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Lampiran 1. Bagan Kerja

a. Pembuatan larutan perak induk $AgNO_3$ 1 mM

Serbuk $AgNO_3$

- Ditimbang sebanyak 0,085 gram
- Dilarutkan dengan akuabides ke dalam labu ukur 500 mL
- Dihomogenkan

Larutan $AgNO_3$ 1 mM

b. **Pembuatan larutan Poli Asam Akrilat (PAA) 1** %

Poli Asam Akrilat

- Ditimbang sebanyak 1 gram
- Dilarutkan dengan akuabides ke dalam labu ukur 100 mL hingga tanda batas
- Dihomogenkan

Larutan PAA 1 %

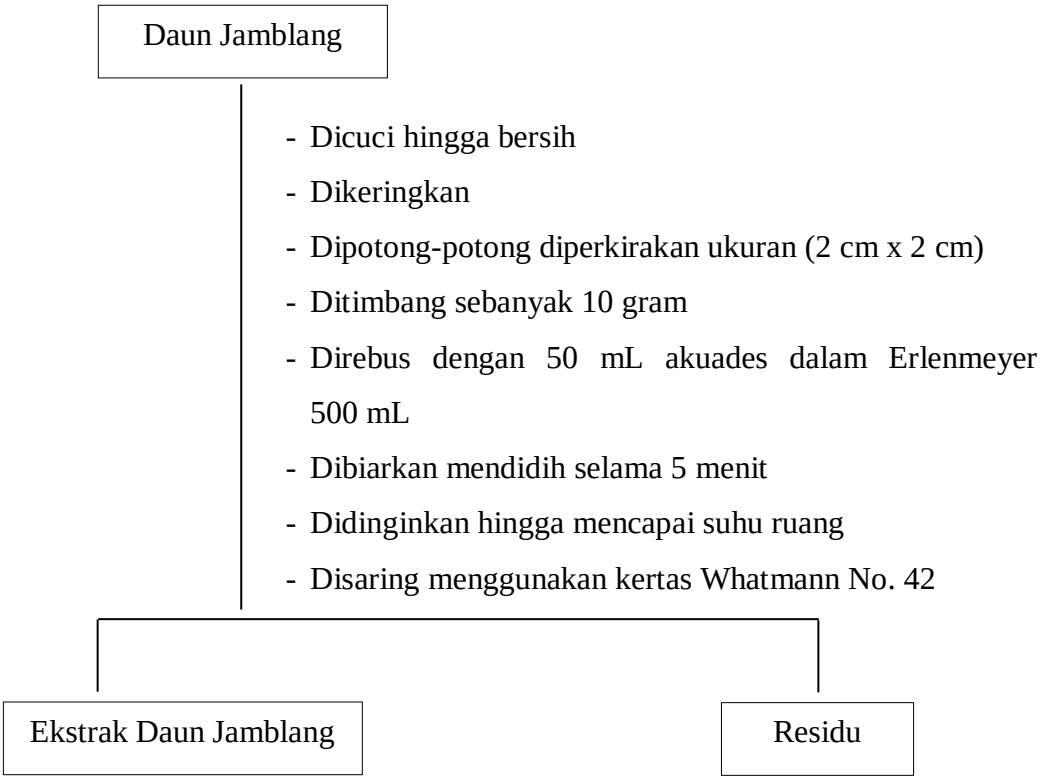
c. Pembuatan larutan Glukosa Standar 0,1 M

Glukosa anhidrat

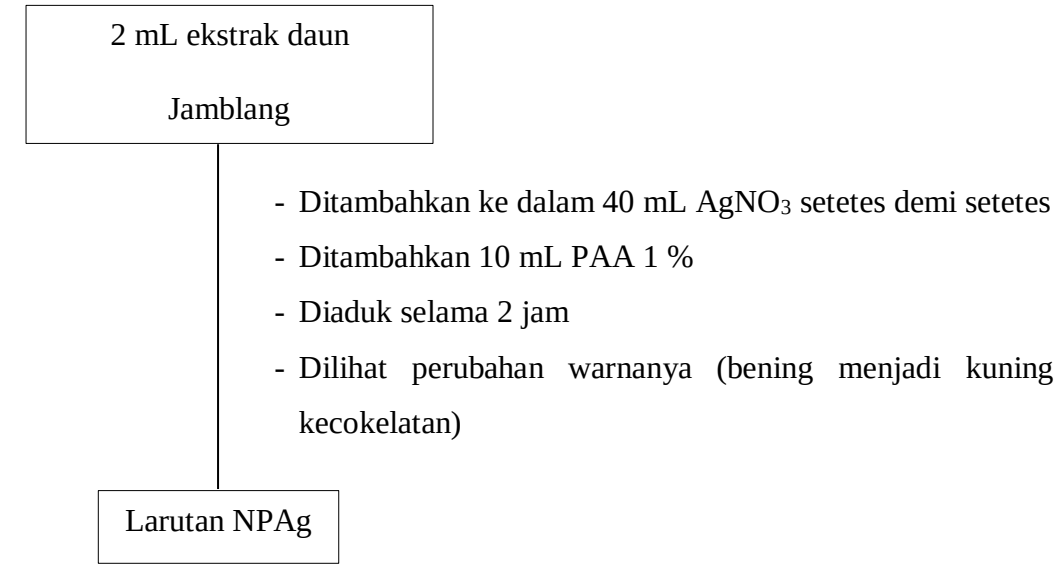
- Ditimbang sebanyak 0,18 gram
- Dilarutkan dengan akuades ke dalam labu ukur 100 mL hingga tanda batas
- Dihomogenkan
- Dilakukan pengenceran untuk mendapatkan konsentrasi glukosa dengan variasi konsentrasi 1mM, 2 mM, 3 mM, 4 mM, 5 mM, 6 mM, 7 mM dan 8 mM

Larutan glukosa standar

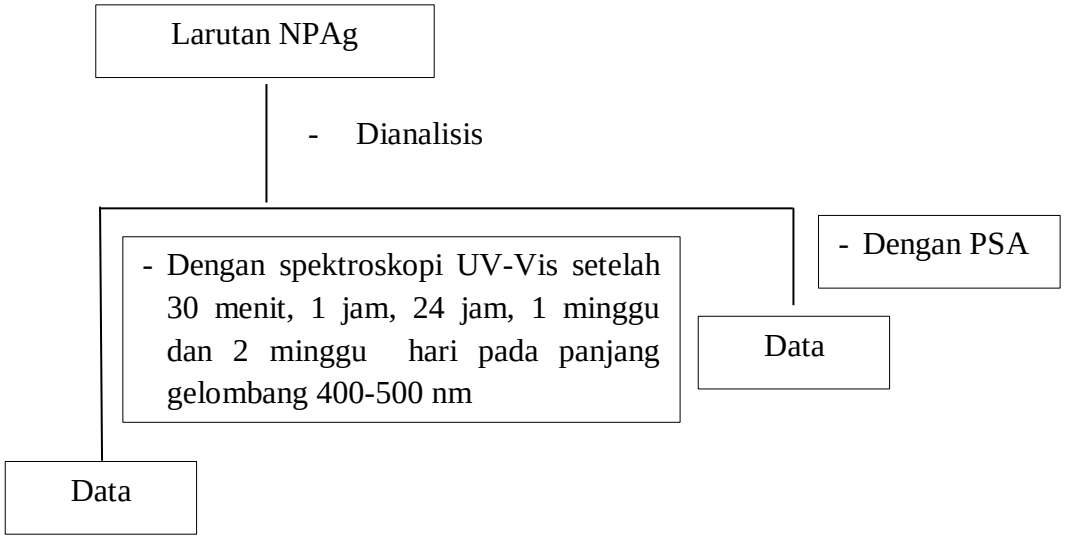
d. Pembuatan Ekstrak Daun Jamblang (*Syzygium cumini*)

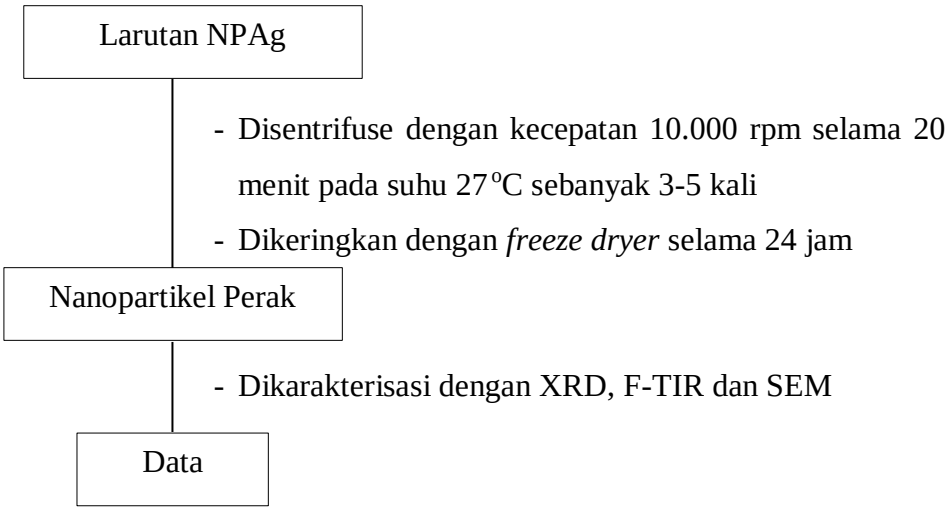


e. Sintesis Nanopartikel Perak

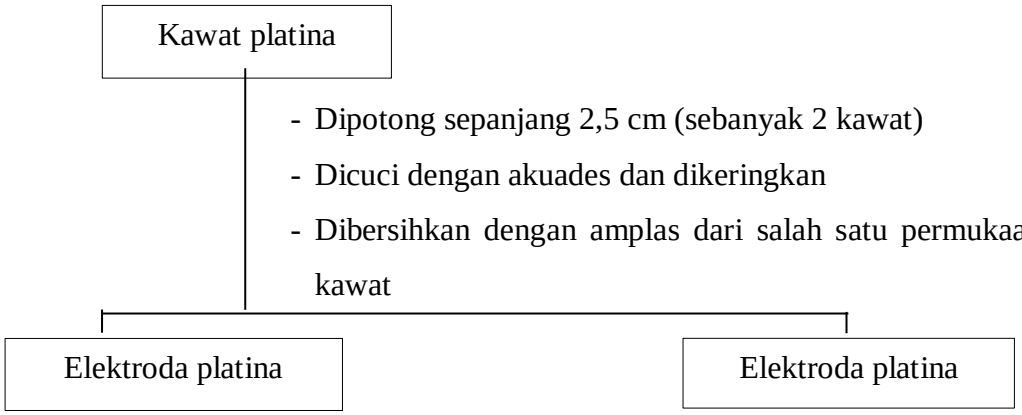


f. Karakterisasi Nanopartikel Perak





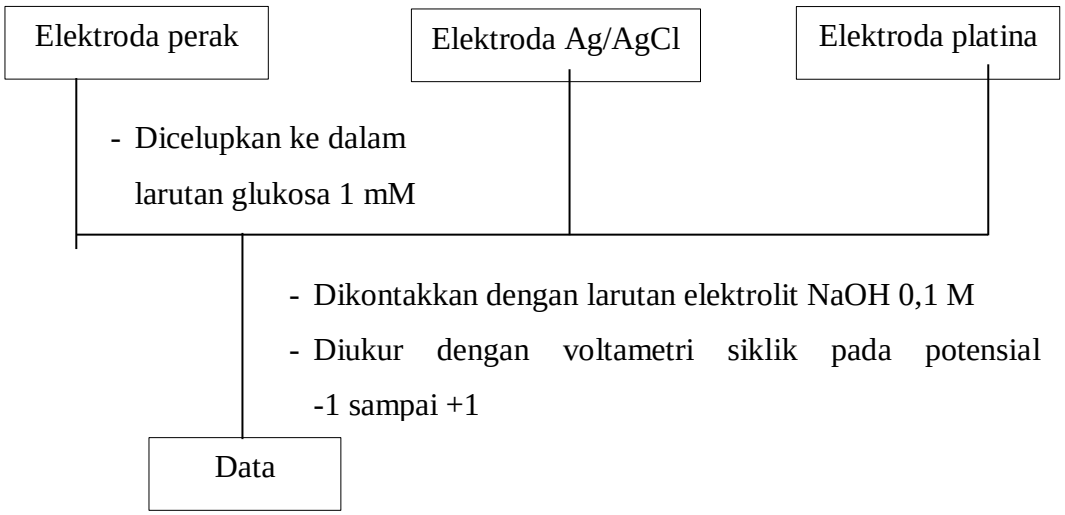
g. Persiapan Elektroda dan Pengendapan Nanopartikel Perak



- Dicelupkan ke dalam larutan PAA 1 % (pH 10) selama 30 menit
- Dibilas dengan akuades
- Dicelupkan ke dalam suspensi nanopartikel perak selama 15 menit
- Dibilas dengan akuades
- Diulangi prosedur sebanyak 3 kali

Elektroda perak termodifikasi

h. Pengukuran Larutan Glukosa Standar



Catatan: - Dilakukan prosedur yang sama dengan mengganti larutan glukosa 1 Mm menjadi 2 mM - 8 mM.

- Elektroda perak diganti dengan elektroda perak termodifikasi.
- Dihitung limit deteksi dan sensitivitas dari data yang diperoleh

Lampiran 2. Data Hasil Karakterisasi Nanopartikel Perak menggunakan PSA

BECKMAN COULTER

Delsa™ Nano
Common

Condition Summary S/N : 123909

User	: Common	Group	:	Repetition	: 1/1
Date	: 9/13/2019	File Name	: AgNP A_20190913_132437		
Time	: 13:24:37	Sample Information	:		
SOP Name	: Sampel Uji PSA			Security	: No Security

Version 2.31 / 2.03

Measurement Condition

Sampling Time	: N/A	(μs)			
Correlation Channel	: 440	(ch)	Correlation Method	: TD	
Accumulation times	: 30	(times)	Attenuator 1	: 0.81	(%)
Cell Center	: Z : 1.800	(mm)	Pinhole	: 50	(μm)
	X : 6.500	(mm)			
Scattering Angle	: 165.0	(°)	Temperature	: 25.0	(°C)
Diluent Name	: WATER				
Refractive Index	: 1.3328		Viscosity	: 0.8878	(cP)
Intensity	: 9781	(cps)			

Cumulants Results

Mean Diameter (d)	: 61.1	(nm)	Diffusion Constant (D)	: 8.046e-008	(cm^2/sec)
Polydispersity Index (P.I.)	: 0.366		Decay Constant (Γ)	: 5092.8	(1/sec)

Fitting Parameter

Analysis Method	: CONTIN						
Histogram Range	: 10.0 - 4000.0	(nm)	Cut	Left	: 0	Right	: 0
Fitting Range	: 1.003 - 2						
Noise Cut Level	: 0.3	(%)					
Residual	: 8.600e-003 [OK]						

BECKMAN COULTER

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Cumulative Size Distribution Table S/N : 123909

User	: Common	Group	:	Repetition	: 1/1
Date	: 9/13/2019	File Name	: AgNP A_20190913_132437		
Time	: 13:24:37	Sample Information	:		
SOP Name	: Sampel Uji PSA			Security	: No Security

Version 2.31 / 2.03

Cum.%	d (nm) Int. Dist.	d (nm) Vol. Dist.	d (nm) No. Dist.
5	13.3	1.1	1.1
10	17.4	1.1	1.1
15	21.7	1.1	1.1
20	28.1	1.1	1.1
25	39.7	1.1	1.1
30	51.9	1.1	1.1
35	61.5	1.1	1.1
40	70.1	1.1	1.1
45	78.2	1.1	1.1
50	86.2	1.1	1.1
55	94.5	1.2	1.1
60	103.1	1.2	1.1
65	112.3	1.2	1.2
70	122.4	1.2	1.2
75	133.7	1.2	1.2
80	147.0	1.3	1.2
85	163.1	1.3	1.2
90	184.3	1.3	1.3
95	217.0	1.4	1.3
100	324.0	301.1	18.7

BECKMAN COULTER

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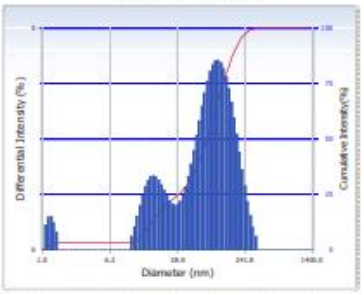
Intensity Distribution S/N : 123909

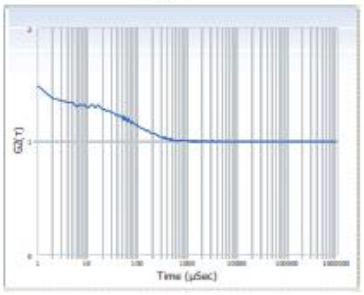
User	: Common	Group	:	Repetition	: 1/1
Date	: 9/13/2019	File Name	: AgNP A_20190913_132437		
Time	: 13:24:37	Sample Information	:		
SOP Name	: Sampel Uji PSA			Security	: No Security

Version 2.31 / 2.03

Intensity Distribution



ACF



Distribution Results (Contin)

Peak	Diameter (nm)	Std. Dev.
1	1.2	0.1
2	21.3	6.0
3	120.8	58.6
4	0.0	0.0
5	0.0	0.0
Average	97.7	67.1

Residual : 8.600e-003 (O.K)

Cumulants Results

Diameter	(d)	: 61.1	(nm)
Polydispersity Index	(P.I.)	: 0.366	
Diffusion Const.	(D)	: 8.046e-008	(cm^2/sec)

Measurement Condition

Temperature	: 25.0	(°C)
Diluent Name	: WATER	
Refractive Index	: 1.3328	
Viscosity	: 0.8878	(cP)
Scattering Intensity	: 9781	(cps)

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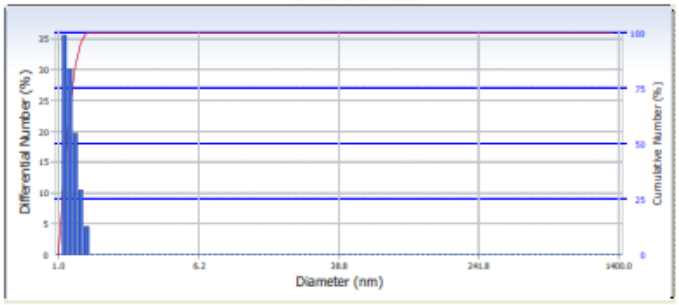
Delsa™ Nano
Common

Number Distribution S/N : 123909

User	: Common	Group	:	Repetition	: 1/1
Date	: 9/13/2019	File Name	: AgNP A_20190913_132437		
Time	: 13:24:37	Sample Information	:		
SOP Name	: Sampel Uji PSA			Security	: No Security

Version 2.31 / 2.03

Number Distribution



Distribution Results (Contin)

Peak	Diameter (nm)	Std. Dev.
1	1.2	0.1
2	14.2	3.0
3	43.3	11.9
4	0.0	0.0
5	0.0	0.0
Average	1.2	0.1

Residual : 8.600e-003 (O.K)

Cumulants Results

Diameter	(d)	: 61.1	(nm)
Polydispersity Index	(P.I.)	: 0.366	
Diffusion Const.	(D)	: 8.046e-008	(cm²/sec)

Measurement Condition

Temperature	: 25.0	(°C)
Diluent Name	: WATER	
Refractive Index	: 1.3328	
Viscosity	: 0.8878	(cP)
Scattering Intensity	: 9781	(cps)

Number Distribution Table

d (nm)	f(%)	f(cum.%)	d (nm)	f(%)	f(cum.%)	d (nm)	f(%)	f(cum.%)	d (nm)	f(%)	f(cum.%)
1.0	0.0	0.0	6.2	0.0	100.0	38.8	0.0	100.0	241.8	0.0	100.0
1.1	35.6	35.6	6.7	0.0	100.0	41.8	0.0	100.0	260.1	0.0	100.0
1.2	30.0	65.6	7.2	0.0	100.0	44.9	0.0	100.0	279.9	0.0	100.0
1.2	19.6	85.2	7.8	0.0	100.0	48.3	0.0	100.0	301.1	0.0	100.0
1.3	10.4	95.6	8.3	0.0	100.0	52.0	0.0	100.0	324.0	0.0	100.0
1.4	4.4	100.0	9.0	0.0	100.0	56.0	0.0	100.0	348.6	0.0	100.0
1.6	0.0	100.0	9.7	0.0	100.0	60.2	0.0	100.0	375.1	0.0	100.0
1.7	0.0	100.0	10.4	0.0	100.0	64.8	0.0	100.0	403.5	0.0	100.0
1.8	0.0	100.0	11.2	0.0	100.0	69.7	0.0	100.0	434.2	0.0	100.0
1.9	0.0	100.0	12.0	0.0	100.0	75.0	0.0	100.0	467.1	0.0	100.0
2.1	0.0	100.0	12.9	0.0	100.0	80.7	0.0	100.0	502.6	0.0	100.0
2.2	0.0	100.0	13.9	0.0	100.0	86.8	0.0	100.0	540.8	0.0	100.0
2.4	0.0	100.0	15.0	0.0	100.0	93.4	0.0	100.0	581.8	0.0	100.0
2.6	0.0	100.0	16.1	0.0	100.0	100.5	0.0	100.0	626.0	0.0	100.0
2.8	0.0	100.0	17.4	0.0	100.0	108.1	0.0	100.0	673.5	0.0	100.0
3.0	0.0	100.0	18.7	0.0	100.0	116.3	0.0	100.0	724.6	0.0	100.0
3.2	0.0	100.0	20.1	0.0	100.0	125.1	0.0	100.0	779.6	0.0	100.0
3.5	0.0	100.0	21.6	0.0	100.0	134.6	0.0	100.0	838.8	0.0	100.0
3.7	0.0	100.0	23.3	0.0	100.0	144.9	0.0	100.0	902.5	0.0	100.0
4.0	0.0	100.0	25.0	0.0	100.0	155.9	0.0	100.0	971.0	0.0	100.0

D (10%) : 1.1 (nm) D (50%) : 1.1 (nm) D (90%) : 1.3 (nm)

BECKMAN COULTER

Delsa™ Nano
Common

Size Distribution Table S/N : 123909

User	: Common	Group	:	Repetition	: 1/1
Date	: 9/13/2019	File Name	: AgNP A_20190913_132437		
Time	: 13:24:37	Sample Information	:		
SOP Name	: Sampel Uji PSA			Security	: No Security

Version 2.31 / 2.03

Γ (1/sec)	d(nm)	f(%)Int.	f(cum.%)int.	f(%)Vol.	f(cum.%)Vol.	f(%)No.	f(cum.%)No.
311407.3	1.0	0.0	0.0	0.0	0.0	0.00	0.00
289434.2	1.1	0.6	0.6	26.5	26.5	35.57	35.57
269011.4	1.2	0.7	1.3	27.8	54.3	29.99	65.56
250029.7	1.2	0.7	2.1	22.6	76.9	19.60	85.16
232387.4	1.3	0.6	2.7	15.0	91.8	10.41	95.57
215989.9	1.4	0.4	3.1	7.9	99.8	4.43	100.00
200749.5	1.6	0.0	3.1	0.0	99.8	0.00	100.00
186584.4	1.7	0.0	3.1	0.0	99.8	0.00	100.00
173418.8	1.8	0.0	3.1	0.0	99.8	0.00	100.00
161182.3	1.9	0.0	3.1	0.0	99.8	0.00	100.00
149809.1	2.1	0.0	3.1	0.0	99.8	0.00	100.00
139238.4	2.2	0.0	3.1	0.0	99.8	0.00	100.00
129413.6	2.4	0.0	3.1	0.0	99.8	0.00	100.00
120282.1	2.6	0.0	3.1	0.0	99.8	0.00	100.00
111794.9	2.8	0.0	3.1	0.0	99.8	0.00	100.00
103906.5	3.0	0.0	3.1	0.0	99.8	0.00	100.00
96574.8	3.2	0.0	3.1	0.0	99.8	0.00	100.00
89760.4	3.5	0.0	3.1	0.0	99.8	0.00	100.00
83426.8	3.7	0.0	3.1	0.0	99.8	0.00	100.00
77540.1	4.0	0.0	3.1	0.0	99.8	0.00	100.00
72068.8	4.3	0.0	3.1	0.0	99.8	0.00	100.00
66983.6	4.6	0.0	3.1	0.0	99.8	0.00	100.00
62257.2	5.0	0.0	3.1	0.0	99.8	0.00	100.00
57864.2	5.4	0.0	3.1	0.0	99.8	0.00	100.00
53781.3	5.8	0.0	3.1	0.0	99.8	0.00	100.00
49986.4	6.2	0.0	3.1	0.0	99.8	0.00	100.00
46459.3	6.7	0.0	3.1	0.0	99.8	0.00	100.00
43181.1	7.2	0.0	3.1	0.0	99.8	0.00	100.00
40134.2	7.8	0.0	3.1	0.0	99.8	0.00	100.00
37302.3	8.3	0.0	3.1	0.0	99.8	0.00	100.00
34670.2	9.0	0.0	3.1	0.0	99.8	0.00	100.00
32223.9	9.7	0.0	3.1	0.0	99.8	0.00	100.00
29950.1	10.4	0.0	3.1	0.0	99.8	0.00	100.00
27836.8	11.2	0.3	3.4	0.0	99.8	0.00	100.00
25872.6	12.0	0.5	3.9	0.0	99.8	0.00	100.00
24047.0	12.9	0.8	4.7	0.0	99.8	0.00	100.00
22350.3	13.9	1.0	5.7	0.0	99.8	0.00	100.00
20773.2	15.0	1.2	6.9	0.0	99.9	0.00	100.00
19307.4	16.1	1.4	8.3	0.0	99.9	0.00	100.00
17945.1	17.4	1.6	9.9	0.0	99.9	0.00	100.00
16678.9	18.7	1.7	11.6	0.0	99.9	0.00	100.00
15502.0	20.1	1.7	13.2	0.0	99.9	0.00	100.00
14408.1	21.6	1.6	14.9	0.0	99.9	0.00	100.00
13391.5	23.3	1.6	16.5	0.0	99.9	0.00	100.00
12446.6	25.0	1.5	17.9	0.0	100.0	0.00	100.00
11568.3	26.9	1.3	19.3	0.0	100.0	0.00	100.00
10752.1	29.0	1.2	20.5	0.0	100.0	0.00	100.00

Γ (1/sec)	d(nm)	f(%)Int.	f(cum.%)int.	f(%)Vol.	f(cum.%)Vol.	f(%)No.	f(cum.%)No.
9993.4	31.2	1.1	21.6	0.0	100.0	0.00	100.00
9288.2	33.5	1.0	22.6	0.0	100.0	0.00	100.00
8632.9	36.1	1.0	23.6	0.0	100.0	0.00	100.00
8023.7	38.8	1.0	24.7	0.0	100.0	0.00	100.00
7457.6	41.8	1.1	25.8	0.0	100.0	0.00	100.00
6931.3	44.9	1.2	27.0	0.0	100.0	0.00	100.00
6442.3	48.3	1.4	28.4	0.0	100.0	0.00	100.00
5987.7	52.0	1.7	30.1	0.0	100.0	0.00	100.00
5565.2	56.0	1.9	32.0	0.0	100.0	0.00	100.00
5172.5	60.2	2.2	34.2	0.0	100.0	0.00	100.00
4807.5	64.8	2.6	36.8	0.0	100.0	0.00	100.00
4468.3	69.7	2.9	39.7	0.0	100.0	0.00	100.00
4153.0	75.0	3.2	43.0	0.0	100.0	0.00	100.00
3860.0	80.7	3.5	46.5	0.0	100.0	0.00	100.00
3587.6	86.8	3.8	50.3	0.0	100.0	0.00	100.00
3334.5	93.4	4.0	54.4	0.0	100.0	0.00	100.00
3099.2	100.5	4.2	58.5	0.0	100.0	0.00	100.00
2880.5	108.1	4.3	62.8	0.0	100.0	0.00	100.00
2677.3	116.3	4.3	67.1	0.0	100.0	0.00	100.00
2488.3	125.1	4.2	71.3	0.0	100.0	0.00	100.00
2312.8	134.6	4.1	75.4	0.0	100.0	0.00	100.00
2149.6	144.9	3.9	79.3	0.0	100.0	0.00	100.00
1997.9	155.9	3.6	82.9	0.0	100.0	0.00	100.00
1856.9	167.7	3.3	86.3	0.0	100.0	0.00	100.00
1725.9	180.4	3.0	89.2	0.0	100.0	0.00	100.00
1604.1	194.1	2.6	91.8	0.0	100.0	0.00	100.00
1490.9	208.9	2.2	94.1	0.0	100.0	0.00	100.00
1385.7	224.7	1.8	95.9	0.0	100.0	0.00	100.00
1287.9	241.8	1.4	97.3	0.0	100.0	0.00	100.00
1197.1	260.1	1.1	98.4	0.0	100.0	0.00	100.00
1112.6	279.9	0.8	99.2	0.0	100.0	0.00	100.00
1034.1	301.1	0.5	99.7	0.0	100.0	0.00	100.00
961.1	324.0	0.3	100.0	0.0	100.0	0.00	100.00
893.3	348.6	0.0	100.0	0.0	100.0	0.00	100.00
830.3	375.1	0.0	100.0	0.0	100.0	0.00	100.00
771.7	403.5	0.0	100.0	0.0	100.0	0.00	100.00
717.2	434.2	0.0	100.0	0.0	100.0	0.00	100.00
666.6	467.1	0.0	100.0	0.0	100.0	0.00	100.00
619.6	502.6	0.0	100.0	0.0	100.0	0.00	100.00
575.9	540.8	0.0	100.0	0.0	100.0	0.00	100.00
535.2	581.8	0.0	100.0	0.0	100.0	0.00	100.00
497.5	626.0	0.0	100.0	0.0	100.0	0.00	100.00
462.4	673.5	0.0	100.0	0.0	100.0	0.00	100.00
429.7	724.6	0.0	100.0	0.0	100.0	0.00	100.00
399.4	779.6	0.0	100.0	0.0	100.0	0.00	100.00
371.2	838.8	0.0	100.0	0.0	100.0	0.00	100.00
345.0	902.5	0.0	100.0	0.0	100.0	0.00	100.00
320.7	971.0	0.0	100.0	0.0	100.0	0.00	100.00
298.1	1044.7	0.0	100.0	0.0	100.0	0.00	100.00
277.0	1124.1	0.0	100.0	0.0	100.0	0.00	100.00
257.5	1209.4	0.0	100.0	0.0	100.0	0.00	100.00
239.3	1301.2	0.0	100.0	0.0	100.0	0.00	100.00
222.4	1400.0	0.0	100.0	0.0	100.0	0.00	100.00

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Volume Distribution S/N : 123909

User	: Common	Group	:	Repetition	: 1/1
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Time	: 13:24:37	Sample Information	:		
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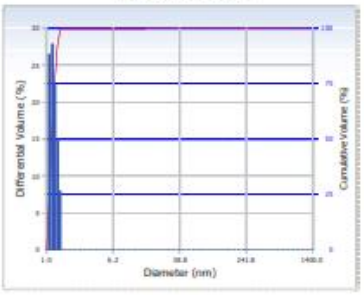
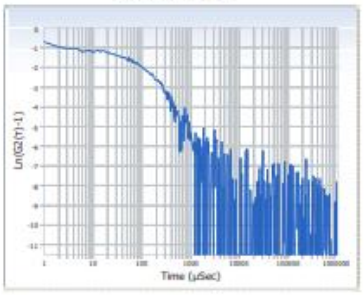
Version 2.31 / 2.03

Volume Distribution



Ln(G2(τ)-1) vs τ



Distribution Results (Contin)

Peak	Diameter (nm)	Std. Dev.
1	1.2	0.1
2	16.7	4.4
3	60.5	28.9
4	0.0	0.0
5	0.0	0.0
Average	1.3	1.5

Residual : 8.600e-003 (O.K)

Cumulants Results

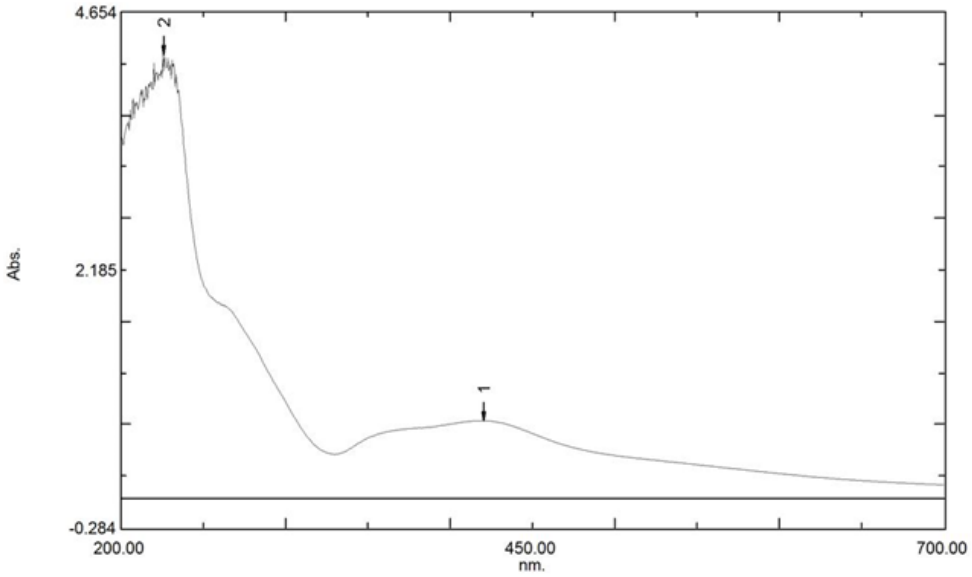
Diameter	(d)	: 61.1	(nm)
Polydispersity Index	(P.I.)	: 0.366	
Diffusion Const.	(D)	: 8.046e-008	(cm²/sec)

Measurement Condition

Temperature	: 25.0	(°C)
Diluent Name	: WATER	
Refractive Index	: 1.3328	
Viscosity	: 0.8878	(cP)
Scattering Intensity	: 9781	(cps)

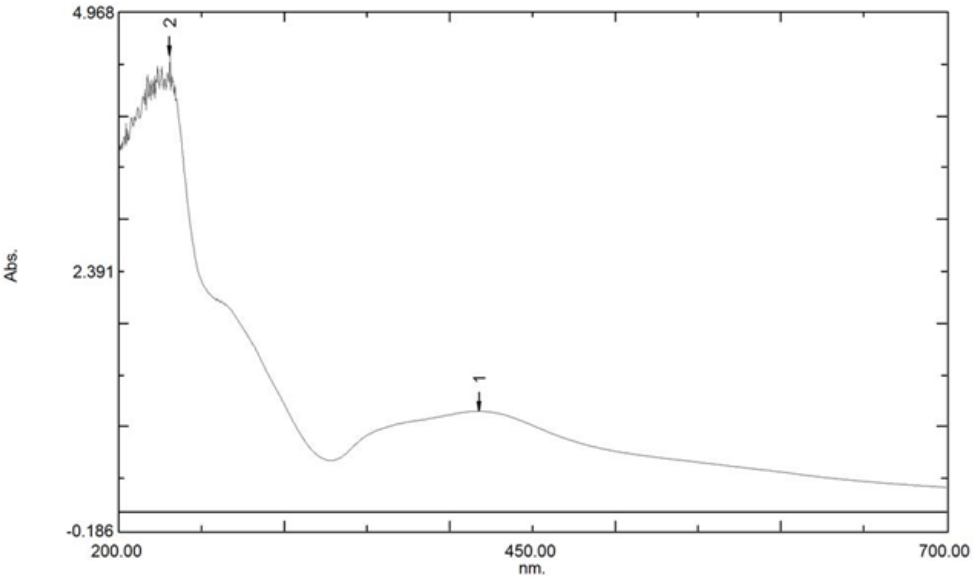
Lampiran 3. Data Hasil Karakterisasi Nanopartikel Perak menggunakan Spektrofotometer UV-Vis

Hari – 1



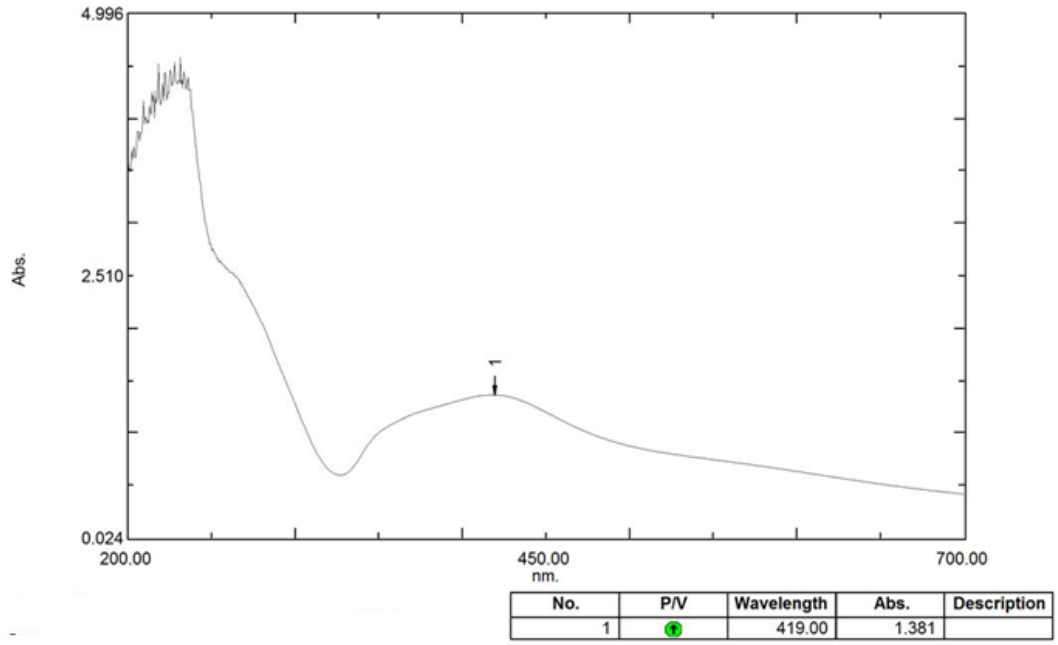
No.	P/V	Wavelength	Abs.	Description
1		420.00	0.743	
2		225.50	4.242	

Hari – 2



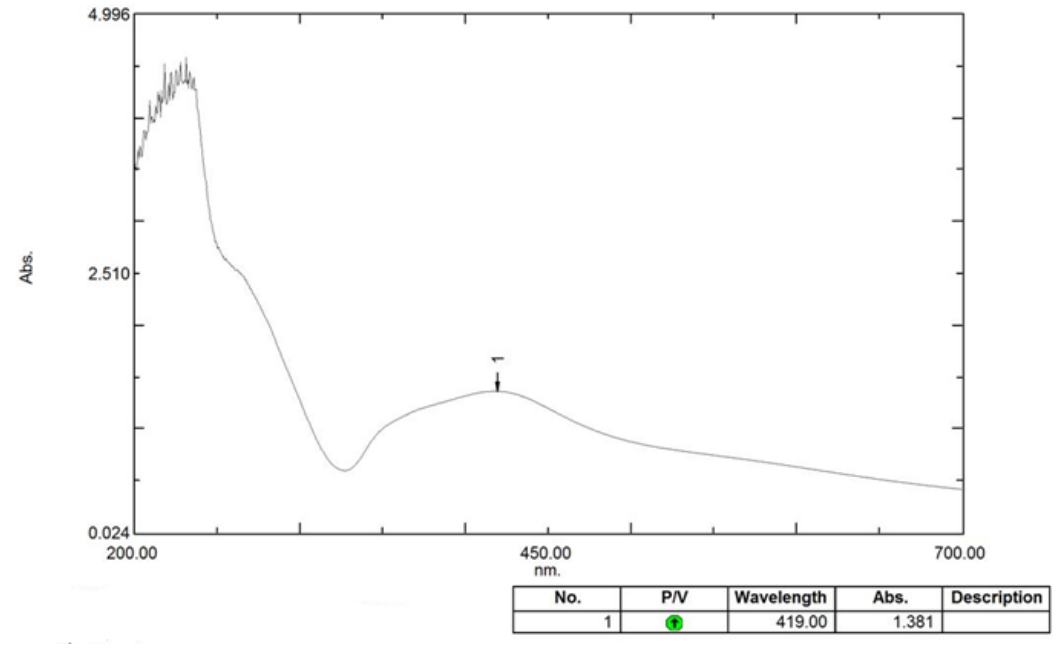
No.	P/V	Wavelength	Abs.	Description
1		418.00	1.003	
2		231.00	4.539	

Hari – 4



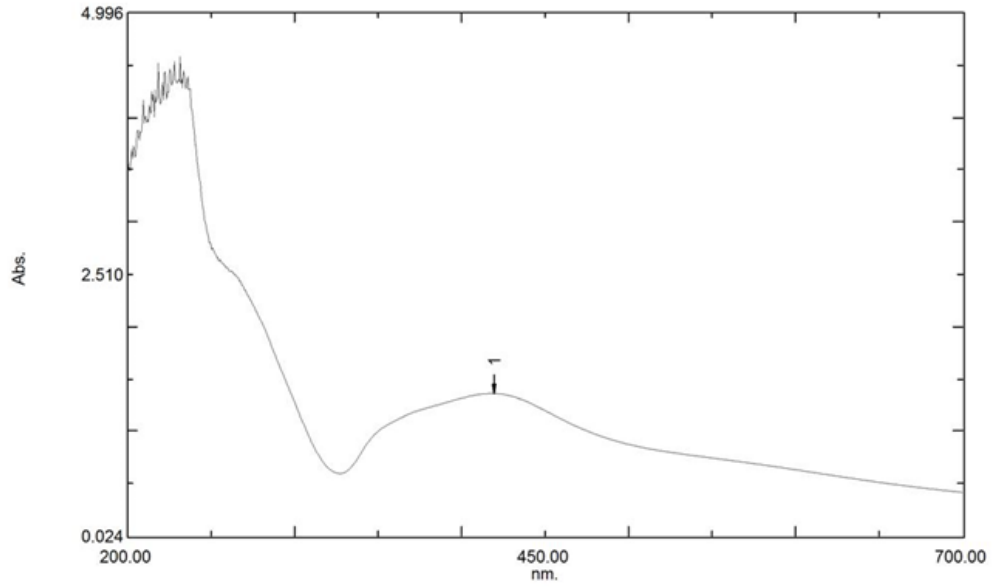
No.	P/V	Wavelength	Abs.	Description
1		419.00	1.381	

Hari – 7



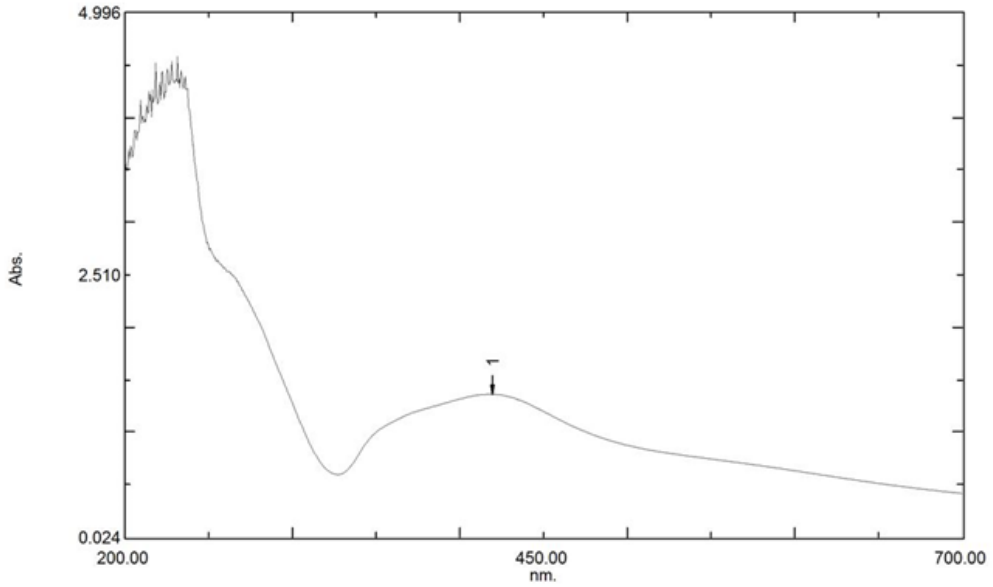
No.	P/V	Wavelength	Abs.	Description
1		419.00	1.381	

Hari – 8



No.	P/V	Wavelength	Abs.	Description
1	↑	419.00	1.381	

Hari – 11



No.	P/V	Wavelength	Abs.	Description
1	↑	419.00	1.381	

Lampiran 4. Data Hasil Karakterisasi Nanopartikel Perak Menggunakan XRD

*** Basic Data Process ***

Group : Standard
Data : AgNan

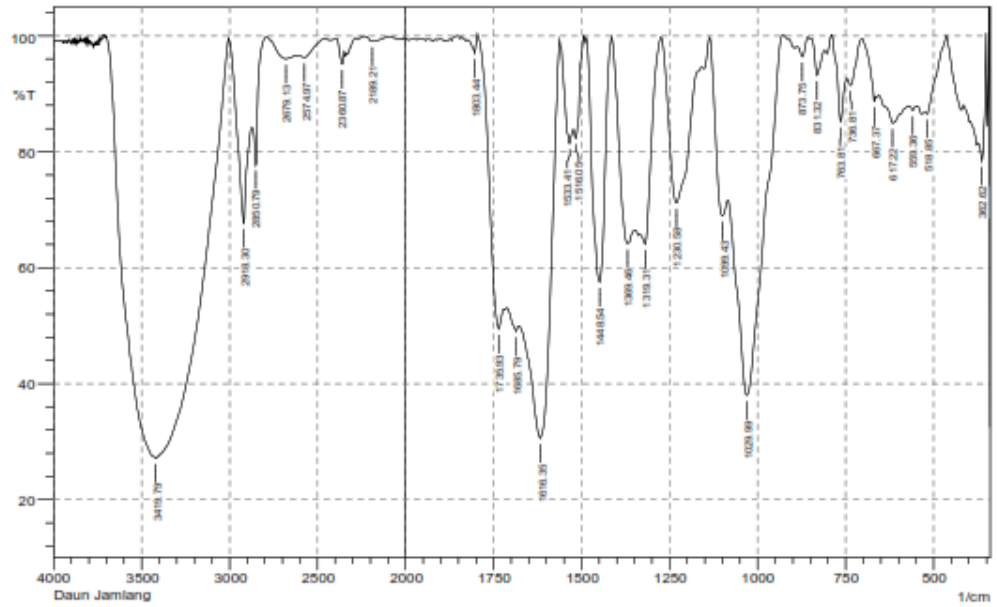
Strongest 3 peaks

no.	peak no.	2Theta (deg)	d (A)	I/I1	FWHM (deg)	Intensity (Counts)	Integrated Int (Counts)
1	5	44.0584	2.05370	100	0.18210	2290	22495
2	9	64.4185	1.44518	88	0.20130	2006	22023
3	3	39.5388	2.27741	26	0.14820	597	5175

Peak Data List

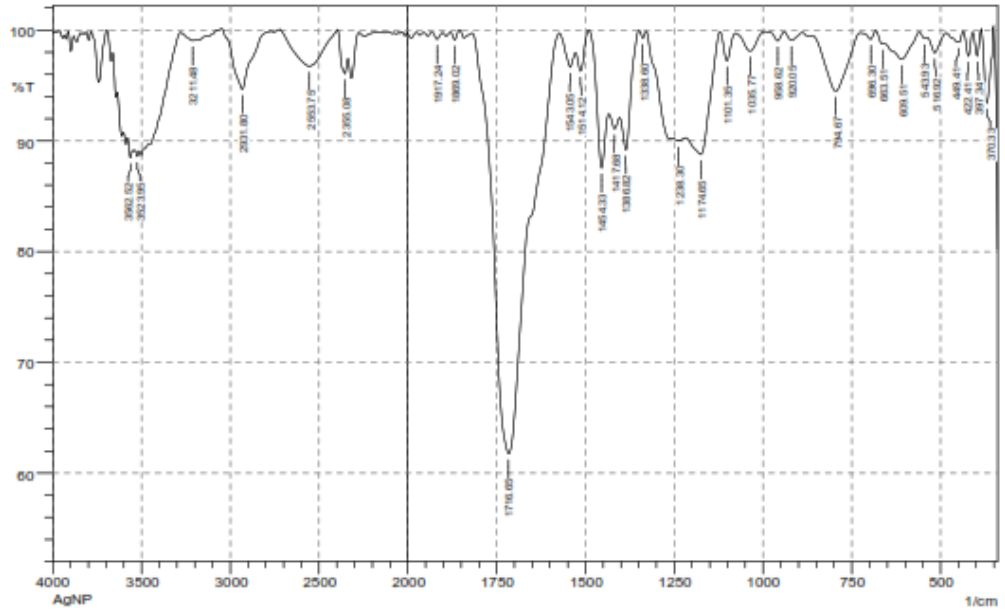
peak no.	2Theta (deg)	d (A)	I/I1	FWHM (deg)	Intensity (Counts)	Integrated Int (Counts)
1	33.9831	2.63593	4	0.16980	98	1085
2	37.8242	2.37661	21	0.19840	475	5628
3	39.5388	2.27741	26	0.14820	597	5175
4	43.7400	2.06791	5	0.13780	107	1630
5	44.0584	2.05370	100	0.18210	2290	22495
6	57.4982	1.60154	23	0.17280	524	4919
7	57.8496	1.59264	4	0.10740	99	558
8	64.0800	1.45200	5	0.13140	117	1706
9	64.4185	1.44518	88	0.20130	2006	22023
10	64.7200	1.43917	4	0.07860	85	755
11	68.8114	1.36324	21	0.19900	473	5212
12	69.2416	1.35582	4	0.11850	81	473

Lampiran 5. Data Hasil Karakterisasi Ekstrak Daun Jamblang Sebelum Penambahan $AgNO_3$ dengan FTIR



No.	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	362.62	76.399	7.14	368.4	352.97	1.293	0.405
2	516.65	86.543	1.16	522.71	464.64	1.796	0.099
3	559.36	87.107	0.757	570.93	547.78	1.332	0.032
4	617.22	84.942	3.926	655.6	572.86	5.039	0.754
5	667.37	86.725	1.301	702.09	665.44	0.643	-0.076
6	736.61	91.452	2.666	746.45	702.09	1.006	0.221
7	763.61	85.167	10.543	788.89	746.45	1.606	0.863
8	831.32	93.159	5.54	846.75	810.1	0.653	0.416
9	873.75	96.367	2.505	887.26	856.32	0.298	0.164
10	1029.99	36	43.617	1083.99	929.69	33.244	22.261
11	1099.43	66.951	10.227	1136.07	1085.92	5.51	1.715
12	1230.56	71.156	26.589	1273.02	1159.22	9.269	7.767
13	1319.31	64.065	10.519	1334.74	1274.95	6.164	1.174
14	1369.46	64.117	12.462	1413.62	1350.17	8.349	2.526
15	1446.54	57.519	41.65	1485.19	1415.75	8.719	8.527
16	1516.05	82.319	5.636	1523.76	1494.83	1.42	0.392
17	1533.41	81.446	5.597	1562.34	1525.69	2.09	0.567
18	1616.35	30.559	45.527	1676.07	1564.27	36.126	20.757
19	1665.79	46.993	1.457	1710.66	1660	9.147	0.206
20	1735.93	49.414	12.272	1793.6	1722.43	11.616	2.239
21	1803.44	96.96	3.039	1822.73	1795.73	0.179	0.156
22	2189.21	99.036	0.005	2191.13	2187.26	0.016	0
23	2360.67	95.106	2.775	2367.67	2349.3	0.546	0.265
24	2574.97	96.241	1.005	2607.76	2461.17	1.517	0.263
25	2679.13	96.011	1.663	2785.21	2621.26	2.064	0.722
26	2850.79	77.771	10.865	2873.94	2792.93	3.365	0.847
27	2916.3	67.65	21.502	3005.1	2875.86	11.042	5.966
28	3419.79	27.166	2.929	3435.22	3007.02	142.474	22.6

Lampiran 6. Data Hasil Karakterisasi Ekstrak Daun Jamblang Setelah Penambahan $AgNO_3$ Menggunakan FTIR



No.	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	370.33	93.421	6.75	385.76	351.04	0.551	0.579
2	397.34	97.666	2.269	406.91	385.76	0.117	0.111
3	422.41	97.656	2.16	435.91	406.91	0.14	0.121
4	449.41	96.914	0.673	464.84	435.91	0.102	0.046
5	516.92	97.936	1.557	536.14	486.06	0.273	0.167
6	543.93	99.242	0.216	559.36	536.14	0.052	0.012
7	609.51	97.374	1.91	657.73	559.36	0.735	0.432
8	663.51	96.754	0.29	682.8	657.73	0.09	0.02
9	696.3	99.175	0.712	727.16	682.8	0.056	0.056
10	794.67	94.49	5.133	862.16	729.09	1.726	1.506
11	920.05	99.063	0.721	941.26	889.16	0.129	0.063
12	956.62	99.031	0.615	995.27	941.26	0.106	0.072
13	1035.77	96.122	1.677	1076.21	995.27	0.351	0.276
14	1101.35	97.223	2.567	1120.64	1076.21	0.267	0.227
15	1174.65	88.769	5.796	1217.08	1122.57	3.419	1.327
16	1238.3	89.996	0.247	1253.73	1219.01	1.57	0.023
17	1338.6	99.264	0.657	1350.17	1328.95	0.033	0.026
18	1386.82	89.164	5.216	1402.25	1350.17	1.41	0.513
19	1417.66	91.062	1.161	1433.11	1404.18	1.096	0.063
20	1454.33	87.564	7.462	1490.97	1435.04	1.747	0.775
21	1514.12	96.295	2.406	1527.62	1490.97	0.348	0.162
22	1543.05	96.656	1.695	1573.91	1527.62	0.411	0.177
23	1716.65	61.742	37.99	1816.67	1573.91	21.263	20.976
24	1869.02	99.117	0.791	1880.6	1855.52	0.05	0.041
25	1917.24	99.154	0.606	1932.67	1901.81	0.066	0.036
26	2355.06	96.06	2.125	2395.59	2337.72	0.674	0.351
27	2553.75	96.759	3.296	2719.63	2397.52	2.563	2.66
28	2931.8	94.662	5.326	3047.53	2792.93	2.615	2.567
29	3211.46	99.056	0.563	3260.92	3136.16	0.442	0.203
30	3523.95	88.563	0.517	3535.52	3514.3	1.091	0.026
31	3562.52	88.461	1.122	3577.95	3550.95	1.356	0.074

Lampiran 7. Perhitungan Ukuran Partikel

Persamaan Debye-Scherer

$$D = \frac{K\lambda}{ß\ Cos\theta}$$

Keterangan:

D = Ukuran partikel (nm)

K = Faktor bentuk dari kristal (0,98)

λ = Panjang gelombang dari sinar X (1,54178 Å)

ß = Nilai FWHM (rad)

θ = Sudut Bragg/sudut difraksi (2θ/2)

a. 2θ = 39, 5388

θ = 19,76

$\beta = 0{,}14820 \times \frac{3{,}14}{180}$

= 0,00258

$D = \frac{0{,}98 \times 0{,}154\ nm}{0{,}613 \times 0{,}00258}$

$= \frac{0{,}15092}{0{,}00158}$

= 62,01 nm

b. 2θ = 44,0584

θ = 22,09

$\beta = 0{,}18210 \times \frac{3{,}14}{180}$

= 0,00317

$D = \frac{0{,}98 \times 0{,}154\ nm}{0{,}926 \times 0{,}00317}$

$= \frac{0{,}15092}{0{,}00293}$

= 51,33 nm

c. 2θ = 64,4185

θ = 32,2

$\beta = 0{,}20130 \times \frac{3{,}14}{180}$

= 0,0035

$D = \frac{0{,}98 \times 0{,}154\ nm}{0{,}846 \times 0{,}0035}$

$= \frac{0{,}15092}{0{,}002961}$

= 50,81 nm

d. 2θ = 68,8114

θ = 34,4

$$\beta = 0{,}19900 \times \frac{3{,}14}{180}$$

$$= 0{,}00348$$

$$D = \frac{0{,}98 \times 0{,}154 \text{ nm}}{0{,}825 \times 0{,}00348}$$

$$= \frac{0{,}15092}{0{,}002871}$$

$$= 54{,}74 \text{ nm}$$

Lampiran 8. Perhitungan Limit Deteksi dan Sensitivitas

a. Limit deteksi

$y = 0{,}982x + 1{,}51$

$y = -0{,}204x + 5{,}926$ (–)

$0 = 1{,}186x - 4{,}416$

$1{,}186x = 4{,}416$

$x = 3{,}723$ mM (67,04 mg/dL)

b. Sensitivitas

$y = 0{,}982x + 1{,}51$

$$\text{Sensitivitas} = \frac{\text{Slope}}{A}$$

Keterangan:

Slope : Slope dari kurva linearitas

A : Luas Permukaan Eletroda Kerja

$$\text{Sensitivitas} = \frac{\text{Slope}}{A}$$

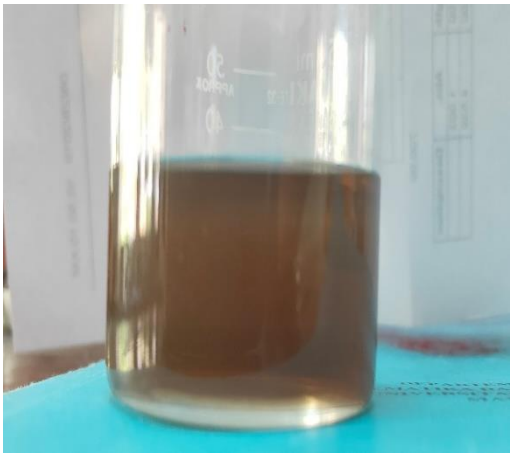
$$= \frac{0{,}982}{3{,}14 \times 0{,}4 \times 0{,}4}$$

$$= \frac{0{,}982}{0{,}5024}$$

$$= 1{,}9546 \text{ A } mM^{-1} \text{ } mm^{-2}$$

Lampiran 9. Dokumentasi Kegiatan Penelitian

Proses Sintesis AgNP



Hasil Sintesis AgNP

Hasil Sentrifuge AgNP

Hasil *Freeze Dryer* AgNP

Elektroda Kerja

Spektrofotometer UV-VIS

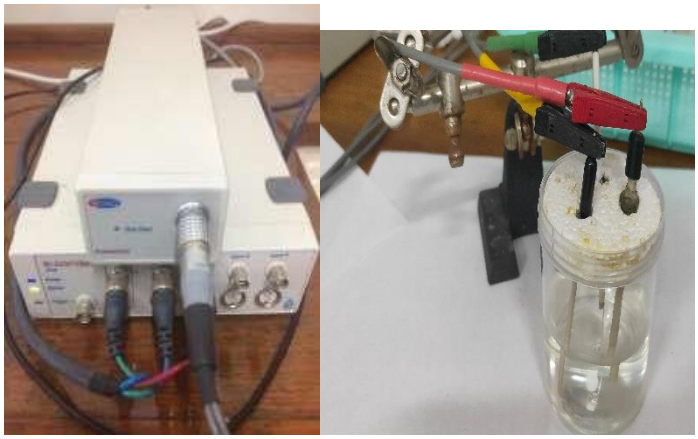
FTIR

Magnetic stirer

PSA

X-Ray Diffarction (XRD)

SEM



Potensiostat