LAMPIRAN

Lampiran 1 Surat Pernyataan Bebas Plagiasi

SURAT PERNYATAAN

Yang bertanda tangan di bawah ini,

Nama : Vilda Salsabila Widiana

N P M : 11181231

adalah mahasiswa Fakultas Farmasi, Universitas Bhakti Kencana, menyatakan dengan sesungguhnya bahwa Naskah Tugas Akhir/Skripsi yang saya tulis dengan judul:

PENETAPAN KADAR PROTEIN TOTAL DARI NUGGET AYAM YANG BEREDAR DI PASARAN DENGAN METODE KOLORIMETRI

adalah benar-benar merupakan hasil karya saya sendiri. Apabila di kemudian hari diketahui bahwa isi Naskah Skripsi ini merupakan hasil plagiasi, maka saya bersedia menerima sanksi berupa pembatalan kelulusan dan atau pencabutan gelar yang saya peroleh.

Demikian surat pernyataan ini saya buat untuk dapat dipergunakan sebagaimana mestinya.

Bandung , 06 Agustus 2022

Yang membuat pernyataan,

(Vilda Salsabila Widiana)

NPM 11181231

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SURAT PERNYATAAN

Yang bertanda tangan di bawah ini,

Nama : Vilda Salsabila Widiana

N P M : 11181231

Menyatakan bahwa demi kepentingan perkembangan ilmu pengetahuan, saya menyetujui abstrak Skripsi yang saya tulis dengan judul:

PENETAPAN KADAR PROTEIN TOTAL DARI NUGGET AYAM YANG BEREDAR DI PASARAN DENGAN METODE KOLORIMETRI

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Bandung , 06 Agustus 2022

Yang membuat pernyataan,

(Vilda Salsabila Widiana)

NPM 11181231

Lampiran 3 Perhitungan larutan baku dan seri konsentrasi

- **Perhitungan larutan baku**

$$\% = \frac{bobot\ (gram)}{volume\ labu}\ x\ 100$$

$$\% = \frac{2{,}5\ gram}{25\ ml} x\ 100 = 10\%$$

- **Seri konsentrasi**

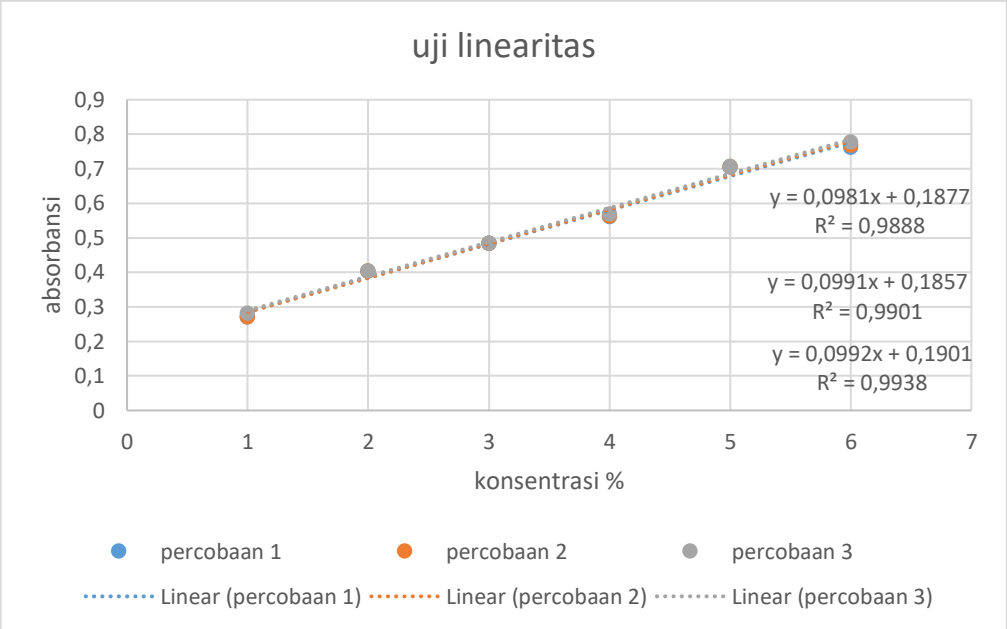
1%	2%	3%
V1.C1 = V2.C2	V1.C1 = V2.C2	V1.C1 = V2.C2
V1.10 = 5.1	V1.10 = 5.2	V1.10 = 5.3
V1 = $\frac{5}{10} = 0{,}5\ mL$	V1 = $\frac{10}{10} = 1\ mL$	V1 = $\frac{15}{10} = 1{,}5\ mL$

4%	5%	6%
V1.C1 = V2.C2	V1.C1 = V2.C2	V1.C1 = V2.C2
V1.10 = 5.4	V1.10 = 5.5	V1.10 = 5.6
V1 = $\frac{20}{10} = 2\ mL$	V1 = $\frac{20}{10} = 2\ mL$	V1 = $\frac{30}{10} = 30\ mL$

Lampiran 4 uji linearitas 3 kali percobaan

Tabel uji linearitas 3 kali percobaan

Konsentarasi (%)	Percobaan 1	Percobaan 2	Percobaan 3
1	0,271	0,271	0,282
2	0,404	0,404	0,404
3	0,484	0,484	0,484
4	0,561	0,563	0,569
5	0,705	0,706	0,706
6	0,762	0,768	0,778



Gambar grafik uji linearitas 3 kali percobaan

Lampiran 5 Batas deteksi dan batas kuantisasi

Tabel Batas deteksi dan batas kuantisasi

KONSENTRASI BSA (%)	ABSORBANSI (y)	y'	y-y'	(y-y')^2
1	0,282	0,2893	-0,0073	-0,00001369
2	0,404	0,3885	0,0155	0,00024025
3	0,484	0,4877	-0,0037	-0,00001369
4	0,569	0,5869	-0,0179	0,00032041
5	0,706	0,6861	0,0199	0,00039601
6	0,778	0,7853	-0,0073	-0,00005329
				Σ =0,00088

Persamaan regresi linear y = 0,0992x + 0,1901

Perhitungan y’

y’ = (0,0992 x seri konsentrasi) + 0,1901

= (0,0992 x 1) + 0,1901= 0,2893

= (0,0992 x 2) + 0,1901= 0,3885

= (0,0992 x 3) + 0,1901= 0,4877

= (0,0992 x 4) + 0,1901= 0,5869

= (0,0992 x 5) + 0,1901= 0,6861

= (0,0992 x 6) + 0,1901= 0,7853

Konsentarsi rata-rata…

$$sy/_x = \sqrt{\frac{\sum(y-y')^{\wedge 2}}{n-2}} = \sqrt{\frac{0{,}000876}{6-2}} = 0{,}1480$$

$$Sx0 = \frac{sy}{b} = \frac{0{,}1480}{0{,}0992} = 0{,}14918$$

$$\text{Vx0} = \frac{sx0}{x} = \frac{0{,}14918}{3{,}5} x\ 100 = 4{,}26228$$

$$\text{BD} = \frac{3SD}{slope} = \frac{3\ X\ 0{,}01480}{0{,}0992} = 0{,}44754$$

$$\text{BK} = \frac{10SD}{slope} = \frac{10\ x\ 0{,}01480}{0{,}0992} = 1{,}49180$$

Lampiran 6 uji akurasi

Tabel Uji akurasi

Konsentrasi 1%

penguangan	sampel non adisi	sampel + 1%	c sampel	c spike	c standar	%recovery	rata - rata	SD
1	0,224	0,324	0,3417	1,3498	1	99,4628	99,4628	1,0081
2	0,225	0,325	0,3518	1,3599	1	100,4709		
3	0,227	0,323	0,3720	1,3397	1	98,4548		
	rata2	0,324	0,3552	1,3498				

Konsentarsi 3%

penguangan	sampel non adisi	sampel + 3%	c sampel	c spike	c standar	%recovery	rata - rata	SD
1	0,224	0,524	0,3417	3,3659	3	100,3585	99,7985	0,1532
2	0,225	0,521	0,3518	3,3356	3	99,3505		
3	0,227	0,522	0,3719	3,3457	3	99,6865		
	rata2	0,522	0,3551	3,3491				

Konsentrasi 5%

penguangan	sampel non adisi	sampel + 5%	c sampel	c spike	c standar	%recovery	rata - rata	SD
1	0,224	0,716	0,3417	5,3014	5	98,9248	99,2608	0,3079
2	0,225	0,718	0,3518	5,3215	5	99,3280		
3	0,227	0,719	0,3719	5,3316	5	99,5296		
	rata2	0,7176	0,3551	5,3182				

Contoh perhitungan uji akurasi

- Perhitungan C sampel

  C sampel = y-a/b

  C sampel =(0,224-0,1901)/0,0992 = 0,3417

- Perhitungan C spike

  C spike = y-a/b

  C spike =(0,324-0,1901)/0,0992 = 1,350

- Perhitungan % perolehan Kembali

  $$\% \text{ rec} = \frac{konsentrasi\ pengukuran - rata2\ sampel}{konsentrasi\ standar} x\ 100$$

  $$\% \text{ rec} = \frac{1,350 - 0,3552}{1} x\ 100 = 99,460\ \%$$

- Perhitungan rata-rata % perolehan Kembali

  $$\text{Rata-rata \% rec} = \frac{rec\ 1 + rec\ 2 + rec\ 3}{3}$$

  $$\text{Rata-rata \% rec} = \frac{99,462 + 100,470 + 98,454}{3} = 99,798\%$$

Lampiran 7 uji presisi

Tabel uji presisi

Konsentrasi sebenarnya %	Presisi intraday Konsentrasi pengukuran			Presisi interday		
	Hari ke-1	Hari ke-2	Hari ke-3	Rata-rata	SD	RSD (%)
3	2,9526	2,9224	2,9325	2,9375	0,0235	0,8005
	2,9325	2,9627	2,9325			
	2,9728	2,9425	2,9526			
	2,9728	2,9123	2,9123			
	2,8921	2,9224	2,9022			
	2,9526	2,9526	2,9526			
Rata-rata	2,9459	2,9358	2,9308			
SD	0,0304	0,0198	0,0206			
RSD (%)	1,0304	0,6752	0,7021			

Contoh perhitungan uji presisi

$$\text{SD} = \frac{\sqrt{\sum(y - y\prime)\hat{}2}}{n-1} = \frac{\sqrt{0,004606746}}{6-1} = 0,0304$$

$$\text{RSD} = \frac{SD}{rata-rata\ konspengukuran} X\ 100 = \frac{0,030353736}{2,945900538} = 1,0304$$

Lampiran 8 penetapan kadar

Tabel penetapan kadar

sampel	Λ 522 nm	Konsentrasi sampel	% kadar	rata-rata kadar	penurunan kadar
	0,296	1,0675	10,6754		curah 1
Curah 1	0,298	1,0877	10,8770	10,8434	3,9651
	0,299	1,0978	10,9778		
	0,305	1,1583	11,5827		curah 2
Curah 2	0,307	1,1784	11,7843	11,7507	2,1841
	0,308	1,1885	11,8851		
	0,345	1,5615	15,6149		merk1
Merk 1	0,346	1,5716	15,7157	15,7493	4,3683
	0,348	1,5917	15,9173		
	0,398	2,0958	20,9577		merk2
Merk 2	0,399	2,1058	21,0585	21,1929	3,7634
	0,404	2,1563	21,5625		
	0,258	0,6845	6,8448		
Curah 1 goreng	0,257	0,6744	6,7440	6,8784	
	0,260	0,7046	7,0464		
	0,284	0,9466	9,4657		
Curah 2 goreng	0,285	0,9567	9,5665	9,5665	
	0,286	0,9667	9,6673		
	0,303	1,1381	11,3810		
Merk 1 goreng	0,304	1,1482	11,4819	11,3810	
	0,302	1,1280	11,2802		
	0,362	1,7329	17,3286		
Merk 2 goreng	0,364	1,7530	17,5302	17,4294	
	0,363	1,7429	17,4294		

- Contoh perhitungan konsentrasi sampel

  C sampel = y-a/b

  C sampel = (0,296-0,1901)/0,0992 = 1,0675

- % kadar

  % Kadar = konsentrasi sampel (g/100ml) x faktor pengenceran x v pelarut

  % kadar = $^{1,0675}/_{100\ mL}$ x 2 x 500

  = $^{1,0675}/_{100\ mL}$ x 2 x 5

  = 10,6754 % b/b

- Rata-rata % kadar

  Rata-rata kadar = $\frac{kadar\ 1 + kadar\ 2 + kadar\ 3}{3}$

$$\text{Rata-rata kadar} = \frac{10{,}6754 + 10{,}8770 + 10{,}9778}{3} = 10{,}8434$$

- Penurunan % kadar

$$= \frac{(rata\ kadar\ protein\ sebelum\ digoreng) - (rata\ kadar\ protein\ sesudah\ digoreng)}{100}\ x\ 100\%$$

$$= \frac{10{,}8434 - 6{,}8784}{100}\ x\ 100\% = 3{,}9651\%\ b/b$$

Lampiran 9 Uji normalitas

Uji normalitas

Tests of Normality

	perlakuan	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
curah_1	sebelum	.253	3	.	.964	3	.637
	sesudah	.253	3	.	.964	3	.637
curah_2	sebelum	.253	3	.	.964	3	.637
	sesudah	.175	3	.	1.000	3	1.000
merk_1	sebelum	.253	3	.	.964	3	.637
	sesudah	.175	3	.	1.000	3	.999
merk_2	sebelum	.175	3	.	1.000	3	1.000
	sesudah	.175	3	.	1.000	3	1.000

a. Lilliefors Significance Correction

Lampiran 10 uji Uji paired sampel t test

Uji paired sampel t test

- curah 1

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	sebelum - sesudah	3.96504	.15398	.08890	3.58253	4.34755	44.601	2	.001

- curah 2

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	sebelum - sesudah	2.18417	.05819	.03360	2.03960	2.32873	65.008	2	.000

- merk 1

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	sebelum - sesudah	4.36827	.23282	.13442	3.78992	4.94661	32.498	2	.001

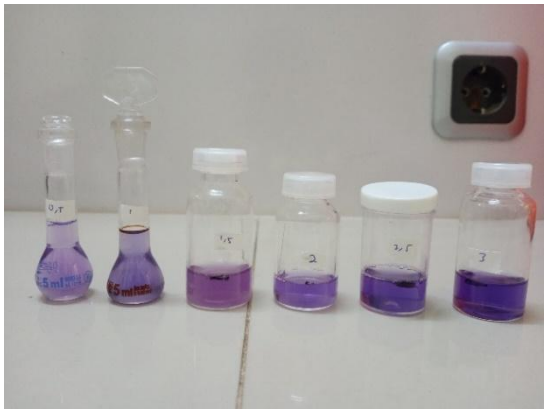
- merk 2

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	sebelum - sesudah	4.43550	.10080	.05820	4.18510	4.68590	76.215	2	.000

Lampiran 11 dokumentasi

- linearitas



Gambar uji linearitas

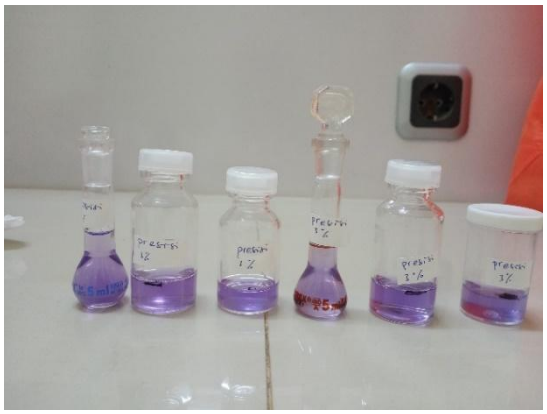
- selektivitas

Gambar uji selektivitas

- akurasi

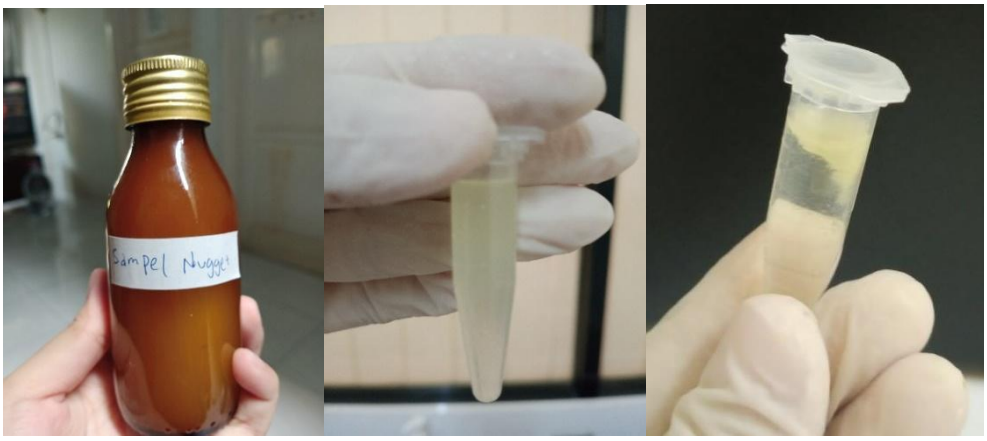
Gambar uji akurasi

- gambar presisi



Gambar uji presisi

- sampel nuget



Gambar sampel nuget

Lampiran 12 surat

Surat *BSA*

SIGMA-ALDRICH

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Bovine Serum Albumin - lyophilized powder, ≥96% (agarose gel electrophoresis)

Product Number:	**A3608**
Batch Number:	**SLCD5973**
Brand:	SIGMA
CAS Number:	9048-46-8
Storage Temperature:	Store at 2 - 8 °C
Quality Release Date:	18 FEB 2020
Recommended Retest Date:	FEB 2025

Test	Specification	Result
Appearance (Color)	Off-White to Lt. Yellow to Green	Faint Green
Appearance (Form)	Powder	Powder
Solubility (Color)	Faint Yellow to Yellow-Green	Faint Green-Yellow
Solubility (Turbidity) 1 g + 25 mL H2O	Clear to Slightly Hazy	Clear
Loss on Drying	≤ 5.0 %	2.4 %
Nitrogen	14.5 - 16.5 %	15.3 %
Identity	Bovine Origin	Conforms
Agarose Electrophoresis	≥ 98.0 %	100.0 %
pH (7% in 0.15M NaCl)	6.5 - 7.5	6.8
Inactivation pH not more than 5.0 for at least 3 hours. Temperature not less than 65 deg C for at least 3 hours.	Conforms	Conforms

Brian Dulle, Supervisor
Quality Assurance
St. Louis, Missouri US

Surat natrium asetat

Certificate of Analysis

1.06267.0000 Sodium acetate trihydrate for analysis EMSURE® ACS,ISO,Reag. Ph Eur
Batch AM1647267

	Spec. Values		Batch Values	
Assay (perchloric acid titration)	99.0 - 101.0	%	99.6	%
Assay (perchloric acid titration, calculated on dried substance)	99.0 - 101.0	%	99.7	%
Identity	passes test		passes test	
Appearance of solution	passes test		passes test	
Insoluble matter	≤ 0.005	%	≤ 0.005	%
pH-value (5 %; water)	7.5 - 9.0		8.8	
Chloride (Cl)	≤ 0.0005	%	≤ 0.0005	%
Phosphate (PO_4)	≤ 0.0002	%	≤ 0.0002	%
Sulfate (SO_4)	≤ 0.002	%	≤ 0.002	%
Total nitrogen (N)	≤ 0.001	%	≤ 0.001	%
Heavy metals (as Pb)	≤ 0.0005	%	≤ 0.0005	%
Al (Aluminium)	≤ 0.0005	%	≤ 0.0005	%
As (Arsenic)	≤ 0.0002	%	≤ 0.0002	%
Ca (Calcium)	≤ 0.001	%	≤ 0.001	%
Cu (Copper)	≤ 0.0003	%	≤ 0.0003	%
Fe (Iron)	≤ 0.0005	%	≤ 0.0005	%
K (Potassium)	≤ 0.005	%	≤ 0.005	%
Mg (Magnesium)	≤ 0.0005	%	≤ 0.0005	%
Pb (Lead)	≤ 0.0005	%	≤ 0.0005	%
Calcium and Magnesium (as Ca)	≤ 0.005	%	≤ 0.005	%
Substances reducing permanganate	passes test		passes test	
Reducing substances	≤ 0.005	%	≤ 0.005	%
Loss on drying (130 °C)	39.0 - 40.5	%	39.8	%
UV absorption (254 nm; 1 mol/l; 1 cm; water)	≤ 0.02		≤ 0.02	
UV absorption (280 nm; 1 mol/l; 1 cm; water)	≤ 0.01		≤ 0.01	
UV absorption (350 nm; 1 mol/l; 1 cm; water)	≤ 0.01		≤ 0.01	

Corresponds to ACS,ISO,Reag. Ph Eur

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Minimum shelf life (DD.MM.YYYY) 30.09.2022

Claudia Wiegand
Responsible laboratory manager quality control

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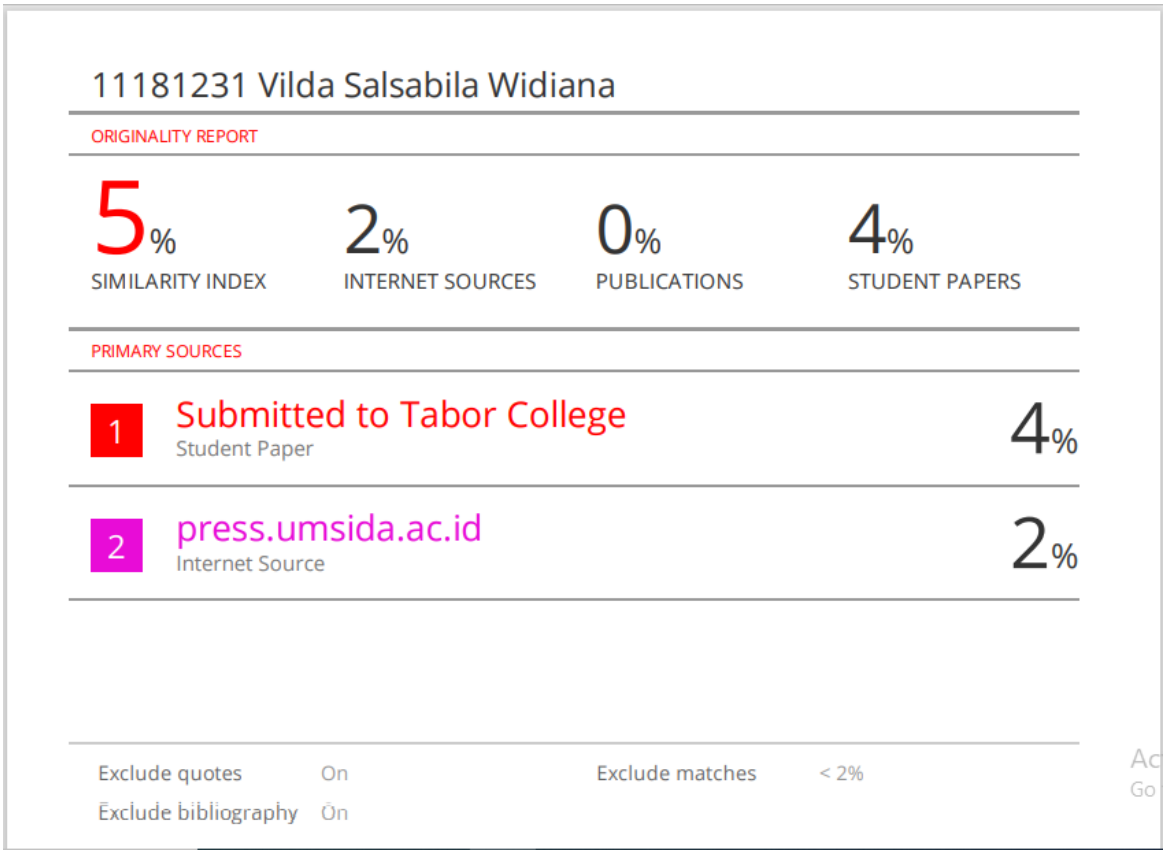

11181231 Vilda Salsabila Widiana

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