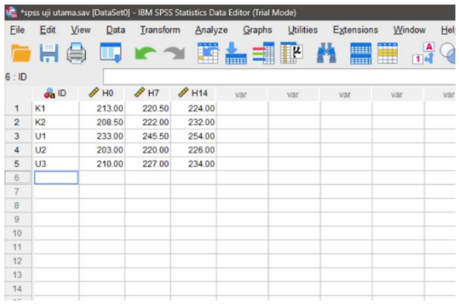
a. Lilliefors Significance Correction

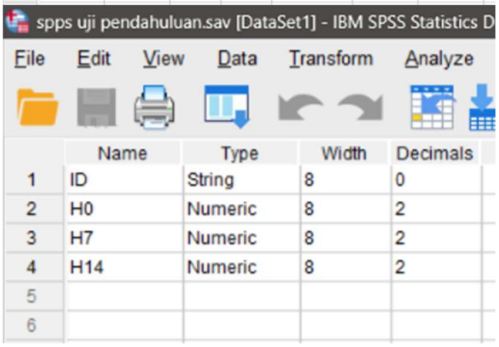
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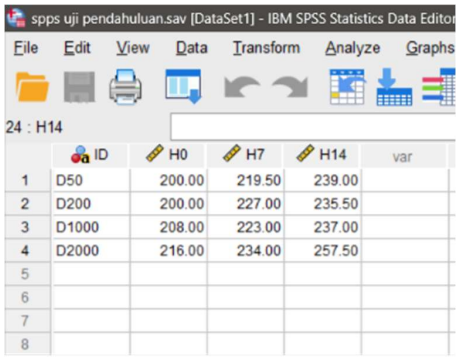
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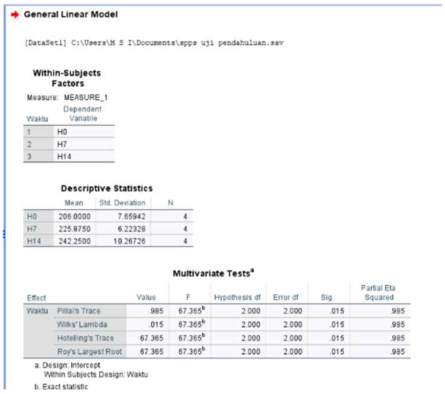
Lampiran V. Data dan hasil *Repeated Measures* ANOVA berat badan

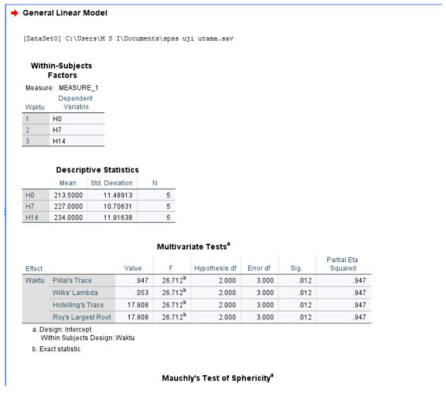












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Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b] Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Waktu	.903	.203	2	.903	.912	1.000	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept
Within Subjects Design: Waktu

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Waktu	Sphericity Assumed	2636.292	2	1318.146	80.532	< .001	.964
	Greenhouse-Geisser	2636.292	1.824	1445.589	80.532	< .001	.964
	Huynh-Feldt	2636.292	2.000	1318.146	80.532	< .001	.964
	Lower-bound	2636.292	1.000	2636.292	80.532	.003	.964
Error(Waktu)	Sphericity Assumed	98.208	6	16.368			
	Greenhouse-Geisser	98.208	5.471	17.951			
	Huynh-Feldt	98.208	6.000	16.368			
	Lower-bound	98.208	3.000	32.736			

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Waktu	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Waktu	Linear	2628.125	1	2628.125	178.683	< .001	.983
	Quadratic	8.167	1	8.167	.453	.549	.131
Error(Waktu)	Linear	44.125	3	14.708			
	Quadratic	54.083	3	18.028			

Tests of Between-Subjects Effects

Measure: MEASURE_1
Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	605926.021	1	605926.021	3562.670	< .001	.999
Error	510.229	3	170.076			

Estimated Marginal Means

Waktu

Estimates

Measure: MEASURE_1

Waktu	Mean	Std. Error	95% Confidence Interval Lower Bound	Upper Bound
1	206.000	3.830	193.812	218.188
2	225.875	3.112	215.972	235.778
3	242.250	5.134	225.912	258.588

Pairwise Comparisons

Measure: MEASURE_1

(I) Waktu	(J) Waktu	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	Upper Bound
1	2	-19.875*	2.553	.013	-32.272	-7.478
	3	-36.250*	2.712	.003	-49.421	-23.079
2	1	19.875*	2.553	.013	7.478	32.272
	3	-16.375*	3.268	.046	-32.248	-.502
3	1	36.250*	2.712	.003	23.079	49.421
	2	16.375*	3.268	.046	.502	32.248

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.985	67.365[a]	2.000	2.000	.015	.985
Wilks' lambda	.015	67.365[a]	2.000	2.000	.015	.985
Hotelling's trace	67.365	67.365[a]	2.000	2.000	.015	.985
Roy's largest root	67.365	67.365[a]	2.000	2.000	.015	.985

Each F tests the multivariate effect of Waktu. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b] Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Waktu	.361	3.060	2	.217	.610	.737	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept
Within Subjects Design: Waktu

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Waktu	Sphericity Assumed	1085.833	2	542.917	63.873	< .001	.941
	Greenhouse-Geisser	1085.833	1.220	890.028	63.873	< .001	.941
	Huynh-Feldt	1085.833	1.475	736.249	63.873	< .001	.941
	Lower-bound	1085.833	1.000	1085.833	63.873	.001	.941
Error(Waktu)	Sphericity Assumed	68.000	8	8.500			
	Greenhouse-Geisser	68.000	4.880	13.934			
	Huynh-Feldt	68.000	5.899	11.527			
	Lower-bound	68.000	4.000	17.000			

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Waktu	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Waktu	Linear	1050.625	1	1050.625	71.229	.001	.947
	Quadratic	35.208	1	35.208	15.648	.017	.796
Error(Waktu)	Linear	59.000	4	14.750			
	Quadratic	9.000	4	2.250			

Tests of Between-Subjects Effects

Measure: MEASURE_1
Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	758250.417	1	758250.417	2040.364	<.001	.998
Error	1486.500	4	371.625			

Estimated Marginal Means

Waktu

Estimates

Measure: MEASURE_1

Waktu	Mean	Std. Error	95% Confidence Interval Lower Bound	Upper Bound
1	213.500	5.138	199.234	227.766
2	227.000	4.788	213.706	240.294
3	234.000	5.329	219.204	248.796

Pairwise Comparisons

Measure: MEASURE_1

(I) Waktu	(J) Waktu	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	Upper Bound
1	2	-13.500*	1.754	.005	-20.446	-6.554
	3	-20.500*	2.429	.003	-30.121	-10.879
2	1	13.500*	1.754	.005	6.554	20.446
	3	-7.000*	1.107	.010	-11.384	-2.616
3	1	20.500*	2.429	.003	10.879	30.121
	2	7.000*	1.107	.010	2.616	11.384

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.947	26.712[a]	2.000	3.000	.012	.947
Wilks' lambda	.053	26.712[a]	2.000	3.000	.012	.947
Hotelling's trace	17.808	26.712[a]	2.000	3.000	.012	.947
Roy's largest root	17.808	26.712[a]	2.000	3.000	.012	.947

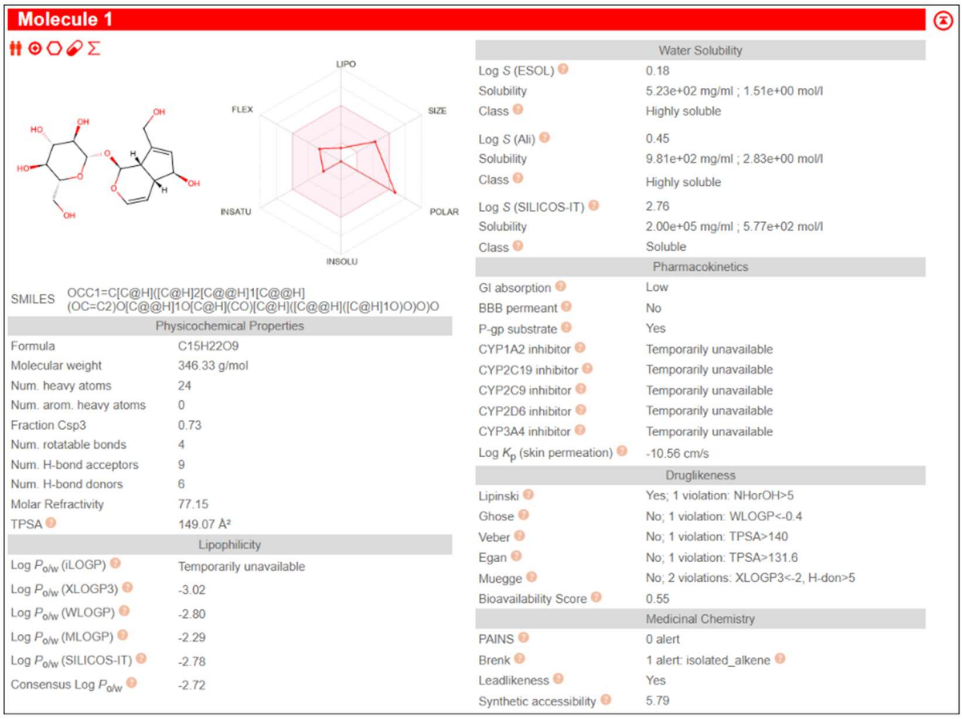
Each F tests the multivariate effect of Waktu. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

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Lampiran VI. SwissADME



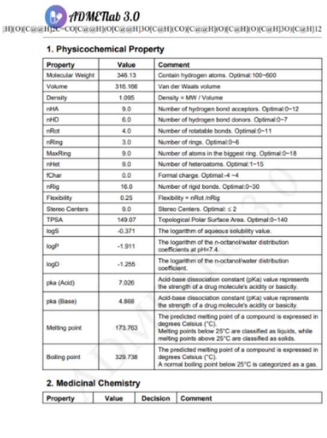
Molecule 1

SMILES OCC1=C[C@H]([C@H]2[C@@H]1[C@@H](OC=C2)O[C@@H]1O[C@H](CO)[C@H]([C@@H]([C@H]1O)O)O)O

Physicochemical Properties	
Formula	C15H22O9
Molecular weight	346.33 g/mol
Num. heavy atoms	24
Num. arom. heavy atoms	0
Fraction Csp3	0.73
Num. rotatable bonds	4
Num. H-bond acceptors	9
Num. H-bond donors	6
Molar Refractivity	77.15
TPSA	149.07 Å²
Lipophilicity	
Log $P_{o/w}$ (iLOGP)	Temporarily unavailable
Log $P_{o/w}$ (XLOGP3)	-3.02
Log $P_{o/w}$ (WLOGP)	-2.80
Log $P_{o/w}$ (MLOGP)	-2.29
Log $P_{o/w}$ (SILICOS-IT)	-2.78
Consensus Log $P_{o/w}$	-2.72

Water Solubility	
Log *S* (ESOL)	0.18
Solubility	5.23e+02 mg/ml ; 1.51e+00 mol/l
Class	Highly soluble
Log *S* (Ali)	0.45
Solubility	9.81e+02 mg/ml ; 2.83e+00 mol/l
Class	Highly soluble
Log *S* (SILICOS-IT)	2.76
Solubility	2.00e+05 mg/ml ; 5.77e+02 mol/l
Class	Soluble
Pharmacokinetics	
GI absorption	Low
BBB permeant	No
P-gp substrate	Yes
CYP1A2 inhibitor	Temporarily unavailable
CYP2C19 inhibitor	Temporarily unavailable
CYP2C9 inhibitor	Temporarily unavailable
CYP2D6 inhibitor	Temporarily unavailable
CYP3A4 inhibitor	Temporarily unavailable
Log K_p (skin permeation)	-10.56 cm/s
Druglikeness	
Lipinski	Yes; 1 violation: NHorOH>5
Ghose	No; 1 violation: WLOGP<-0.4
Veber	No; 1 violation: TPSA>140
Egan	No; 1 violation: TPSA>131.6
Muegge	No; 2 violations: XLOGP3<-2, H-don>5
Bioavailability Score	0.55
Medicinal Chemistry	
PAINS	0 alert
Brenk	1 alert: isolated_alkene
Leadlikeness	Yes
Synthetic accessibility	5.79

Lampiran VII. ADMETlab



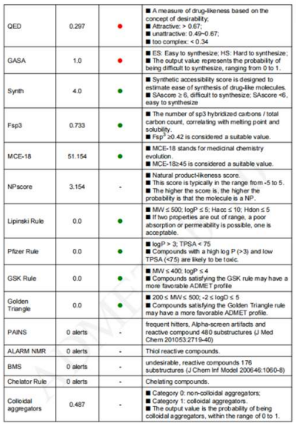
ADMETlab 3.0

1. Physicochemical Property

Property	Value	Comment
Molecular Weight	346.13	Contain hydrogen atoms. Optimal:100~600
Volume	316.166	Van der Waals volume
Density	1.095	Density = MW / Volume
nHA	9.0	Number of hydrogen bond acceptors. Optimal:0~12
nHD	6.0	Number of hydrogen bond donors. Optimal:0~7
nRot	4.0	Number of rotatable bonds. Optimal:0~11
nRing	3.0	Number of rings. Optimal:0~6
MaxRing	9.0	Number of atoms in the biggest ring. Optimal:0~18
nHet	9.0	Number of heteroatoms. Optimal:1~15
fChar	0.0	Formal charge. Optimal:-4 ~4
nRig	16.0	Number of rigid bonds. Optimal:0~30
Flexibility	0.25	Flexibility = nRot /nRig
Stereo Centers	9.0	Stereo Centers. Optimal: ≤ 2
TPSA	149.07	Topological Polar Surface Area. Optimal:0~140
logS	-0.371	The logarithm of aqueous solubility value.
logP	-1.911	The logarithm of the n-octanol/water distribution coefficients at pH=7.4.
logD	-1.255	The logarithm of the n-octanol/water distribution coefficient.
pka (Acid)	7.026	Acid-base dissociation constant (pKa) value represents the strength of a drug molecule's acidity or basicity.
pka (Base)	4.868	Acid-base dissociation constant (pKa) value represents the strength of a drug molecule's acidity or basicity.
Melting point	173.763	The predicted melting point of a compound is expressed in degrees Celsius (°C). Melting points below 25°C are classified as liquids, while melting points above 25°C are classified as solids.
Boiling point	329.736	The predicted melting point of a compound is expressed in degrees Celsius (°C). A normal boiling point below 25°C is categorized as a gas.

2. Medicinal Chemistry

Property	Value	Decision	Comment



QED	0.297	•	■ A measure of drug-likeness based on the concept of desirability. ■ Attractive: > 0.67; ■ unattractive: 0.49~0.67; ■ too complex: < 0.34.
GASA	1.0	•	■ ES: Easy to synthesize; HS: Hard to synthesize; ■ The output value represents the probability of being difficult to synthesize, ranging from 0 to 1.
Synth	4.0	•	■ Synthetic accessibility score is designed to estimate ease of synthesis of drug-like molecules. ■ SAscore ≥ 6, difficult to synthesize; SAscore <6, easy to synthesize.
Fsp3	0.733	•	■ The number of sp3 hybridized carbons / total carbon count, correlating with melting point and solubility. ■ $Fsp^3 \geq 0.42$ is considered a suitable value.
MCE-18	51.154	•	■ MCE-18 stands for medicinal chemistry evolution. ■ MCE-18≥45 is considered a suitable value.
NPscore	3.154	-	■ Natural product-likeness score. ■ This score is typically in the range from -5 to 5. ■ The higher the score is, the higher the probability is that the molecule is a NP.
Lipinski Rule	0.0	•	■ MW ≤ 500, logP ≤ 5; Hacc ≤ 10; Hdon ≤ 5 ■ If two properties are out of range, a poor absorption or permeability is possible, one is acceptable.
Pfizer Rule	0.0	•	■ logP > 3; TPSA < 75 ■ Compounds with a high log P (>3) and low TPSA (<75) are likely to be toxic.
GSK Rule	0.0	•	■ MW ≤ 400; logP ≤ 4 ■ Compounds satisfying the GSK rule may have a more favorable ADMET profile
Golden Triangle	0.0	•	■ 200 ≤ MW ≤ 500, -2 ≤ logD ≤ 5 ■ Compounds satisfying the Golden Triangle rule may have a more favorable ADMET profile.
PAINS	0 alerts	-	frequent hitters, Alpha-screen artifacts and reactive compound 480 substructures (J Med Chem 2010;53:2719-40)
ALARM NMR	0 alerts	-	Thiol reactive compounds.
BMS	0 alerts	-	undesirable, reactive compounds 176 substructures (J Chem Inf Model 2006;46:1060-8)
Chelator Rule	0 alerts	-	Chelating compounds.
Colloidal aggregators	0.487	-	■ Category 0: non-colloidal aggregators; ■ Category 1: colloidal aggregators. ■ The output value is the probability of being colloidal aggregators, within the range of 0 to 1.

Page 2

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FLuc inhibitors	0.001	●	■ Category 0: non-fLuc inhibitors; ■ Category 1: fLuc inhibitors. ■ The output value is the probability of being fLuc inhibitors, within the range of 0 to 1.
Blue fluorescence	0.096	●	■ Category 0: non-blue fluorescence; ■ Category 1: blue fluorescence. ■ The output value is the probability of being blue fluorescence, within the range of 0 to 1.
Green fluorescence	0.013	●	■ Category 0: non-green fluorescence; ■ Category 1: green fluorescence. ■ The output value is the probability of being green fluorescence, within the range of 0 to 1.
Reactive compounds	0.456	●	■ Category 0: non-reactive compound; ■ Category 1: reactive compound. ■ The output value is the probability of being reactive compound, within the range of 0 to 1.
Promiscuous compounds	0.157	●	■ Category 0: non-promiscuous compound; ■ Category 1: promiscuous compound. ■ The output value is the probability of being promiscuous compound, within the range of 0 to 1.

3. Absorption

Property	Value	Decision	Comment
Caco-2 Permeability	-5.927	●	Optimal: higher than -5.15 Log unit
MDCK Permeability	-5.098	●	■ low permeability: < 2 × 10-6 cm/s ■ medium permeability: 2-20 × 10^{-6} cm/s ■ high passive permeability: > 20 × 10^{-6} cm/s
PAMPA	0.994	●	■ The experimental data for Peff was logarithmically transformed (logPeff). ■ Molecules with log Peff values below 2.0 were classified as low-permeability (Category 0), while those with log Peff values exceeding 2.5 were classified as high-permeability (Category 1).
Pgp-inhibitor	0.0	●	■ Category 1: Inhibitor; ■ Category 0: Non-inhibitor; ■ The output value is the probability of being Pgp-inhibitor.
Pgp-substrate	0.807	●	■ Category 1: substrate; ■ Category 0: Non-substrate; ■ The output value is the probability of being Pgp-substrate.
HIA	0.979	●	■ Human Intestinal Absorption ■ Category 1: HIA+(HIA < 30%); ■ Category 0: HIA-(HIA >= 30%); ■ The output value is the probability of being HIA+

CYP1A2 substrate	0.0	●	■ Category 1: Substrate; Category 0: Non-substrate; ■ The output value is the probability of being substrate.
CYP2C19 inhibitor	0.0	●	■ Category 1: Inhibitor; Category 0: Non-inhibitor; ■ The output value is the probability of being inhibitor.
CYP2C19 substrate	0.0	●	■ Category 1: Substrate; Category 0: Non-substrate; ■ The output value is the probability of being substrate.
CYP2C9 inhibitor	0.0	●	■ Category 1: Inhibitor; Category 0: Non-inhibitor; ■ The output value is the probability of being inhibitor.
CYP2C9 substrate	0.001	●	■ Category 1: Substrate; Category 0: Non-substrate; ■ The output value is the probability of being substrate.
CYP2D6 inhibitor	0.0	●	■ Category 1: Inhibitor; Category 0: Non-inhibitor; ■ The output value is the probability of being inhibitor.
CYP2D6 substrate	0.0	●	■ Category 1: Substrate; Category 0: Non-substrate; ■ The output value is the probability of being substrate.
CYP3A4 inhibitor	0.0	●	■ Category 1: Inhibitor; Category 0: Non-inhibitor; ■ The output value is the probability of being inhibitor.
CYP3A4 substrate	0.003	●	■ Category 1: Substrate; Category 0: Non-substrate; ■ The output value is the probability of being substrate.
CYP2B6 inhibitor	0.0	●	■ Category 1: Inhibitor; Category 0: Non-inhibitor; ■ The output value is the probability of being inhibitor.
CYP2B6 substrate	0.0	●	■ Category 1: Substrate; Category 0: Non-substrate; ■ The output value is the probability of being substrate.
CYP2C8 inhibitor	0.016	●	■ Category 1: Inhibitor; Category 0: Non-inhibitor; ■ The output value is the probability of being inhibitor.
HLM Stability	0.0	●	■ human liver microsomal (HLM) stability ■ Category 0: stable+ (HLM > 30 min); Category 1: unstable- (HLM ≤ 30 min). The output value is the probability of human liver microsomal instability, where a value closer to 1 indicates a higher likelihood of instability. The range is between 0 and 1.

6. Excretion

Property	Value	Decision	Comment
Eye Corrosion	0.0	●	■ Eye Corrosion ■ Category 1: corrosives; Category 0: noncorrosives; ■ The output value is the probability of being corrosives.
Eye Irritation	0.399	●	■ Eye Irritation ■ Category 1: irritants; Category 0: nonirritants; ■ The output value is the probability of being irritants.
Respiratory	0.011	●	■ Category 1: respiratory toxicants; ■ Category 0: non-respiratory toxicants. ■ The output value is the probability of being toxic, within the range of 0 to 1.
Human Hepatotoxicity	0.577	●	■ Human Hepatotoxicity ■ Category 1: H-HT positive(+); ■ Category 0: H-HT negative(-); ■ The output value is the probability of being toxic.
Drug-induced Nephrotoxicity	0.706	●	■ Category 0: non-nephrotoxic (-); ■ Category 1: nephrotoxic (+). ■ The output value is the probability of being nephrotoxic (+), within the range of 0 to 1.
Ototoxicity	0.962	●	■ Category 0: non-ototoxicity (-); ■ Category 1: ototoxicity (+). ■ The output value is the probability of being ototoxicity (+), within the range of 0 to 1.
Hematotoxicity	0.42	●	■ Category 0: non-hematotoxicity (-); ■ Category 1: hematotoxicity (+). ■ The output value is the probability of being hematotoxicity (+), within the range of 0 to 1.
Genotoxicity	0.204	●	■ Category 0: non-Genotoxicity (-); ■ Category 1: Genotoxicity (+). ■ The output value is the probability of being ototoxicity (+), within the range of 0 to 1.
RPMI-8226 Immunitoxicity	0.1	●	■ Category 0: non-cytotoxicity (-); ■ Category 1: cytotoxicity (+). ■ The output value is the probability of being ototoxicity (+), within the range of 0 to 1.
A549 Cytotoxicity	0.166	●	■ Category 0: non-cytotoxicity (-); ■ Category 1: cytotoxicity (+). ■ The output value is the probability of being ototoxicity (+), within the range of 0 to 1.
Hek293 Cytotoxicity	0.09	●	■ Category 0: non-cytotoxicity (-); ■ Category 1: cytotoxicity (+). ■ The output value is the probability of being ototoxicity (+), within the range of 0 to 1.
Drug-induced Neurotoxicity	0.027	●	■ Category 0: non-neurotoxic (-); ■ Category 1: neurotoxic (+). ■ The output value is the probability of being neurotoxic (+), within the range of 0 to 1.

$F_{20\%}$	0.668	●	■ 20% Bioavailability ■ Category 1: F 20% + (bioavailability < 20%); ■ Category 0: F 20% - (bioavailability ≥ 20%); ■ The output value is the probability of being F 20% +
$F_{30\%}$	0.999	●	■ 30% Bioavailability ■ Category 1: F 30% + (bioavailability < 30%); ■ Category 0: F 30% - (bioavailability ≥ 30%); ■ The output value is the probability of being F 30% +
$F_{50\%}$	0.955	●	■ 50% Bioavailability ■ Category 1: F 50% + (bioavailability < 50%); ■ Category 0: F 50% - (bioavailability ≥ 50%); ■ The output value is the probability of being F 50% +

4. Distribution

Property	Value	Decision	Comment
PPB	29.386	●	■ Plasma Protein Binding Optimal: < 90%. ■ Drugs with high protein-bound may have a low therapeutic index.
VDss	-0.595	●	■ Volume Distribution ■ Optimal: 0.04-20L/kg
BBB	0.227	●	■ Blood-Brain Barrier Penetration ■ Category 1: BBB+; Category 0: BBB-; ■ The output value is the probability of being BBB+
Fu	75.959	●	■ The fraction unbound in plasma ■ Low: <5%; Middle: 5~20%; High: > 20%
OATP1B1 inhibitor	0.933	●	■ Category 0: Non-inhibitor; Category 1: inhibitor. ■ The output value is the probability of being inhibitor, within the range of 0 to 1.
OATP1B3 inhibitor	0.988	●	■ Category 0: Non-inhibitor; Category 1: inhibitor. ■ The output value is the probability of being inhibitor, within the range of 0 to 1.
BCRP inhibitor	0.005	●	■ Category 0: Non-inhibitor; Category 1: inhibitor. ■ The output value is the probability of being inhibitor, within the range of 0 to 1.
MRP1 inhibitor	0.036	●	■ Category 0: Non-inhibitor; Category 1: inhibitor. ■ The output value is the probability of being inhibitor, within the range of 0 to 1.

5. Metabolism

Property	Value	Decision	Comment
CYP1A2 inhibitor	0.0	●	■ Category 1: Inhibitor; Category 0: Non-inhibitor; ■ The output value is the probability of being inhibitor.

CL_{plasma}	1.39	●	■ The unit of predicted CLplasma penetration is ml/min/kg. >15 ml/min/kg: high clearance; 5-15 ml/min/kg: moderate clearance; < 5 ml/min/kg: low clearance.
$T_{1/2}$	3.264	●	■ The unit of predicted T1/2 is hours. ■ ultra-short half-life drugs: 1/2 < 1 hour; short half-life drugs: T1/2 between 1-4 hours; intermediate short half-life drugs: T1/2 between 4-8 hours; long half-life drugs: T1/2 > 8 hours.

7. Toxicity

Property	Value	Decision	Comment
hERG Blockers	0.013	●	■ Molecules with IC50 ≤10μM or ≥50% inhibition at 10 μM were classified as hERG+ (Category 1). ■ while molecules with IC50 >10μM or < 50% inhibition at 10μM were classified as hERG - (Category 0). ■ The output value is the probability of being hERG+, within the range of 0 to 1.
hERG Blockers (10um)	0.088	●	■ Molecules with IC50 ≤10 μM are classified as hERG+ (Category 1), ■ and molecules with IC50 > 10μM are classified as hERG- (Category 0). ■ The output value is the probability of being hERG+, within the range of 0 to 1.
DILI	0.833	●	■ Drug Induced Liver Injury. ■ Category 1: drugs with a high risk of DILI; ■ Category 0: drugs with no risk of DILI. ■ The output value is the probability of being toxic.
AMES Mutagenicity	0.947	●	■ AMES Toxicity ■ Category 1: Ames positive(+); ■ Category 0: Ames negative(-); ■ The output value is the probability of being toxic.
Rat Oral Acute Toxicity	0.025	●	■ Rat Oral Acute Toxicity ■ Category 0: low-toxicity, > 500 mg/kg; ■ Category 1: high-toxicity, < 500 mg/kg. ■ The output value is the probability of being toxic, within the range of 0 to 1.
FDAMDD	0.009	●	■ FDA Maximum (Recommended) Daily Dose. ■ Category 1: FDAMDD (+); ■ Category 0: FDAMDD (-); The output value is the probability of being positive.
Skin Sensitization	0.995	●	■ Category 1: Sensitizer; ■ Category 0: Non-sensitizer. ■ The output value is the probability of being toxic, within the range of 0 to 1.
Carcinogenicity	0.376	●	■ Category 1: carcinogens; ■ Category 0: non-carcinogens; ■ The output value is the probability of being toxic.

8. Environmental toxicity

Property	Value	Comment
Bioconcentration Factors	0.236	■ Bioconcentration factors are used for considering secondary poisoning potential and assessing risks to human health via the food chain. ■ The unit is –log10[(mg/L)/(1000*MW)]
IGC_{50}	1.892	■ Tetrahymena pyriformis 50 percent growth inhibition concentration. ■ The unit is –log10[(mg/L)/(1000*MW)]
$LC_{50}FM$	2.731	■ 96-hour fathead minnow 50 percent lethal concentration. ■ The unit is –log10[(mg/L)/(1000*MW)]
$LC_{50}DM$	3.255	■ 48-hour daphnia magna 50 percent lethal concentration. ■ The unit is –log10[(mg/L)/(1000*MW)]

9. Tox21 pathway

Property	Value	Decision	Comment
NR-AhR	0.019	●	■ Aryl hydrocarbon receptor ■ Category 1: actives ; ■ Category 0: inactives; ■ The output value is the probability of being active.
NR-AR	0.33	●	■ Androgen receptor ■ Category 1: actives ; ■ Category 0: inactives; ■ The output value is the probability of being active.
NR-AR-LBD	0.113	●	■ Androgen receptor ligand-binding domain ■ Category 1: actives ; ■ Category 0: inactives; ■ The output value is the probability of being active.
NR-Aromatase	0.05	●	■ Category 1: actives ; ■ Category 0: inactives; ■ The output value is the probability of being active.
NR-ER	0.511	●	■ Estrogen receptor ■ Category 1: actives ; ■ Category 0: inactives; ■ The output value is the probability of being active.
NR-ER-LBD	0.018	●	■ Estrogen receptor ligand-binding domain ■ Category 1: actives ; ■ Category 0: inactives; ■ The output value is the probability of being active.
NR-PPAR-gamma	0.0	●	■ Peroxisome proliferator-activated receptor gamma ■ Category 1: actives ; ■ Category 0: inactives; ■ The output value is the probability of being active.
SR-ARE	0.036	●	■ Antioxidant response element ■ Category 1: actives ; ■ Category 0: inactives; ■ The output value is the probability of being active.

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SR-ATAD5	0.001	●	■ ATPase family AAA domain-containing protein 5 ■ Category 1: actives ; ■ Category 0: inactives; ■ The output value is the probability of being active.
SR-HSE	0.005	●	■ Heat shock factor response element ■ Category 1: actives ; ■ Category 0: inactives; ■ The output value is the probability of being active.
SR-MMP	0.024	●	■ Mitochondrial membrane potential ■ Category 1: actives ; ■ Category 0: inactives; ■ The output value is the probability of being active.
SR-p53	0.017	●	■ p53, a tumor suppressor protein ■ Category 1: actives ; ■ Category 0: inactives; ■ The output value is the probability of being active.

10. Toxicophore Rules

Property	Value	Comment
Acute Toxicity Rule	0	■ 20 substructures; ■ acute toxicity during oral administration
Genotoxic Carcinogenicity Rule	3 alerts	■ 117 substructures; ■ carcinogenicity or mutagenicity
NonGenotoxic Carcinogenicity Rule	0	■ 23 substructures; ■ carcinogenicity through nongenotoxic mechanisms
Skin Sensitization Rule	2 alerts	■ 155 substructures; ■ skin irritation
Aquatic Toxicity Rule	2 alerts	■ 99 substructures; ■ toxicity to liquid(water)
NonBiodegradable Rule	1 alerts	■ 19 substructures; ■ non-biodegradable
SureChEMBL Rule	0	■ 164 substructures; ■ MedChem unfriendly status
FAF-Drugs4 Rule	0	154 toxic substructures from FAF-Drug4

Lampiran VIII. Dokumentasi penelitian






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