

LAMPIRAN

Lampiran 1. Surat Determinasi

HERBARIUM JATINANGOR
LABORATORIUM TAKSONOMI TUMBUHAN
JURUSAN BIOLOGI FMIPA UNPAD
 Gedung D2-212, Jl. Raya Bandung Sumedang Km 21 Jatinangor
 Telp. 022-7796412, email: phanerogamae@yahoo.com

LEMBAR IDENTIFIKASI TUMBUHAN
 No.13/HB/01/2023.

Herbarium Jatinangor, Laboratorium Taksonomi Tumbuhan, Jurusan Biologi FMIPA UNPAD, dengan ini menerangkan bahwa:

Nama : Dwiky Rusmania Hadi
 NIP/NIDN : 191FF03104
 Instansi : Universitas Bhakti Kencana.
 Telah melakukan identifikasi tumbuhan, dengan No. Koleksi: -
 Tanggal Koleksi : 02 Januari 2023
 Lokasi : Bandung.

Hasil Identifikasi

Nama Ilmiah : *Dioscorea hispida* Dennst.
 Sinonim : *Dioscorea hispida* var. *daemona* (Roxb.) Prain & Burkill
 Nama Lokal : Umbi Gadung
 Suku/Famili : Dioscoreaceae

Klasifikasi (Hirarki Taksonomi)

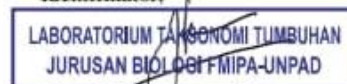
Kingdom : Plantae
 Divisi : Magnoliophyta
 Class : Liliopsida
 Ordo : Dioscoreales
 Famili : Dioscoreaceae
 Genus : *Dioscorea*
 Species : *Dioscorea hispida* Dennst.

Referensi:

Bucker, C. A. and Bakhuizen v/d Brink R. C Jr. 1963. *Flora of Java*. Wolter-Noordhoff NV, Groningen.
 Cronquist, Arthur. 1981. *An Integrated System of Classification of Flowering Plants*. Columbia University Press. New York
 The Plant List. *Website DuniaTumbuhan*. <http://www.theplantlist.org/tpl1.1/record/kew-158489>.

Jatinangor, 03 Januari 2023.

Identifikator,



Drs. Joko Kusnoro, M.P.
 NIP. 19600801 199101 1 001

Lampiran 2. Dokumentasi Penelitian

Umbi Gadung Segar	
Penimbangan Umbi Gadung	
Penghalusan Umbi Gadung	
Pemanasan Pada Analisis Secara Kualitatif	
Preparasi Kertas Pikrat	

Lampiran 3. Hasil Analisis Kualitatif Menggunakan Kertas Pikrat

	Baku 0.5 Bpj	Baku 1 Bpj	Baku 2 Bpj	Baku 5 Bpj	Baku 10 Bpj	Sampel	Kontrol (-)
Hasil							

Lampiran 4. Perhitungan LOD dan LOQ

Konsentrasi (ppm)	Absorbansi (Y)	Y'	(Y-Y')^2
0.1	0.222	0.21454	5.56516E-05
0.15	0.3223	0.32356	1.5876E-06
0.2	0.4293	0.43258	1.07584E-05
0.25	0.5326	0.5416	8.1E-05
0.3	0.6453	0.65062	2.83024E-05
0.35	0.7706	0.75964	0.000120122
0.225		jumlah (y-y')^2	0.000297422

Persamaan Regresi Linearitas $Y = 2.1804x - 0.0035$

B (Slope) = 2.1804

A (Intersep) = 0.0035

R = 0.9992

$$(S_y/x) = \frac{\sqrt{\sum(y-y')^2}}{N-2} = \frac{\sqrt{0.000297422}}{4} = 0.008622958$$

$$BD = 3 \frac{(S_y/x)}{B} = 3 \frac{0.008622958}{2.1804} = 0.011864279$$

$$BK = 10 \frac{(S_y/x)}{B} = 10 \frac{0.008622958}{2.1804} = 0.039547596$$

$$Sx0 = \frac{(S_y/x)}{B} = \frac{0.008622958}{2.1804} = 0.00395476$$

$$Vx0 = \frac{Sx0}{Rata-Rata} \times 100 = \frac{0.00395476}{0.225} \times 100 = 1.757670912$$

Lampiran 5. Perhitungan Akurasi

	Persentase	Abs Non Adisi	Abs Adisi	C sampel	C adisi	C standar	% recovery	Rata-rata	Akurasi
0.2	80% (0.2 bpj)	0.224	0.632	0.104338 653	0.2914 6	0.2	93.56081 453	94.0 1	91.37 %
		0.222	0.633	0.103421 391	0.2919 19	0.2	94.24876 17		
		0.219	0.63	0.102045 496	0.2905 43	0.2	94.24876 17		
0.25	100% (0.25 bpj)	0.224	0.727	0.104338 653	0.3350 3	0.25	92.27664 649	92.0 8	
		0.222	0.721	0.103421 391	0.3322 78	0.25	91.54283 618		
		0.219	0.723	0.102045 496	0.3331 96	0.25	92.46009 906		
0.3	120% (0.3 bpj)	0.224	0.796	0.104338 653	0.3666 76	0.3	87.44572 861	88.0 4	
		0.222	0.799	0.103421 391	0.3680 52	0.3	88.21011 435		
		0.219	0.798	0.102045 496	0.3675 93	0.3	88.51586 865		

Rumus % recovery

$$\frac{\text{konsentrasi pengukuran} - \text{konsentrasi sampel}}{\text{konsentrasi sebenarnya}} \times 100\%$$

80%

$$\frac{0.29146 - 0.10433865}{0.2} \times 100\% = 93.55\%$$

$$\frac{0.29192 - 0.103421391}{0.2} \times 100\% = 94.25\%$$

$$\frac{0.29054 - 0.102045496}{0.2} \times 100\% = 94.25\%$$

100 %

$$\frac{0.33503 - 0.104338653}{0.25} \times 100\% = 92.28\%$$

$$\frac{0.332278 - 0.103421391}{0.25} \times 100\% = 91.52\%$$

$$\frac{0.333196 - 0.102045496}{0.25} \times 100\% = 92.44\%$$

120 %

$$\frac{0.366676 - 0.104338653}{0.3} \times 100\% = 87.43\%$$

$$\frac{0.368052 - 0.103421391}{0.3} \times 100\% = 88.20\%$$

$$\frac{0.367593 - 0.102045496}{0.3} \times 100\% = 88.50\%$$

Lampiran 6. Perhitungan Presisi

Presisi Intraday

(Pengukuran 1)

ABS sampel	ABS Spike	C sampel	C Spike	C Standar	%kadar	SD	Rata-rata
0.221	0.727	0.102962759	0.33503027	0.25	92.827	0.51462	92.4397
0.221	0.721	0.102962759	0.332278481	0.25	91.72629		
0.221	0.723	0.102962759	0.333195744	0.25	92.09319		
0.221	0.727	0.102962759	0.33503027	0.25	92.827		
0.221	0.729	0.102962759	0.335947533	0.25	93.19391		
0.221	0.724	0.102962759	0.333654375	0.25	92.27665		
0.223	0.732	0.103880022	0.337323427	0.25	93.37736		
0.223	0.726	0.103880022	0.334571638	0.25	92.27665		
0.223	0.725	0.103880022	0.334113007	0.25	92.09319		
0.223	0.731	0.103880022	0.336864795	0.25	93.19391		
0.223	0.725	0.103880022	0.334113007	0.25	92.09319		
0.223	0.728	0.103880022	0.335488901	0.25	92.64355		
0.224	0.726	0.104338653	0.334571638	0.25	92.09319		
0.224	0.724	0.104338653	0.333654375	0.25	91.72629		
0.224	0.726	0.104338653	0.334571638	0.25	92.09319		
0.224	0.73	0.104338653	0.336406164	0.25	92.827		
0.224	0.729	0.104338653	0.335947533	0.25	92.643		
0.224	0.725	0.104338653	0.334113007	0.25	91.909		
RSD (%)				0.5567			

Presisi Interday

(Pengukuran Hari ke-1)

ABS sampel	ABS Spike	C sampel	C Spike	C Standar	%kadar	SD	rata-rata
0.224	0.726	0.104338653	0.334571638	0.25	92.09319	0.4289	92.2154
0.224	0.724	0.104338653	0.333654375	0.25	91.72629		
0.224	0.726	0.104338653	0.334571638	0.25	92.09319		
0.224	0.73	0.104338653	0.336406164	0.25	92.827		
0.224	0.729	0.104338653	0.335947533	0.25	92.64355		
0.224	0.725	0.104338653	0.334113007	0.25	91.90974		
RSD			0,4651				

(Pengukuran Hari ke-2)

ABS sampel	ABS Spike	C sampel	C Spike	C Standar	%kadar	SD	rata-rata
0.2683	0.765	0.124656026	0.352458265	0.25	91.1209	0.27822	91.21262154
0.2683	0.766	0.124656026	0.352916896	0.25	91.30435		
0.2683	0.768	0.124656026	0.353834159	0.25	91.67125		
0.2683	0.766	0.124656026	0.352916896	0.25	91.30435		
0.2683	0.764	0.124656026	0.351999633	0.25	90.93744		
0.2683	0.764	0.124656026	0.351999633	0.25	90.93744		
RSD			0.3050				

(Pengukuran Hari ke-3)

ABS sampel	ABS Spike	C sampel	C Spike	C Standar	%kadar	SD	rata-rata
0.2856	0.778	0.13259035	0.358420473	0.25	90.33205	0.356043	90.54607717
0.2856	0.779	0.13259035	0.358879105	0.25	90.5155		
0.2856	0.781	0.13259035	0.359796368	0.25	90.88241		
0.2856	0.777	0.13259035	0.357961842	0.25	90.1486		
0.2856	0.778	0.13259035	0.358420473	0.25	90.33205		
0.2856	0.782	0.13259035	0.360254999	0.25	91.06586		

RSD		0.3932					
Presisi Interday							
ABS sampel	ABS Spike	C sampel	C Spike	C Standar	%kadar	SD	Rata-rata
0.224	0.726	0.104338653	0.334571638	0.25	92.09319	0.7827	91.3247
0.224	0.724	0.104338653	0.333654375	0.25	91.72629		
0.224	0.726	0.104338653	0.334571638	0.25	92.09319		
0.224	0.73	0.104338653	0.336406164	0.25	92.827		
0.224	0.729	0.104338653	0.335947533	0.25	92.64355		
0.224	0.725	0.104338653	0.334113007	0.25	91.90974		
0.2683	0.765	0.124656026	0.352458265	0.25	91.1209		
0.2683	0.766	0.124656026	0.352916896	0.25	91.30435		
0.2683	0.768	0.124656026	0.353834159	0.25	91.67125		
0.2683	0.766	0.124656026	0.352916896	0.25	91.30435		
0.2683	0.764	0.124656026	0.351999633	0.25	90.93744		
0.2683	0.764	0.124656026	0.351999633	0.25	90.93744		
0.2856	0.778	0.13259035	0.358420473	0.25	90.33205		
0.2856	0.779	0.13259035	0.358879105	0.25	90.5155		
0.2856	0.781	0.13259035	0.359796368	0.25	90.88241		
0.2856	0.777	0.13259035	0.357961842	0.25	90.1486		
0.2856	0.778	0.13259035	0.358420473	0.25	90.33205		
0.2856	0.782	0.13259035	0.360254999	0.25	91.06586		
RSD (%)				0.8570			

Lampiran 7. Perhitungan Optimasi Hari Penyimpanan

Absorbansi				Konsentrasi			
Hari Ke-1	Hari Ke-3	Hari Ke-5	Hari Ke-8	Hari Ke-1	Hari Ke-3	Hari Ke-5	Hari Ke-8
0.224	0.266	0.438	0.489	0.104339	0.123601	0.202480	0.225876
0.222	0.271	0.44	0.494	0.103421	0.125894	0.203403	0.228169

0.219	0.268	0.444	0.488	0.1020	0.1245	0.20523	0.2254
				45	18	7	17
0.2216666	0.2683333	0.4406666	0.4903333	0.1032	0.1246	0.20370	0.2264
67	33	67	33	69	71	8	87
			SD	0.0011	0.0011	0.00140	0.0014
				54	54	1	74

Rumus Konsentrasi $\frac{Y+a}{b}$

Hari Ke-1

$$= \frac{Y+a}{b} = \frac{0.224+0.0035}{2.1804} = 0.10433$$

$$= \frac{Y+a}{b} = \frac{0.222+0.0035}{2.1804} = 0.10342$$

$$= \frac{Y+a}{b} = \frac{0.219+0.0035}{2.1804} = 0.10204$$

Hari Ke-3

$$= \frac{Y+a}{b} = \frac{0.266+0.0035}{2.1804} = 0.12360$$

$$= \frac{Y+a}{b} = \frac{0.271+0.0035}{2.1804} = 0.12589$$

$$= \frac{Y+a}{b} = \frac{0.268+0.0035}{2.1804} = 0.12451$$

Hari Ke-5

$$= \frac{Y+a}{b} = \frac{0.438+0.0035}{2.1804} = 0.20248$$

$$= \frac{Y+a}{b} = \frac{0.440+0.0035}{2.1804} = 0.20340$$

$$= \frac{Y+a}{b} = \frac{0.444+0.0035}{2.1804} = 0.20523$$

Hari Ke-8

$$= \frac{Y+a}{b} = \frac{0.489+0.0035}{2.1804} = 0.225876$$

$$= \frac{Y+a}{b} = \frac{0.494+0.0035}{2.1804} = 0.228169$$

$$= \frac{Y+a}{b} = \frac{0.488+0.0035}{2.1804} = 0.225417$$

Lampiran 8. Perhitungan Optimasi Konsentrasi

Optimasi Konsentrasi					%penurunan								
A	0	10	15	20	Sam	0%	10%	15%	20%	0%	10%	15%	20%
B	%	%	%	%	pel								
S													
0.	0.	0.	0.	0.	0.21	0.20	0.1318	0.10	0.17	4.32	37.2	47.9	18.5
45	43	28	23	37	0283	111	5654	9384	1299	4506	7091	6213	0673
5	5	4	5										
0.	0.	0.	0.	0.	0.21	0.19	0.1291	0.11	0.17	6.51	38.8	47.5	17.5
45	42	27	23	37	12	7441	04751	0759	4051	4755	7086	5706	8966
7	7	8	8	6									
0.	0.	0.	0.	0.	0.21	0.19	0.1300	0.10	0.16	6.22	38.9	49.9	20.2
46	43	28	22	36	3034	9734	22014	6632	9923	8172	568	3812	2397
1	2		9	7									
										rata-	5.68	38.3	48.4
										rata	9145	6619	8577
										SD	1.19	0.94	1.27
											0467	951	3973
												7253	

Rumus % Penurunan

$$= \frac{C \text{ Sampel} - C \text{ Perlakuan}}{C \text{ Sampel}} \times 100\%$$

0%

$$\frac{0.210283 - 0.20111}{0.210283} \times 100\% = 4.324506$$

$$\frac{0.2112 - 0.197441}{0.2112} \times 100\% = 6.514755$$

$$\frac{0.213034 - 0.199734}{0.213034} \times 100\% = 6.228172$$

10%

$$\frac{0.210283 - 0.13185654}{0.210283} \times 100\% = 37.27091$$

$$\frac{0.2112 - 0.129104751}{0.2112} \times 100\% = 38.87086$$

$$\frac{0.213034 - 0.130022014}{0.213034} \times 100\% = 38.9568$$

15%

$$\frac{0.210283-0.109384}{0.210283} \times 100\% = 47.96213$$

$$\frac{0.2112-0.110759}{0.2112} \times 100\% = 47.55706$$

$$\frac{0.213034-0.106632}{0.213034} \times 100\% = 49.93812$$

20%

$$\frac{0.210283-0.171299}{0.210283} \times 100\% = 18.50673$$

$$\frac{0.2112-0.174051}{0.2112} \times 100\% = 17.58966$$

$$\frac{0.213034-0.169923}{0.213034} \times 100\% = 20.22397$$

Lampiran 9. Perhitungan Optimasi Waktu Perendaman

Optimasi waktu				Konsentrasi			%penurunan			
ABS	5	6	7	Sampel	5 jam	6 jam	7 jam	5 jam	6 jam	7 jam
Sam	jam	jam	jam							
pel										
0.45	0.2	0.2	0.2	0.21028	0.118	0.109	0.09654	43.81656	47.96	54.07
5	54	35	07	2517	098	384	1919		213	14
0.45	0.2	0.2	0.2	0.21119	0.115	0.110	0.09837	45.16835	47.55	53.42
7	49	38	11	978	804	759	6445		706	024
0.46	0.2	0.2	0.2	0.21303	0.119	0.106	0.10021	43.90916	49.93	52.95
1	57	29	15	4306	473	632	097		812	26
							rata-rata	44.29802	48.48	53.48
									577	141

Rumus % Penurunan

$$= \frac{C \text{ Sampel} - C \text{ Perlakuan}}{C \text{ Sampel}} \times 100\%$$

5 Jam

$$\frac{0.210282517-0.118098}{0.210282517} \times 100\% = 43.81656$$

$$\frac{0.21119978-0.115804}{0.21119978} \times 100\% = 45.16835$$

$$\frac{0.213034306-0.119473}{0.213034306} \times 100\% = 43.90916$$

6 Jam

$$\frac{0.210282517-0.109384}{0.210282517} \times 100\% = 47.96213$$

$$\frac{0.21119978-0.110759}{0.21119978} \times 100\% = 47.55706$$

$$\frac{0.213034306-0.106632}{0.213034306} \times 100\% = 49.93812$$

7 Jam

$$\frac{0.210282517-0.096541919}{0.210282517} \times 100\% = 54.0714$$

$$\frac{0.21119978-0.098376445}{0.21119978} \times 100\% = 53.42024$$

$$\frac{0.213034306-0.10021097}{0.213034306} \times 100\% = 52.9526$$

Lampiran 10. Perhitungan Penetapan Kadar

(Tanpa Perlakuan)

Abs	c	faktor koreksi	Fp	V Pelarutan	W sianida (µg)	W sampel (Gram)	W sianida (µg/gram)	% kadar
0.424	0.1960	1.0276	2	100	40.2969	5	8.0593	0.000161188
0.432	0.1997	1.0276	2	100	41.0510	5.01	8.1938	0.000163877
0.428	0.1978	1.0276	2	100	40.6740	5	8.1348	0.000162696

(Diberi Perlakuan)

Abs	c	faktor koreksi	Fp	V Pelarutan	W sianida (µg)	W Sianida (Gram)	W sianida (µg/gram)	% kadar
0.216	0.1006	1.0276	2	100	20.6904	5	4.1380	0,00008276
0.222	0.1034	1.0276	2	100	21.2560	5.01	4.2427	0,00008485
0.22	0.1025	1.0276	2	100	21.0675	5	4.2135	0,00008427

Lampiran 11. Kartu Bimbingan



No. Dok. 02.64.00/FRM-03/AKD-SPMI



KARTU BIMBINGAN TUGAS AKHIR I/TUGAS AKHIR II

Pembimbing Utama	: apt. Wimarsh Rachmauli, M.Si
Nama Mahasiswa	: Diviky RUSMANIA HAQI
NPM	: 191FF03104
Bidang Ilmu	: Analisis Sarmasi & kimia Medisinal

No	Hari/Tanggal	Waktu	Tempat	Materi	Paraf Dosen
1.	3 ^{/03} / ²⁰²³ / Jum'at	13.00	kampus UBK	Diskusi Calakan seminar Proposal	[Signature]
2.	16 ^{/03} / ²⁰²³ / Kamis	13.30	kampus UBK	Diskusi Perlakuan sampel	[Signature]
3.	30 ^{/03} / ²⁰²³ / Kamis	12.00	kampus UBK	Diskusi hasil analisis kualitatif penentuan panjang gel Maksimum	[Signature]
4.	10 ^{/04} / ²⁰²³ / Senin	10.00	kampus UBK	Diskusi hasil penentuan Linearitas B.O & BK	[Signature]
5.	14 ^{/04} / ²⁰²³ / Jum'at	13.00	kampus UBK	Diskusi hasil selektivitas laporan kemayuan I	[Signature]
6.	4 ^{/5} / ²⁰²³ / Kamis	10.30	kampus UBK	Diskusi terkait prosedur optimasi	[Signature]
7.	5 ^{/5} / ²⁰²³ / Jum'at	09.30	kampus UBK	Diskusi terkait prosedur akurasi	[Signature]
8.	9 ^{/5} / ²⁰²³ / Selasa	8.20	kampus UBK	Diskusi terkait prosedur akurasi	[Signature]
9.	17 ^{/5} / ²⁰²³ / Rabu	12.00	kampus UBK	Diskusi hasil Akurasi & Presisi	[Signature]
10.	19 ^{/5} / ²⁰²³ / Jumat	11.30	kampus UBK	Diskusi hasil optimasi waktu dan konsentrasi	[Signature]
11.	6 ^{/06} / ²⁰²³ / Kamis	09.00	kampus UBK	Diskusi hasil penetapan kadar	[Signature]
12.	10 ^{/07} / ²⁰²³ / Senin	09.00	kampus UBK	Tanda tangan lembar Pengesahan	[Signature]

Jl. Soekarno Hatta No 754 Bandung

Catatan : Kartu ini harus dibawa setiap kali melakukan bimbingan dan harus diisi oleh dosen pembimbing.

KARTU BIMBINGAN TUGAS AKHIR I/TUGAS AKHIR II

Pembimbing Serta	: Emma Emmawati, M.si
Nama Mahasiswa	: Diwiky RUSMANIA HADI
NPM	: 191FF03104
Bidang Ilmu	: Analisis Farmasi & Kimia-Medisinal

1.	Kamis / 02 Maret 2023	13.00	Kampus UBK	Konfirmasi & diskusi Alat dan Bahan	G
2.	Senin / 27 Maret 2023	11.00	kampus UBK	Diskusi Persiapan Penelitian	G
3.	Rabu / 29 Maret 2023	12.00	kampus UBK	Diskusi hasil analisis kualitatif & penentuan panjang gel maksimum	G
4.	Senin / 10 April 2023	11.00	kampus UBK	Diskusi hasil Linearitas, BD & BK	G
5.	Jumat / 14 April 2023	16.30	kampus UBK	TTD laporan kemajuan I TA 2	G
6.	Jumat / 5 Mei 2023	10.00	kampus UBK	TTD surat rekomendasi & diskusi	G
7.	Rabu / 10 Mei 2023	13.00	kampus UBK	konsultasi prosedur	G
8.	Kamis / 11 Mei 2023	11.00	kampus UBK	konsultasi prosedur	G
9.	Senin / 15 Mei 2023	13.00	kampus UBK	konsultasi prosedur	G
10.	Jumat / 26 Mei 2023	13.00	kampus UBK	Diskusi hasil	G
11.	6 / 07 Juli 2023	10.00	kampus UBK	Diskusi hasil penetapan kadar	G
12.	Senin / 10 Juli 2023	14.30	kampus UBK	Tanda tangan lembar persetujuan	G
13.	Kamis / 13 Juli 2023	10.00	kampus UBK	Diskusi Draft Skripsi	G
14.					G

Catatan: Kartu ini harus dibawa setiap kali melakukan bimbingan dan harus diisi oleh dosen pembimbing.

☎ 022 7830 760, 022 7830 768

✉ bku.ac.id contact@bku.ac.id

Lampiran 12. Hasil Cek Plagiarisme

ORIGINALITY REPORT			
8%	8%	2%	4%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS
PRIMARY SOURCES			
1	repository.bku.ac.id Internet Source	2%	
2	pdfcoffee.com Internet Source	1%	
3	www.researchgate.net Internet Source	1%	
4	repositori.uin-alauddin.ac.id Internet Source	1%	
5	123dok.com Internet Source	1%	
6	Submitted to Universitas Jenderal Achmad Yani Student Paper	1%	
7	Submitted to Doral Academy High School Student Paper	1%	
8	jurnal.farmasi.umi.ac.id Internet Source	1%	
9	etheses.uin-malang.ac.id Internet Source	1%	

Lampiran 13. Daftar Riwayat Hidup

DAFTAR RIWAYAT HIDUP

Nama	: Dwiky Rusmania Hadi
Tempat/Tanggal Lahir	: Bandung, 21 April 2001
Jenis Kelamin	: Laki-laki
Agama	: Islam
Kewarganegaraan	: Indonesia
Alamat	: Kp. Kertasari Rt 05 Rw 07 No 216 Kecamatan Mandalajati Kelurahan Karang Pamulang Kota Bandung Jawa Barat Indonesia Kode Pos 40194
Telepon	: 081546821005
Email	: dwikyrusmania@gmail.com

PENDIDIKAN

TK	: TK Al- Hadi Bandung 2006-2007
SD	: SD Negeri Cikadut I Bandung 2007- 2013
SMP	: SMP Negeri 49 Kota Bandung 2013-2016
SMK	: SMA Kartika XIX-1 Kota Bandung 2016-2019
S1	: Universitas Bhakti Kencana Bandung 2019 - 2023