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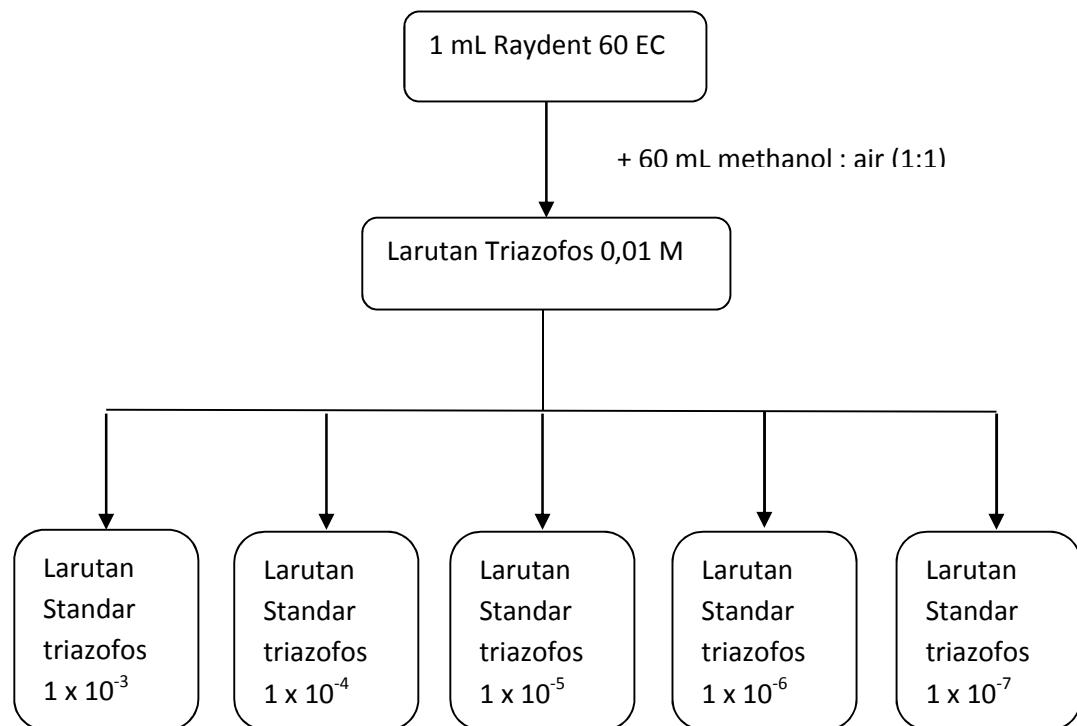
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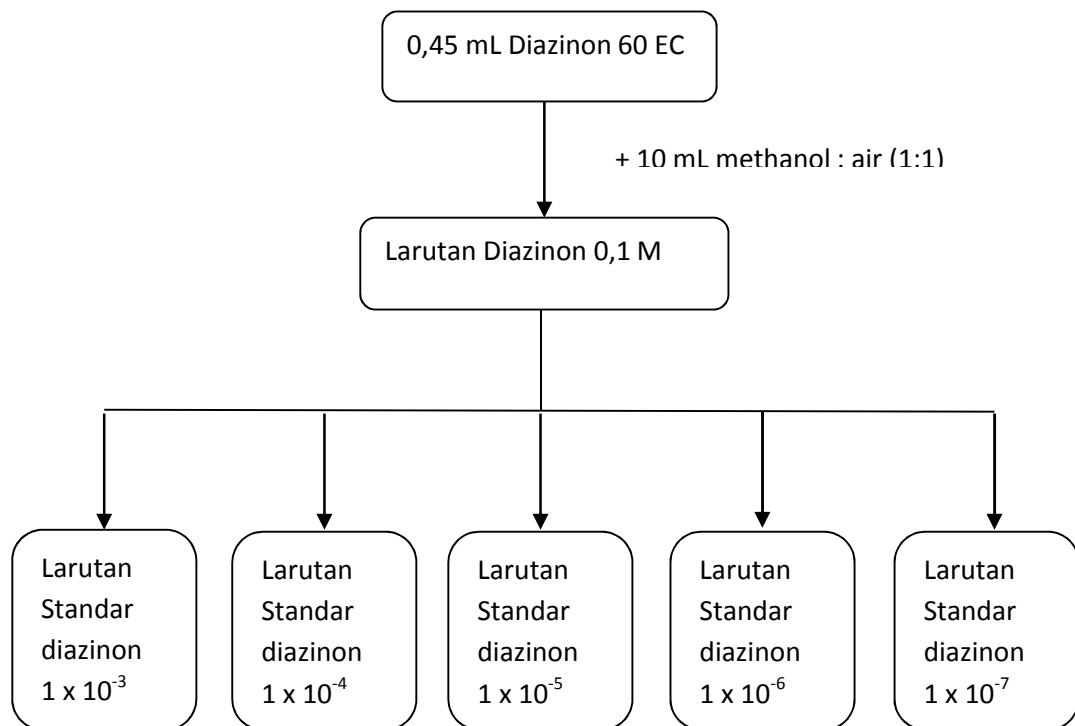
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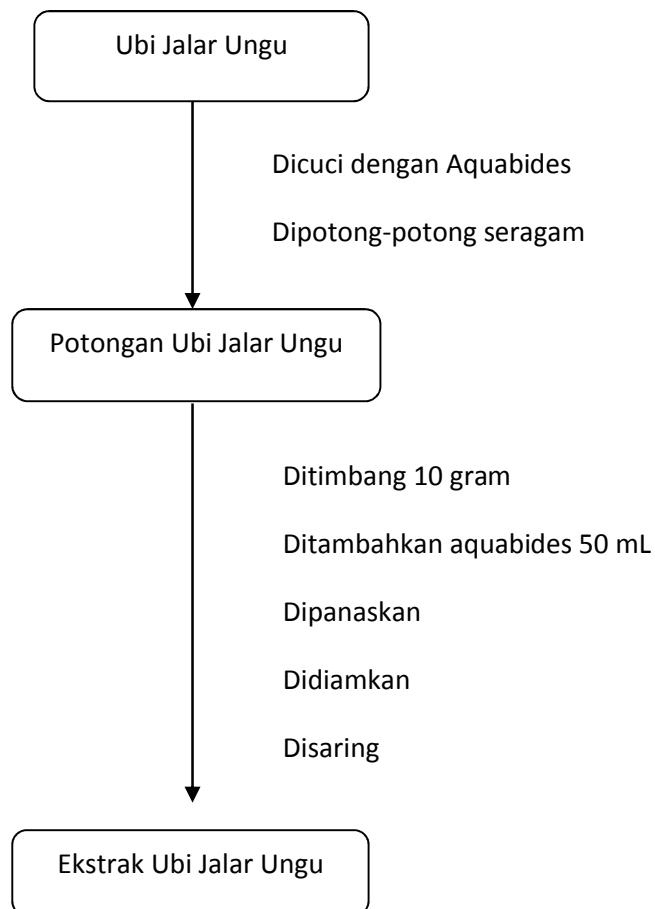
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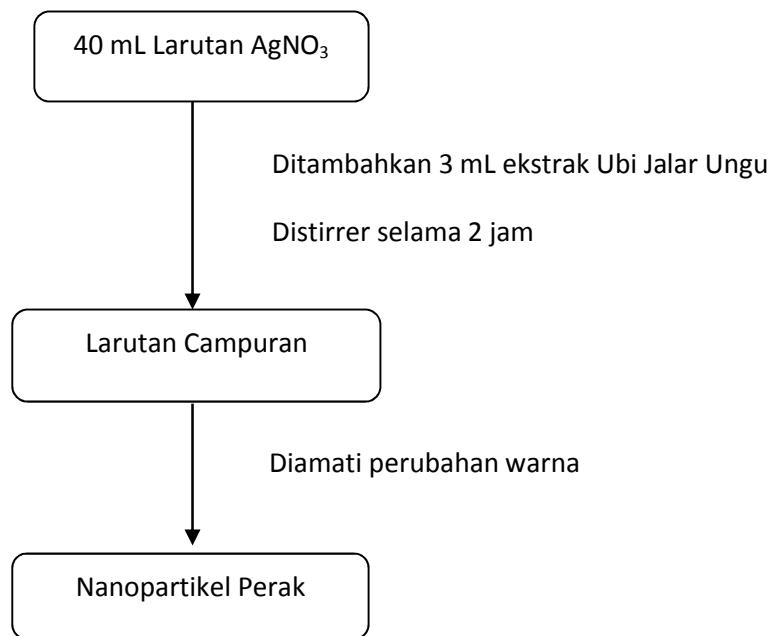
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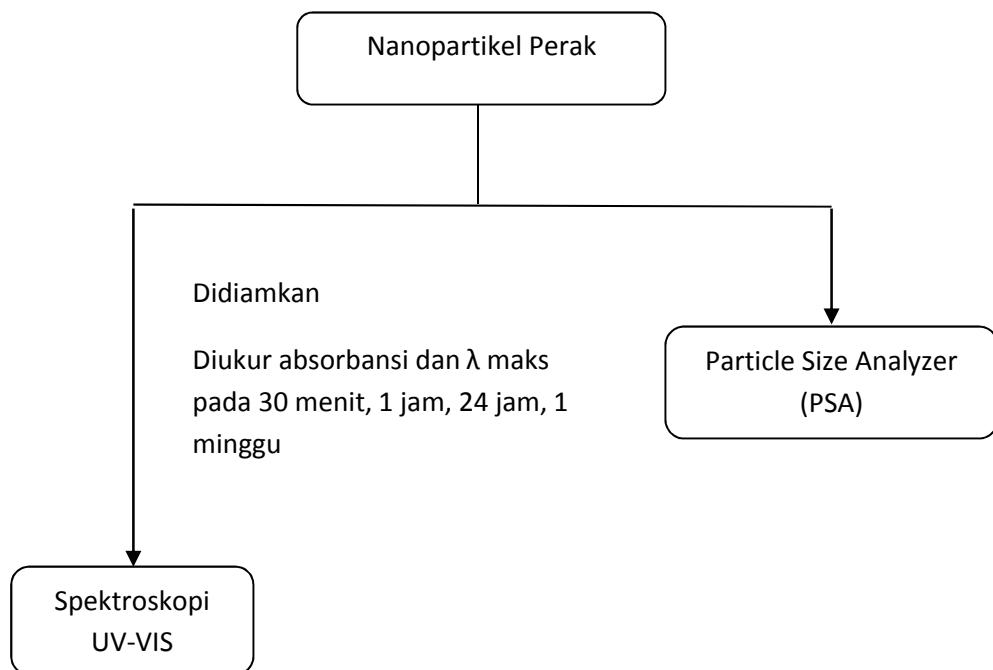
LAMPIRAN

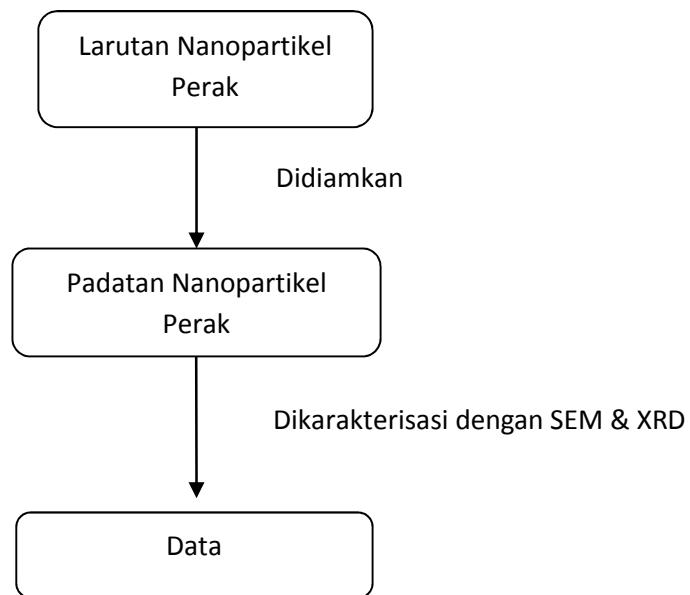
Lampiran 1. Bagan pembuatan larutan standar Triazofos

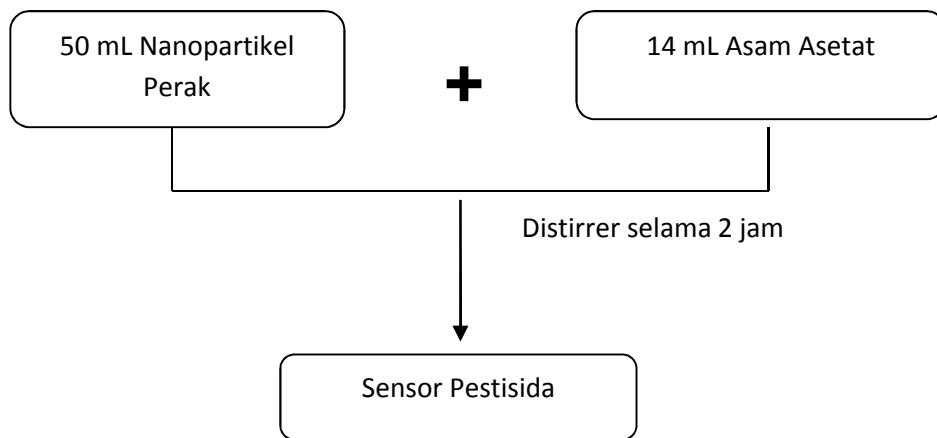
Lampiran 2. Bagan pembuatan larutan standar Diazinon

Lampiran 3. Pembuatan Air Rebusan Ubi Jalar Ungu

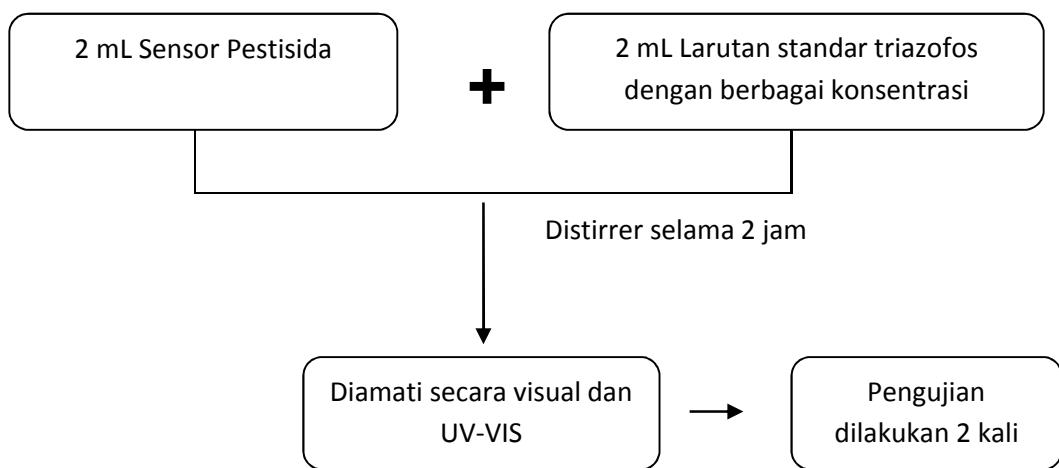
Lampiran 4. Biosintesis Nanopartikel Perak (AgNP)

Lampiran 5. Karakterisasi AgNP dengan Spektroskopi UV-VIS & PSA

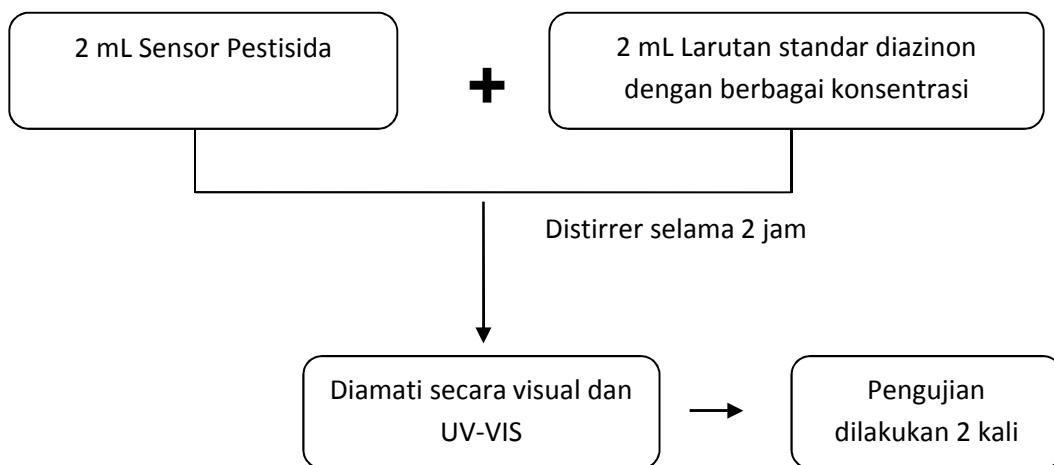
Lampiran 6. Karakterisasi Nanopartikel Perak

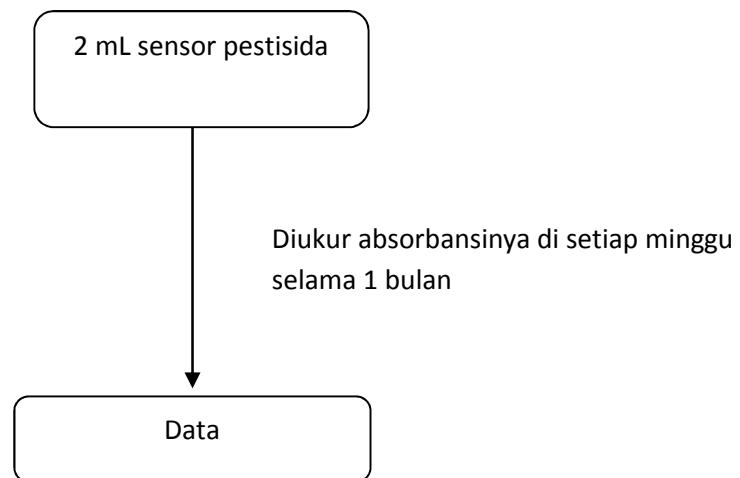
Lampiran 7. Pembuatan Sensor Pestisida

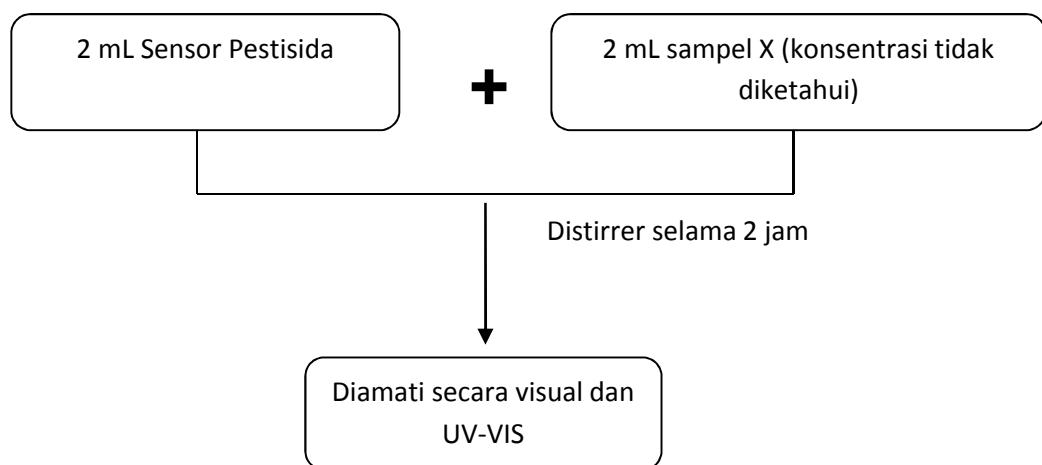
Lampiran 8. Pengujian Sensitifitas dan Reproduksibilitas Sensor Pestisida



Lampiran 9. Pengujian Sensitifitas dan Reproduksibilitas Sensor Pestisida

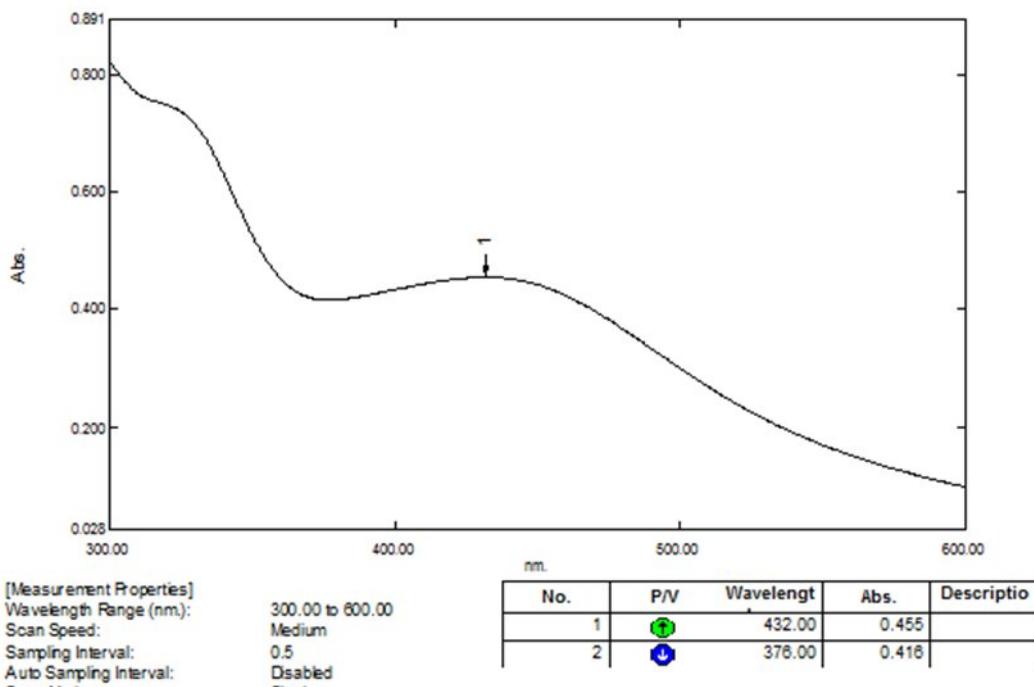


Lampiran 10. Pengujian *Aging Effect* Sensor Pestisida

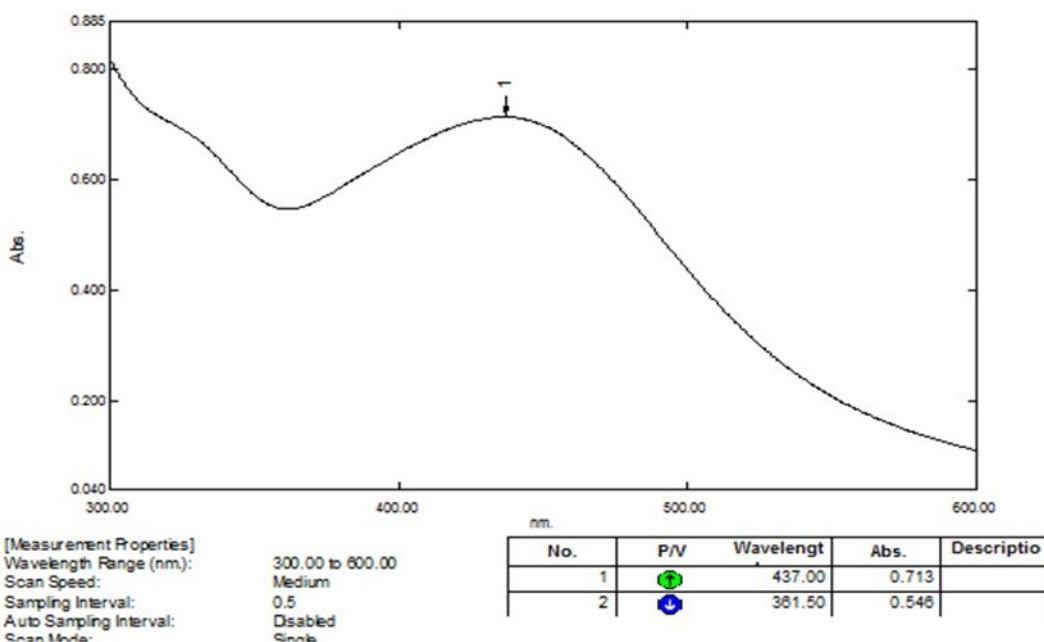
Lampiran 11. Pengukuran Kandungan Sampel Pestisida

Lampiran 12. Pemantauan pembuatan nanopartikel perak

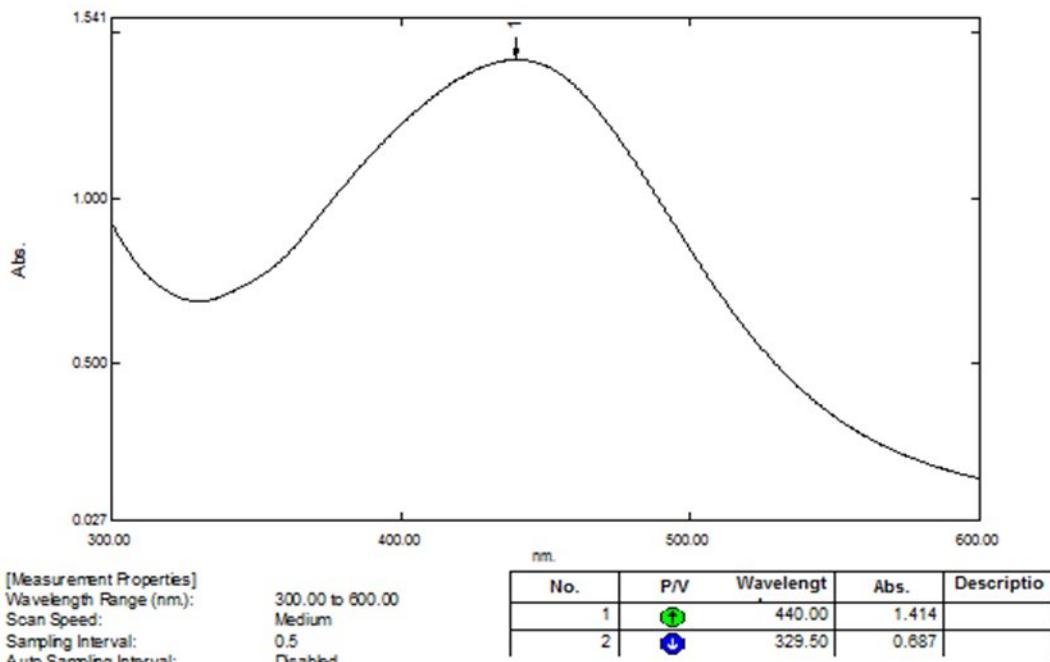
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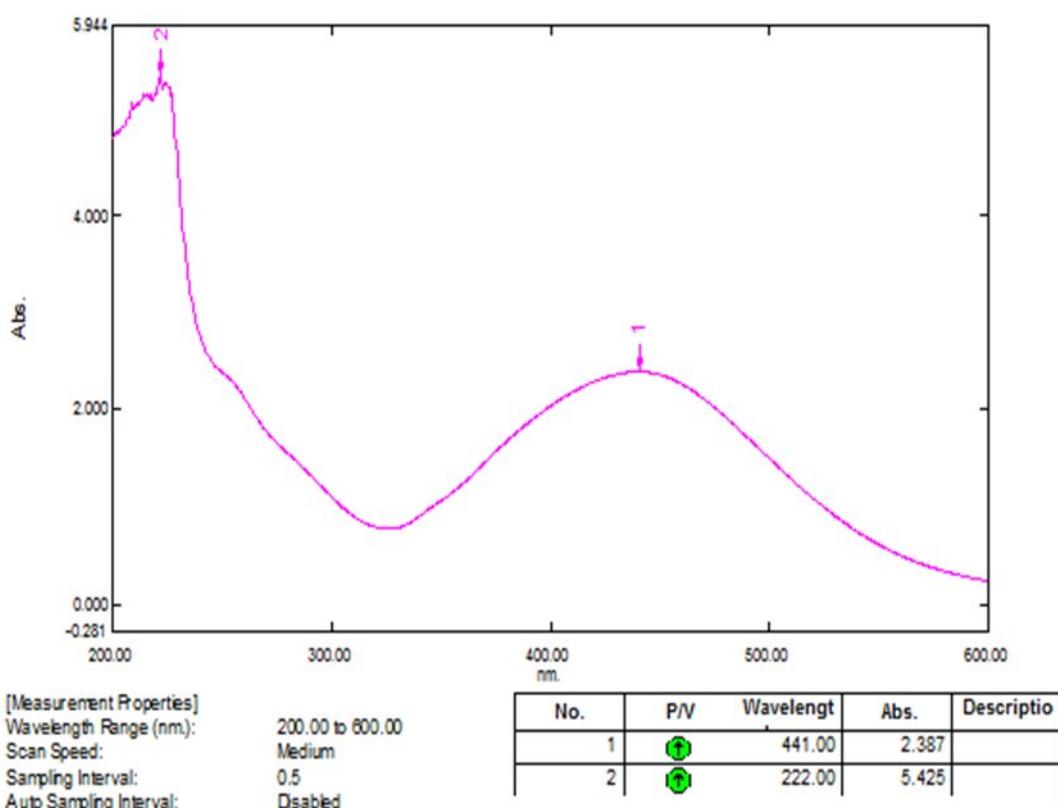
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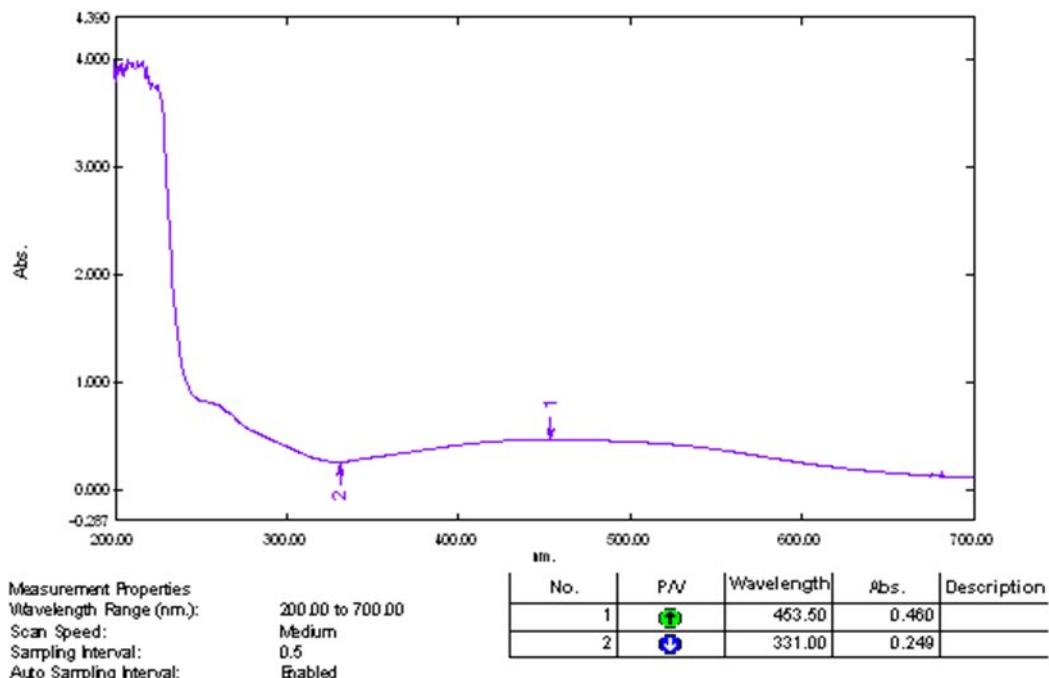
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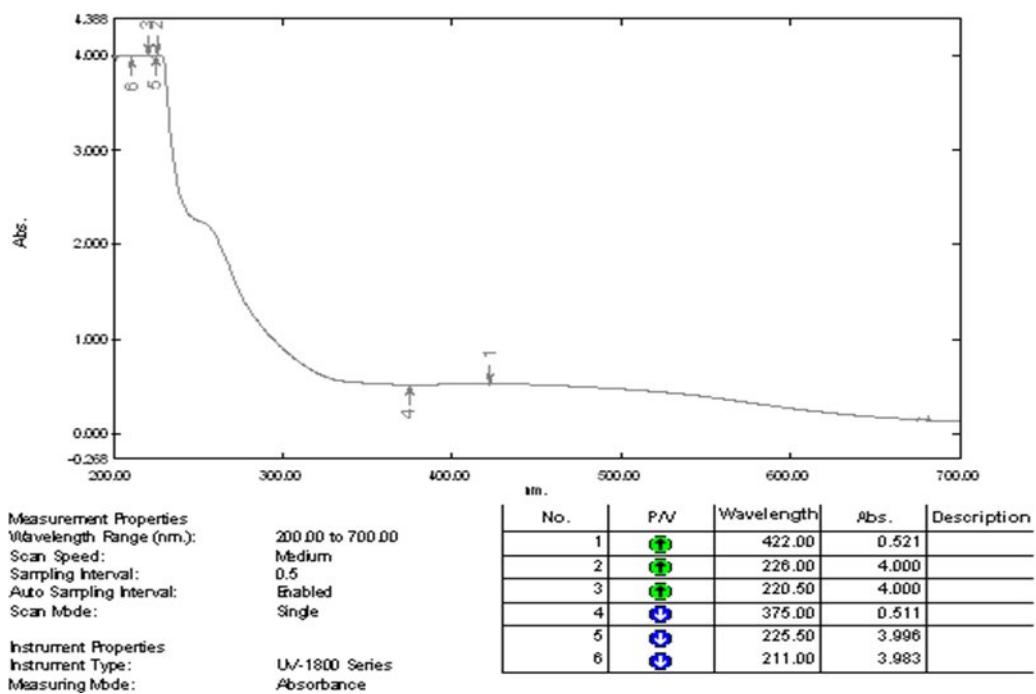
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Data Set: diazinon 10-5 + el sensor (II) - RawData



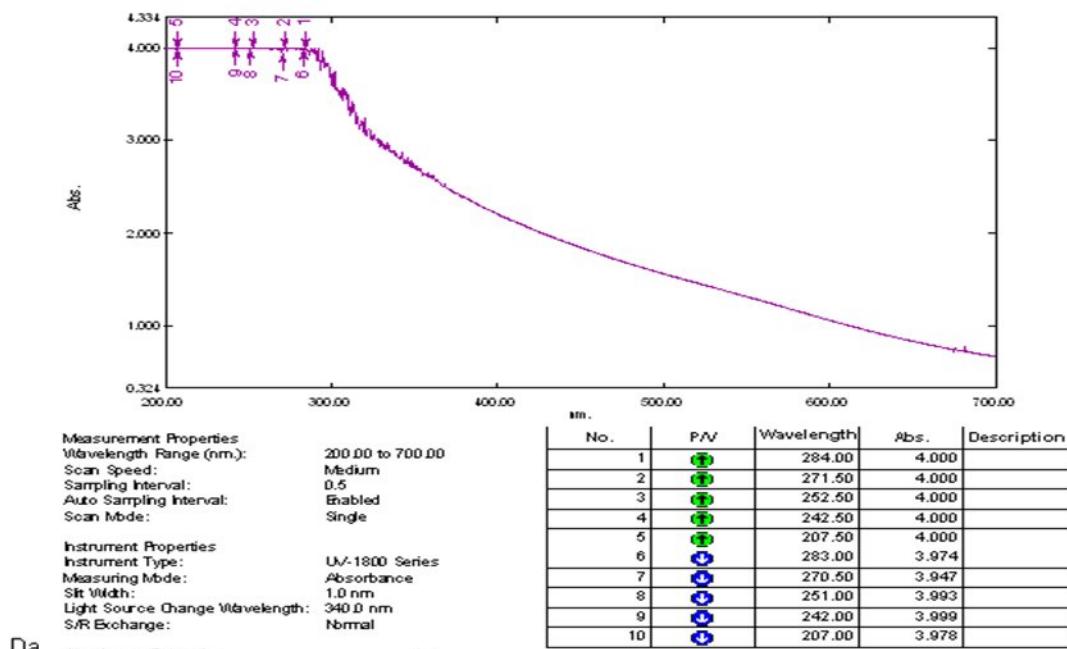
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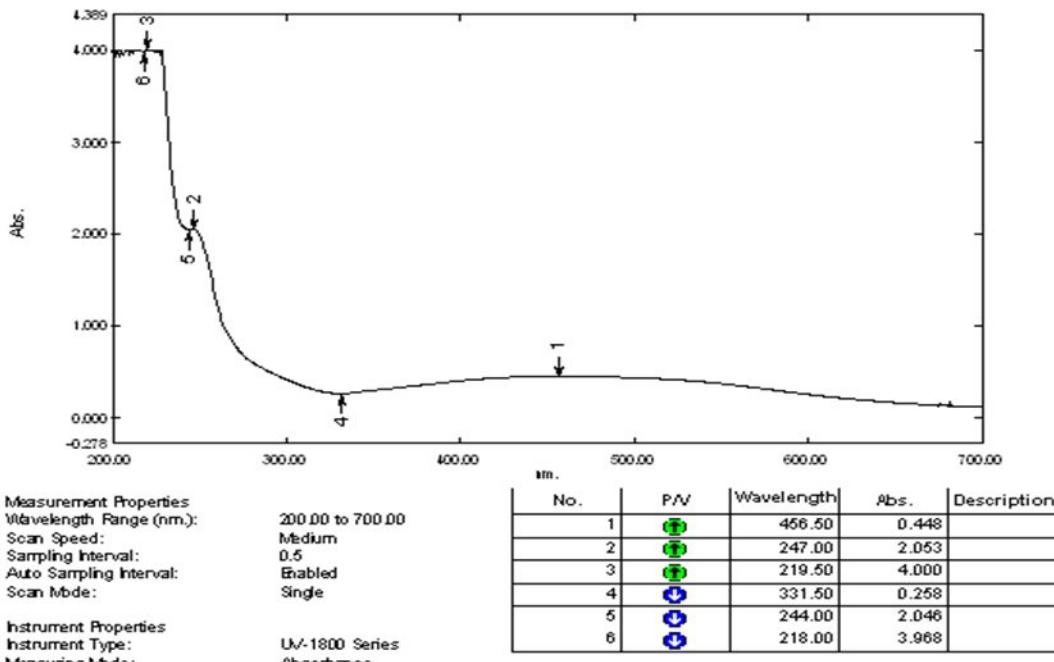
Lampiran 15. Pengujian Sensitifitas elemen sensor

Diazinon eksperimen pertama

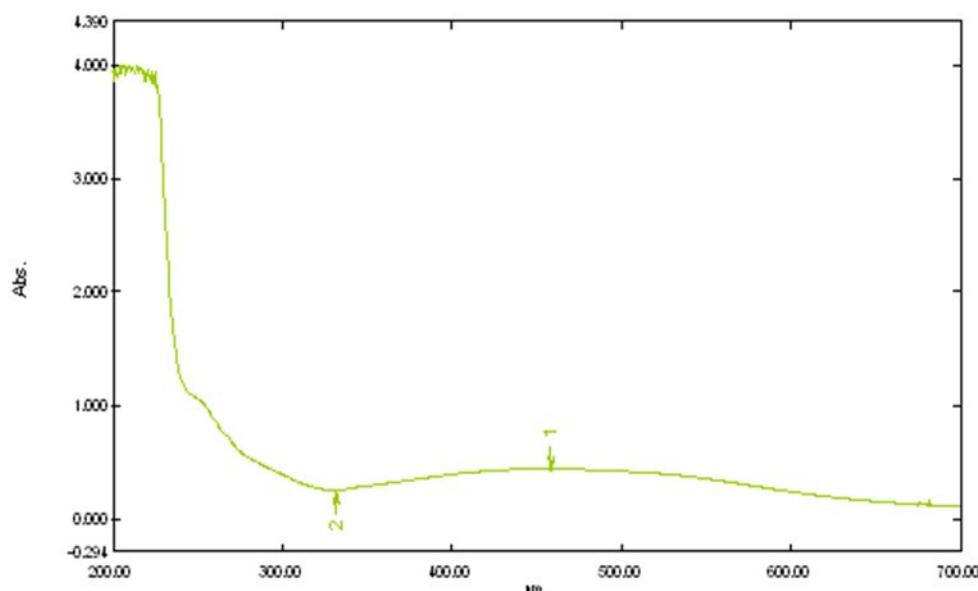
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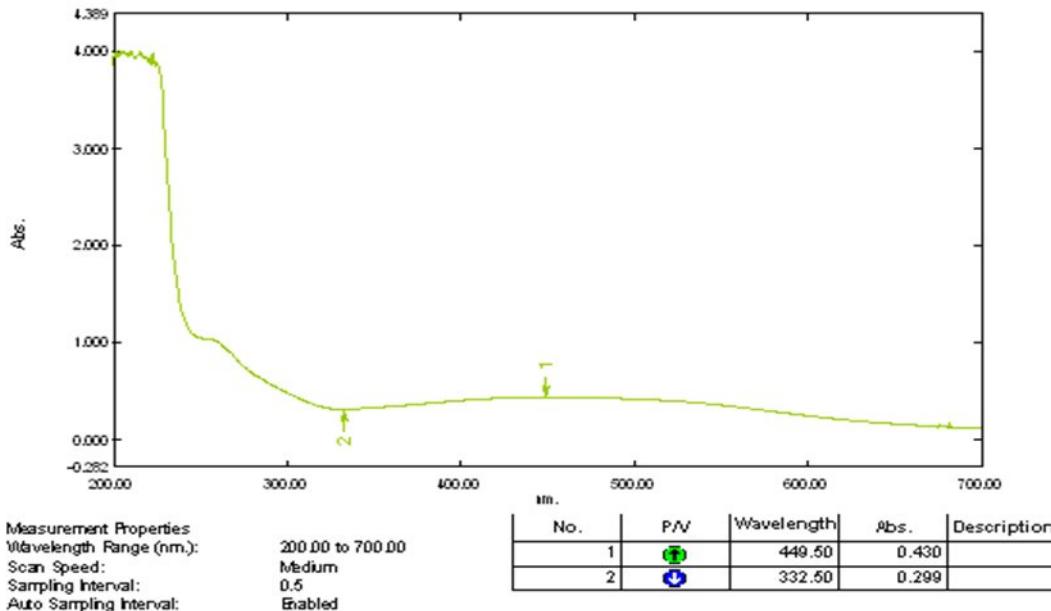
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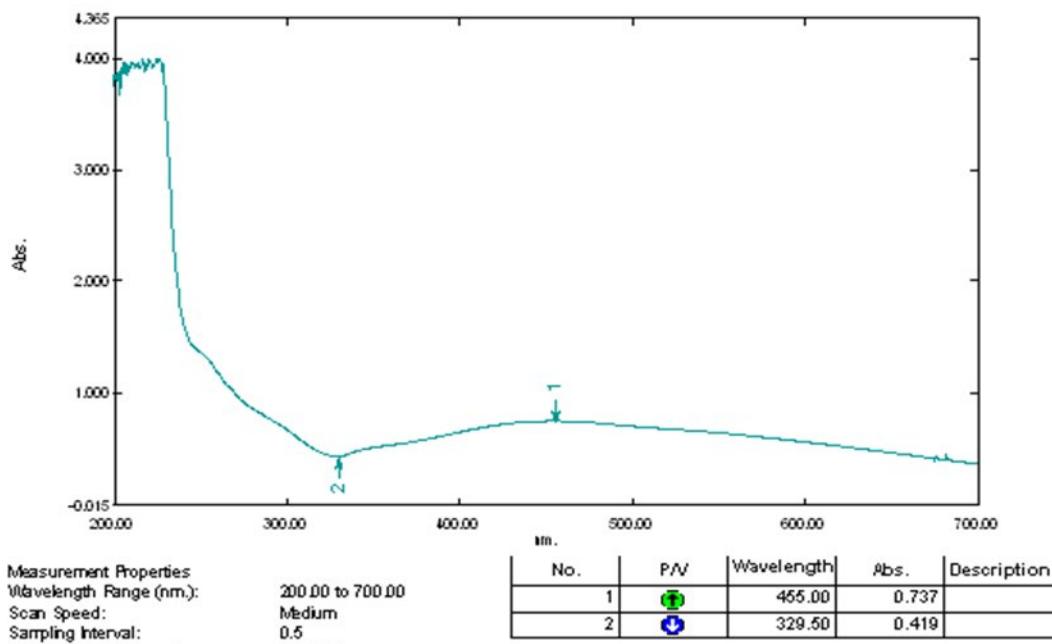
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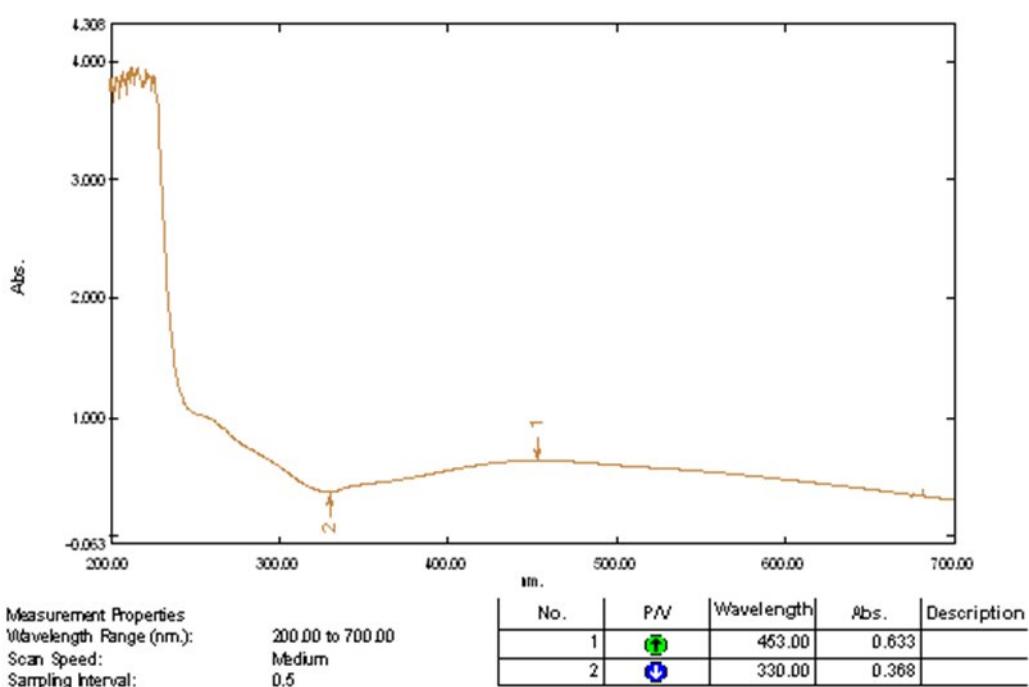
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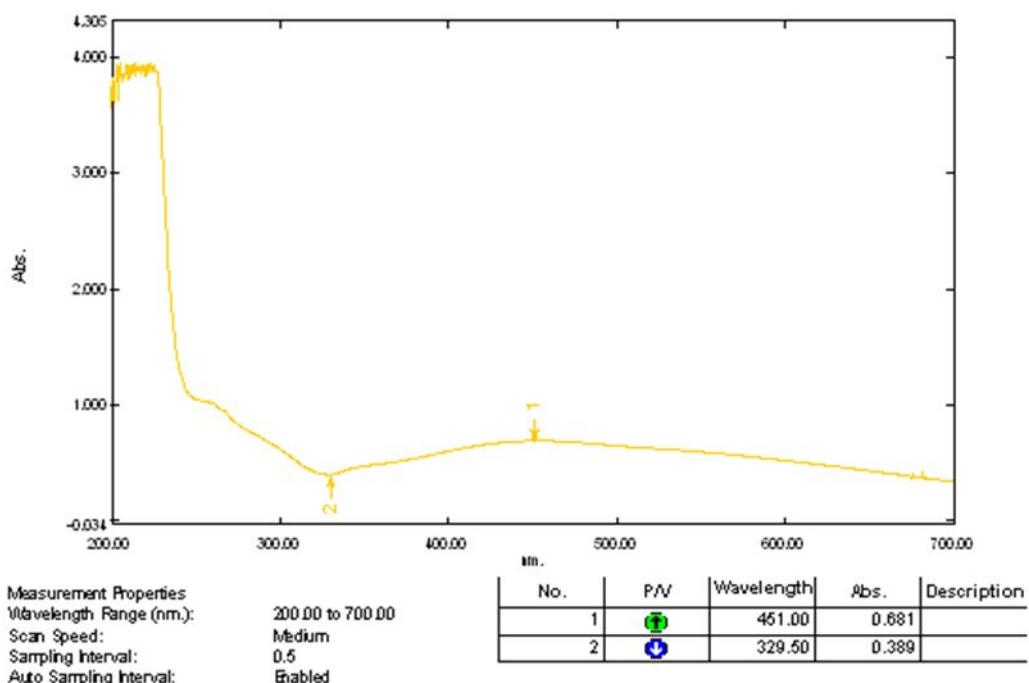
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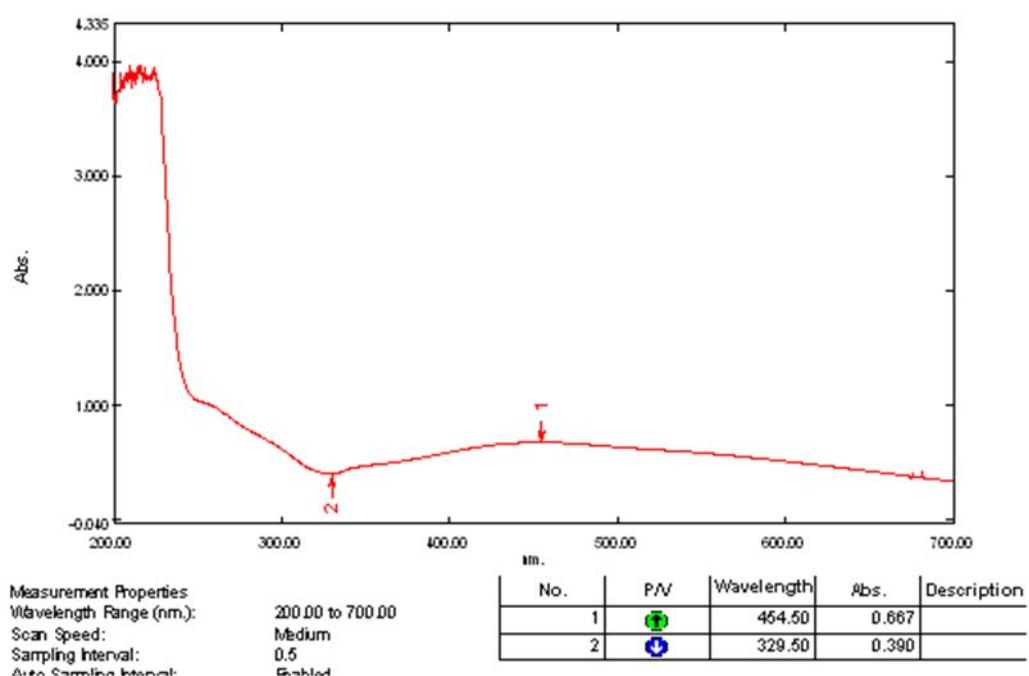


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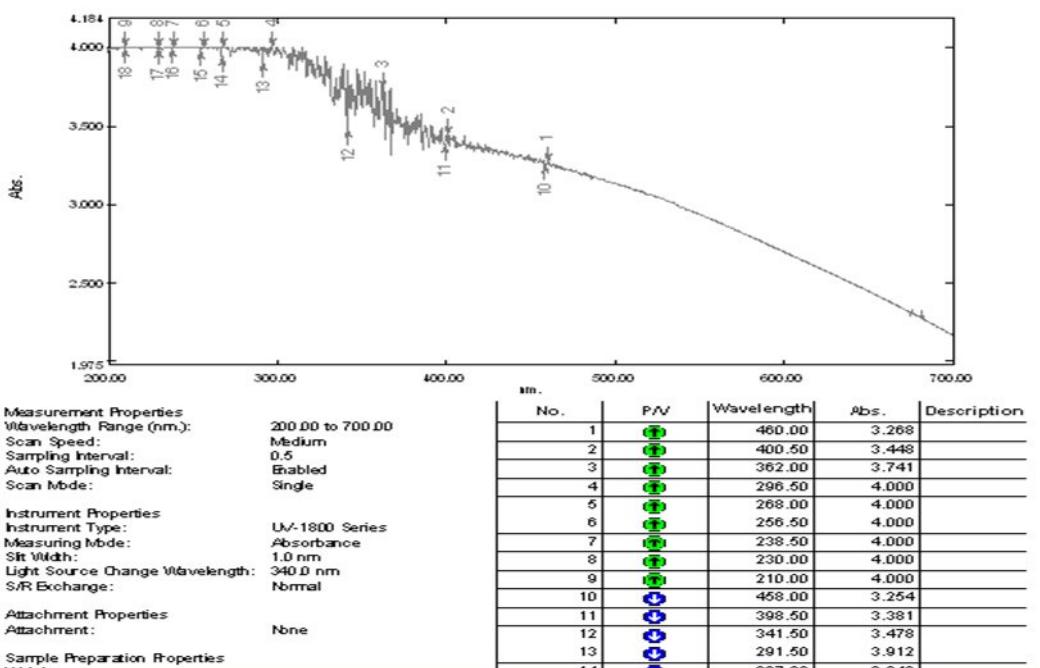


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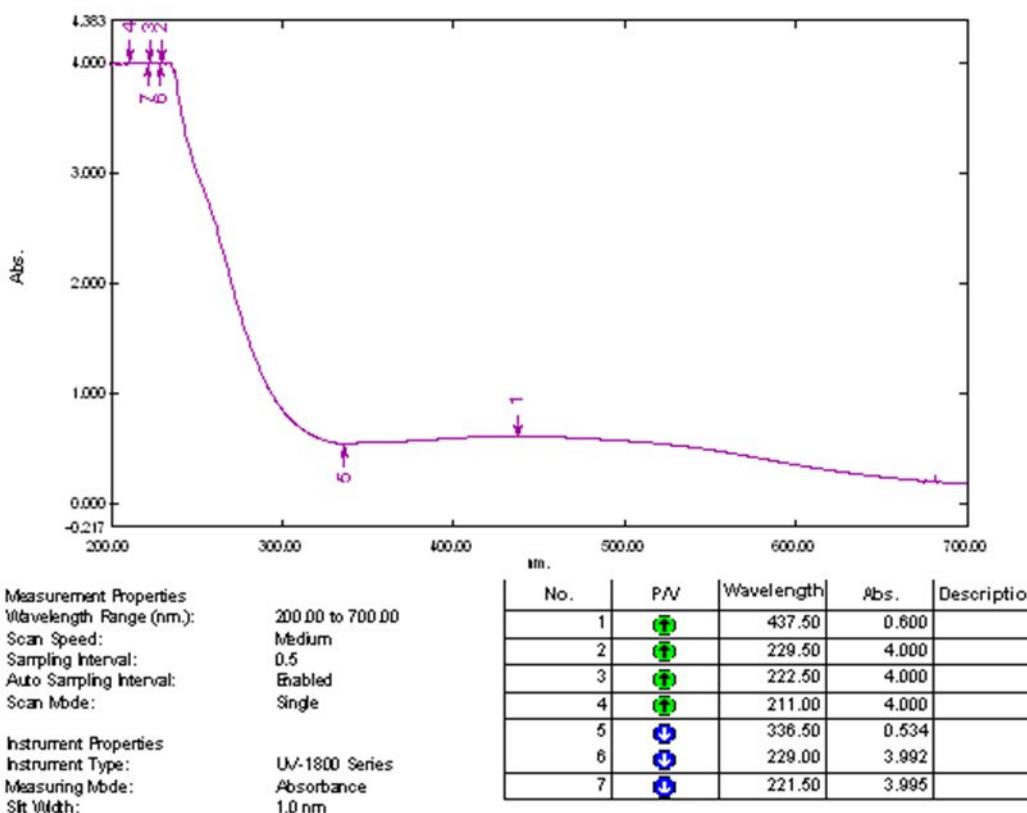
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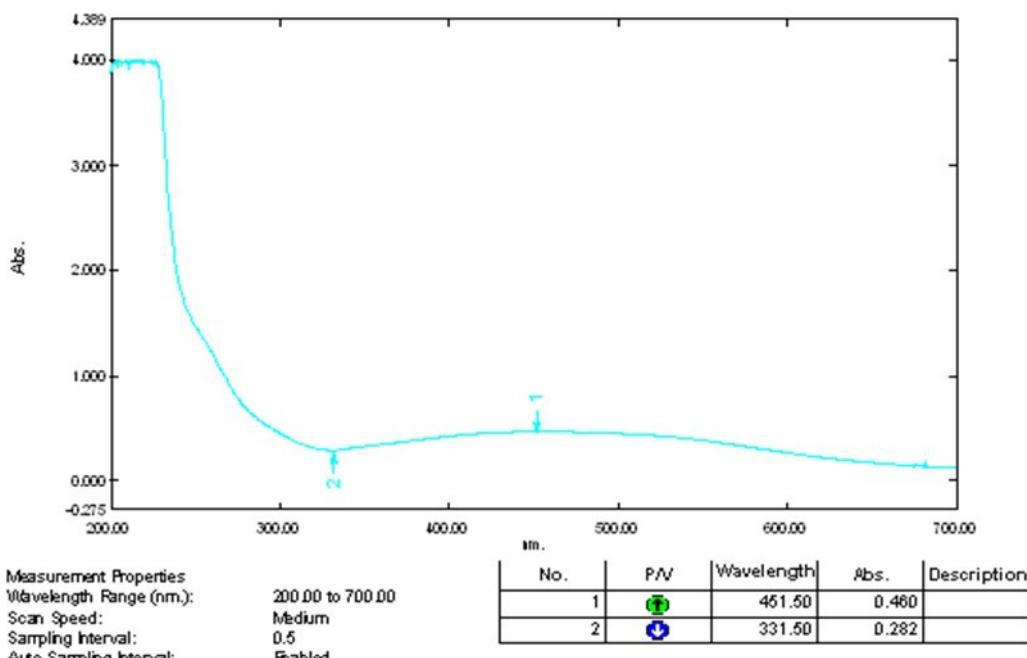
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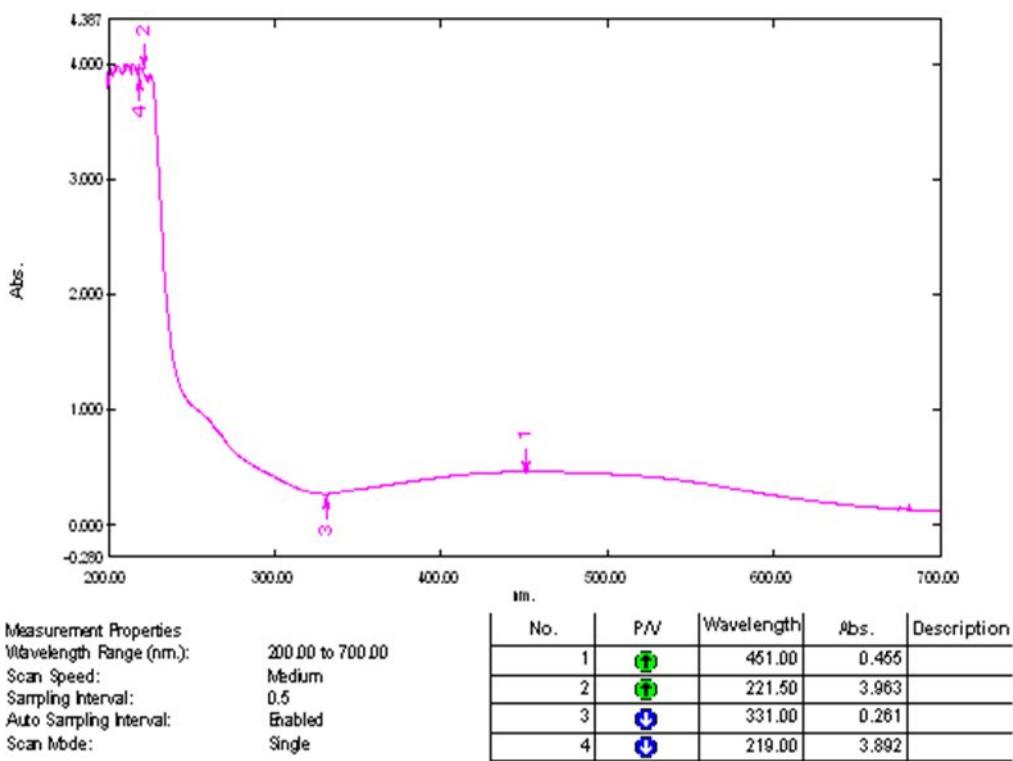
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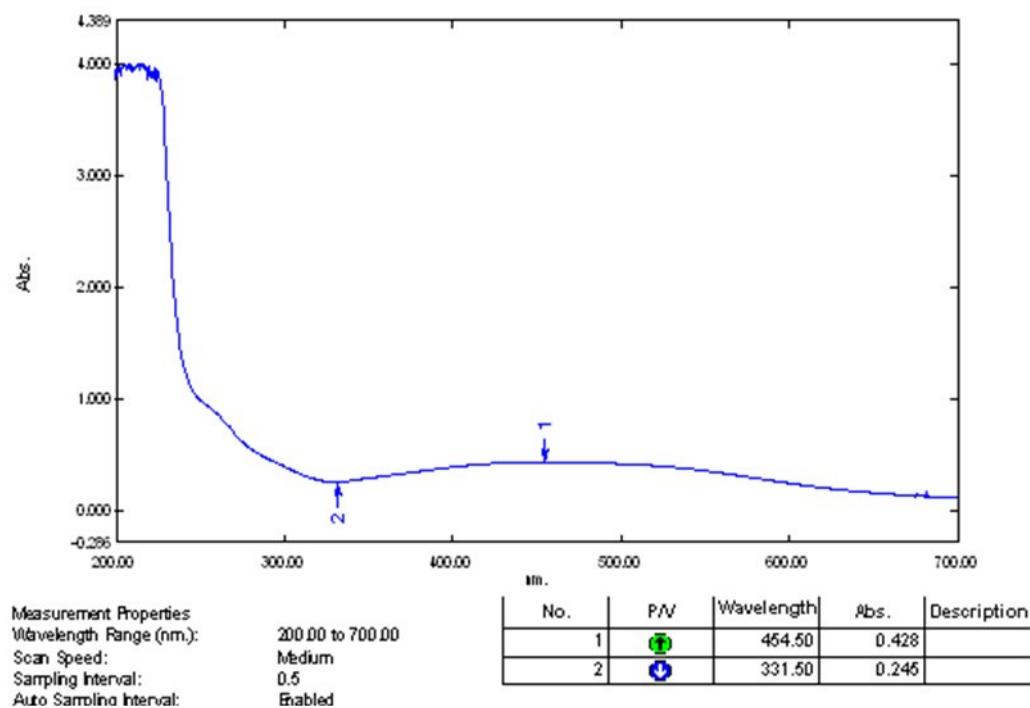
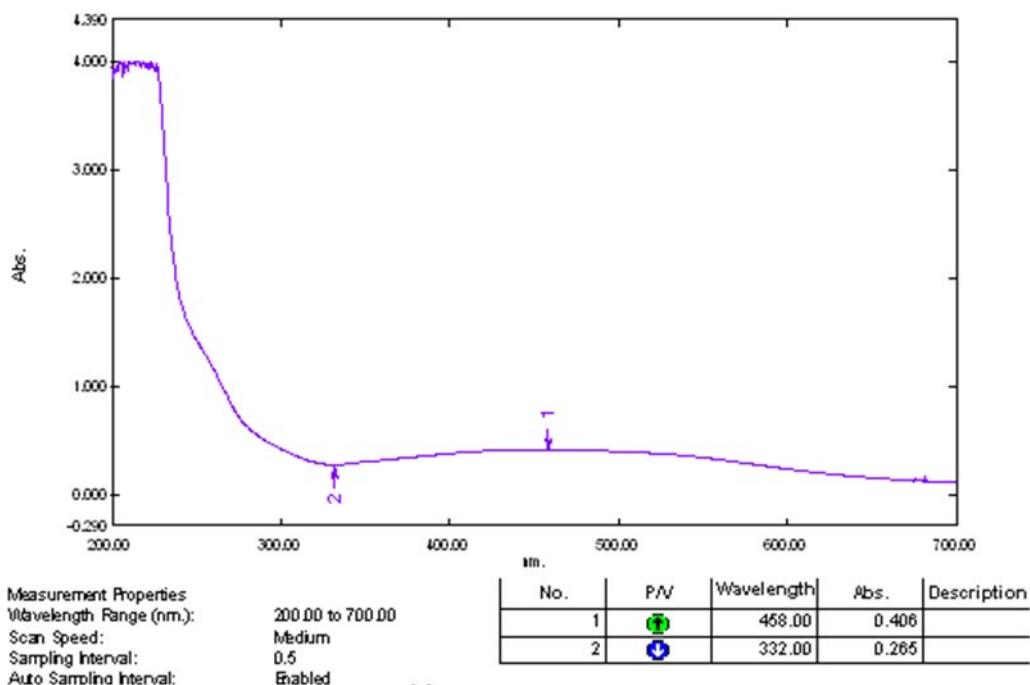
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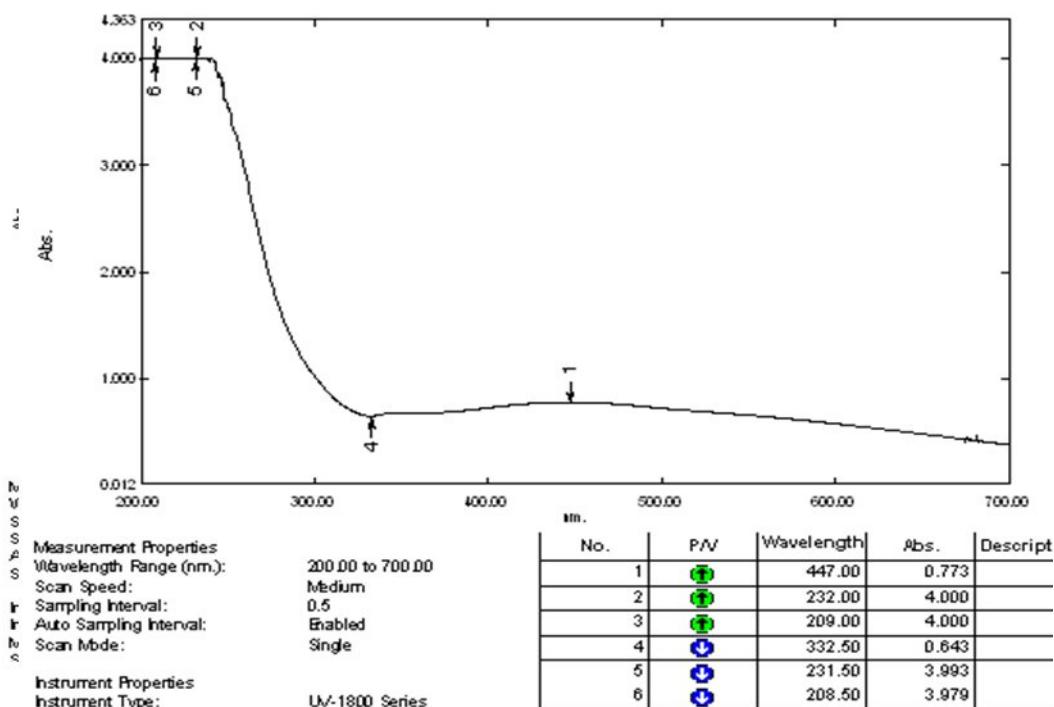


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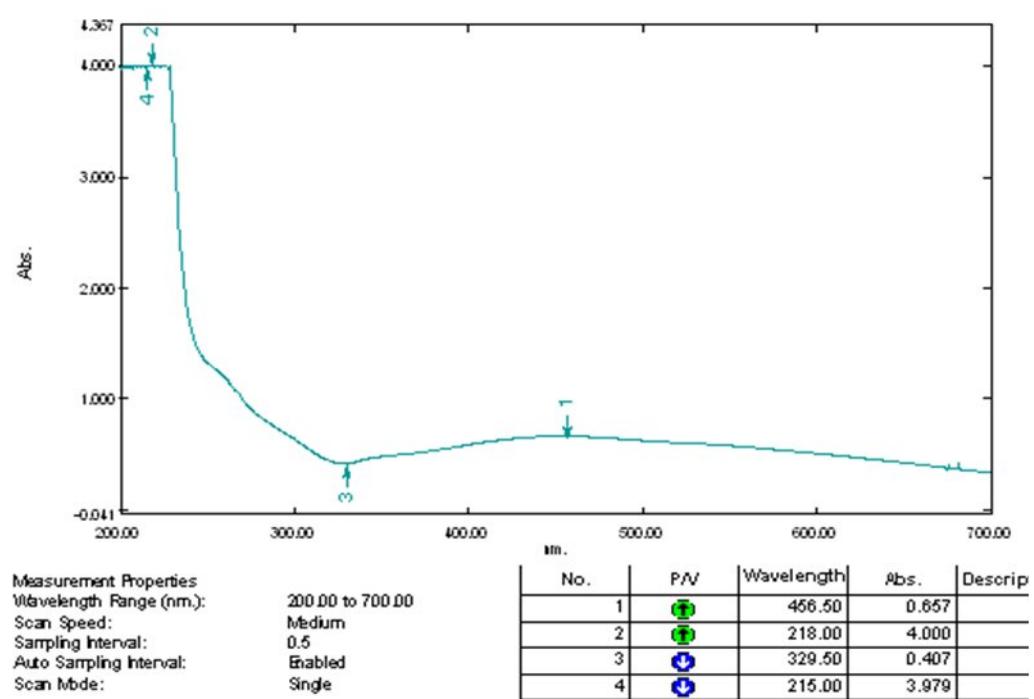


Triazofos eksperimen kedua

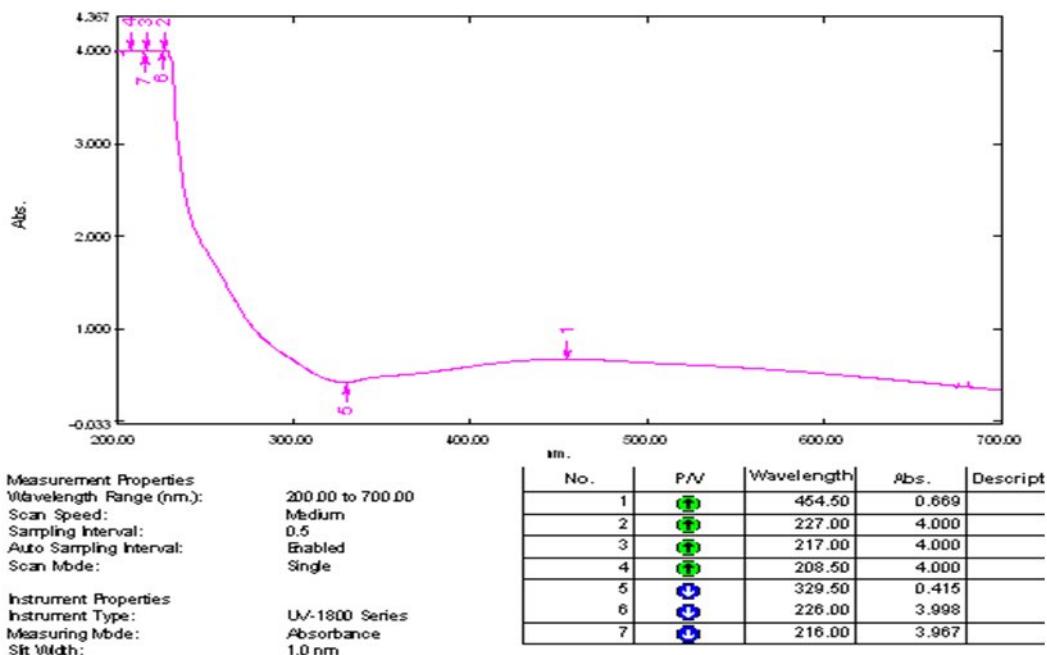
I Data Set: triazofos 10-3 + el sensor (III) - RawData



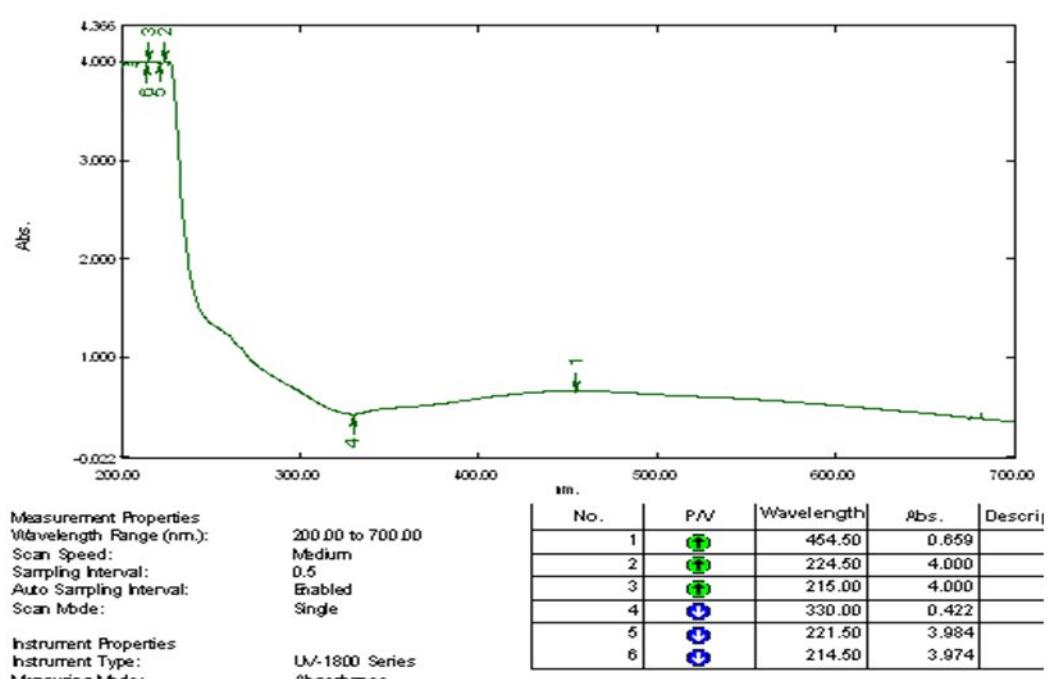
Data Set: triazofos 10-6 + el sensor (III) - RawData



Data Set: triazofos 10-4 + el sensor (III) - RawData

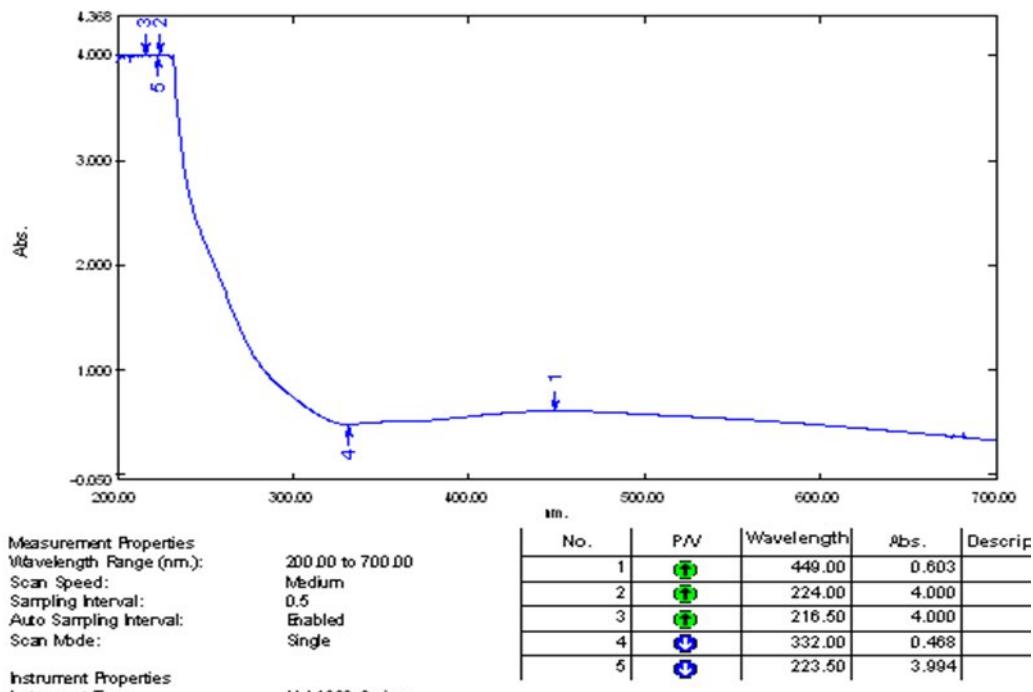


Data Set: triazofos 10-5 + el sensor (III.) - RawData

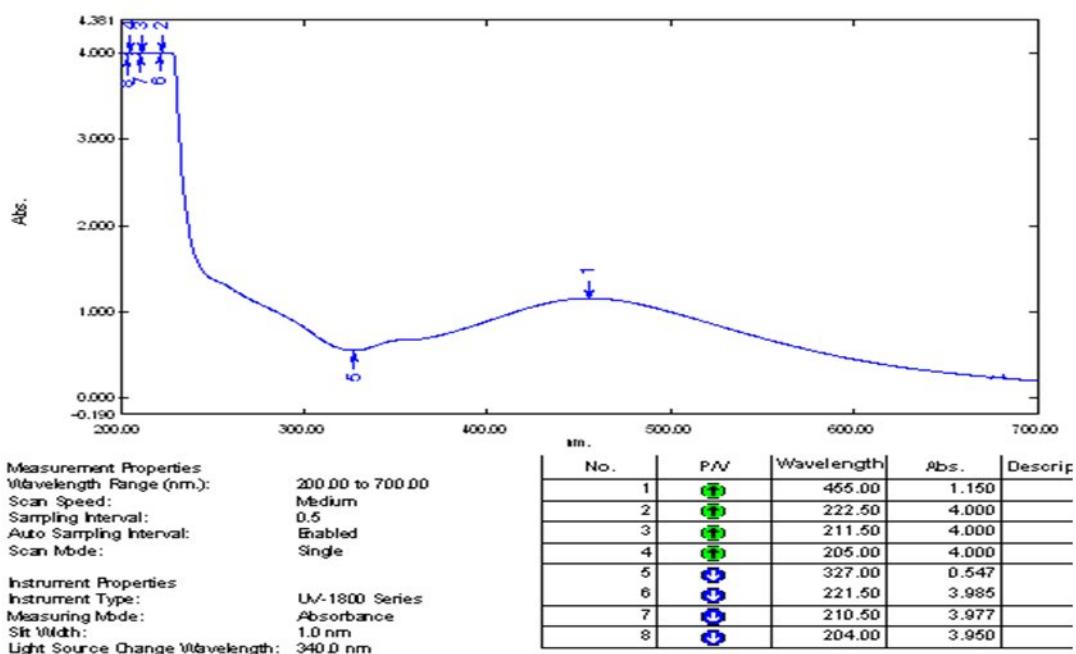


Analisis triazofos tanpa asam asetat

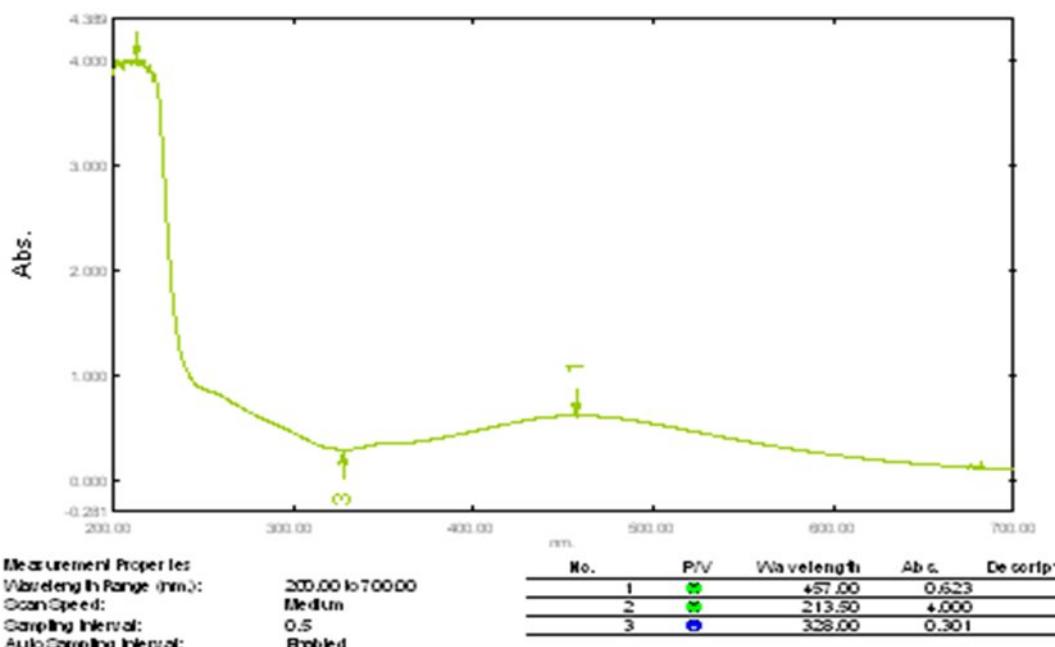
Data Set: triazofos 10-7 + el sensor (III.) - RawData



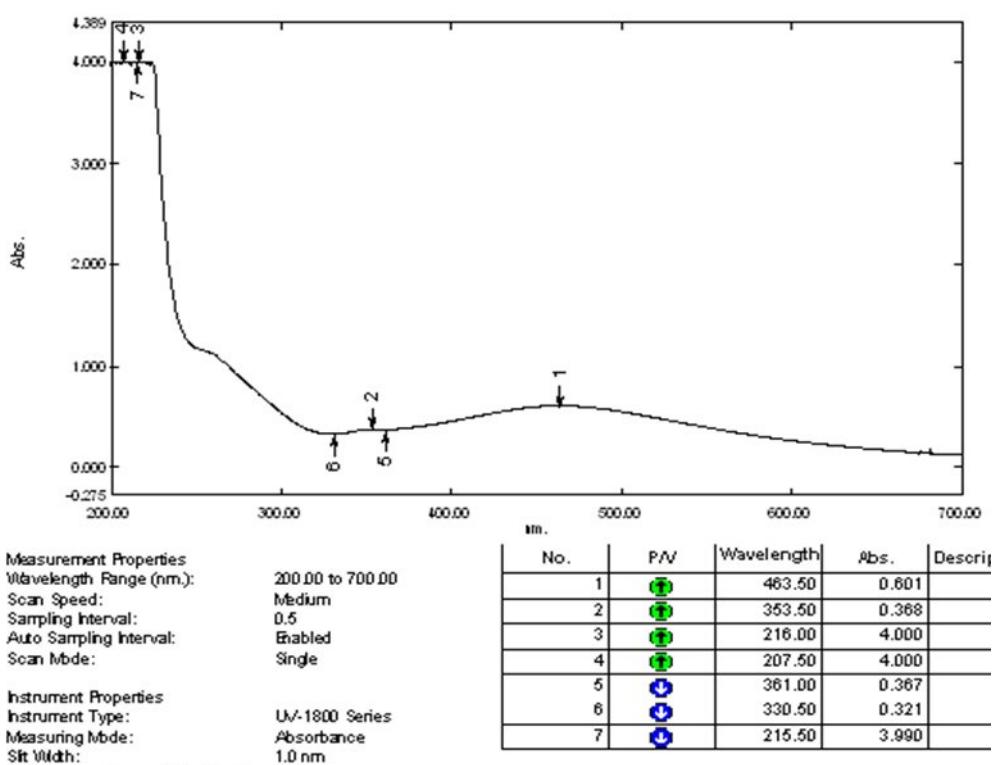
Data Set: AgNp 0,001 M analisis triazo - RawData

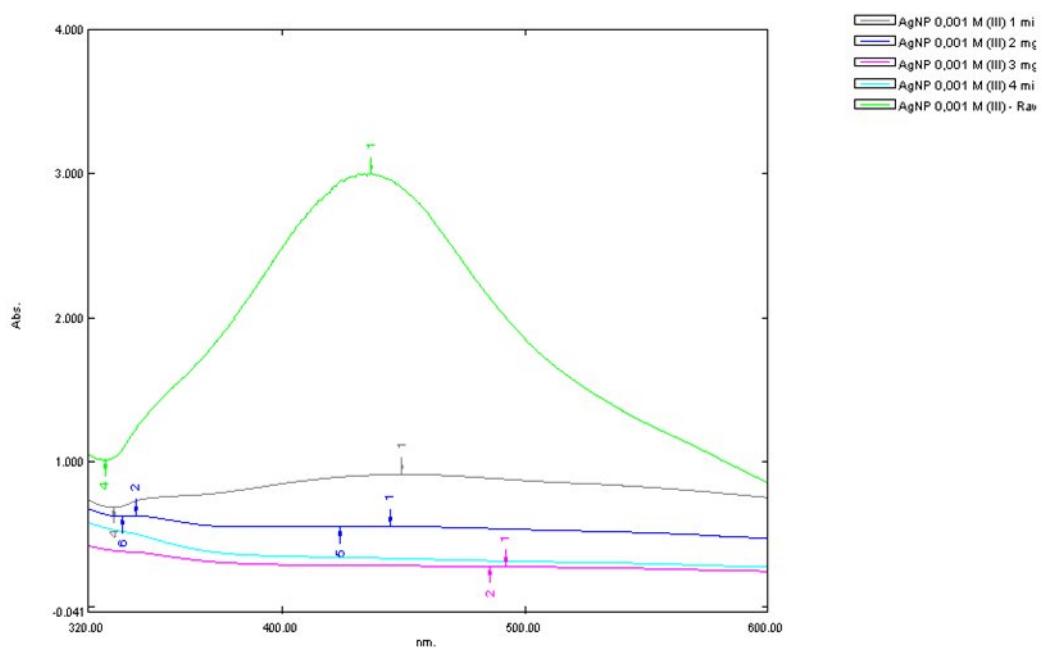
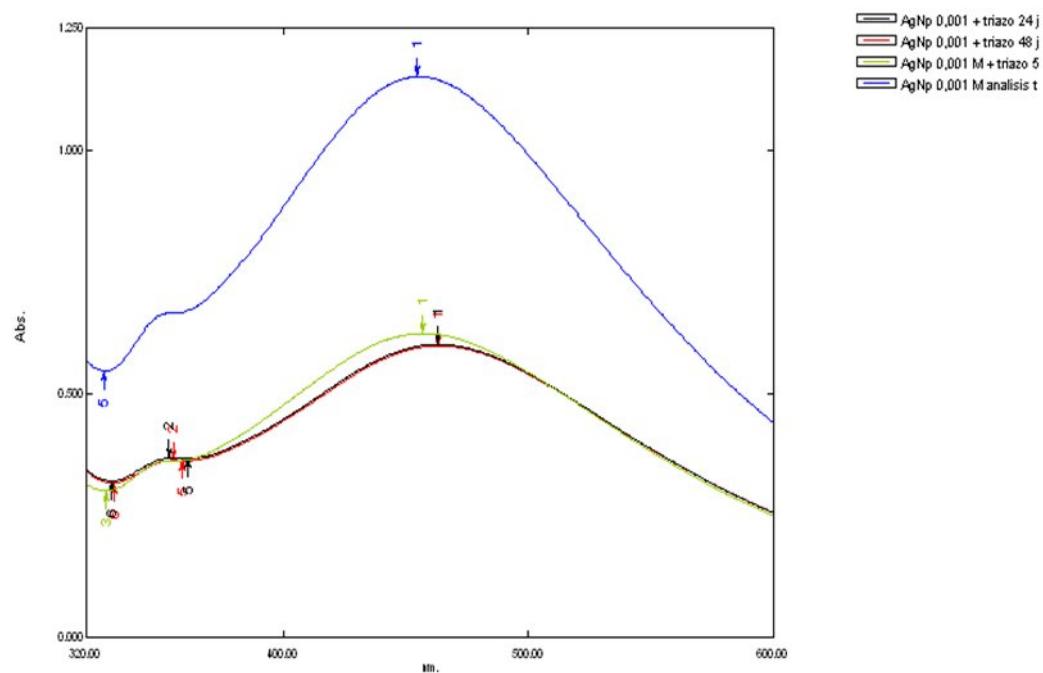


Data Set: AgNp 0,001 M + triazo 5 menit - RawData

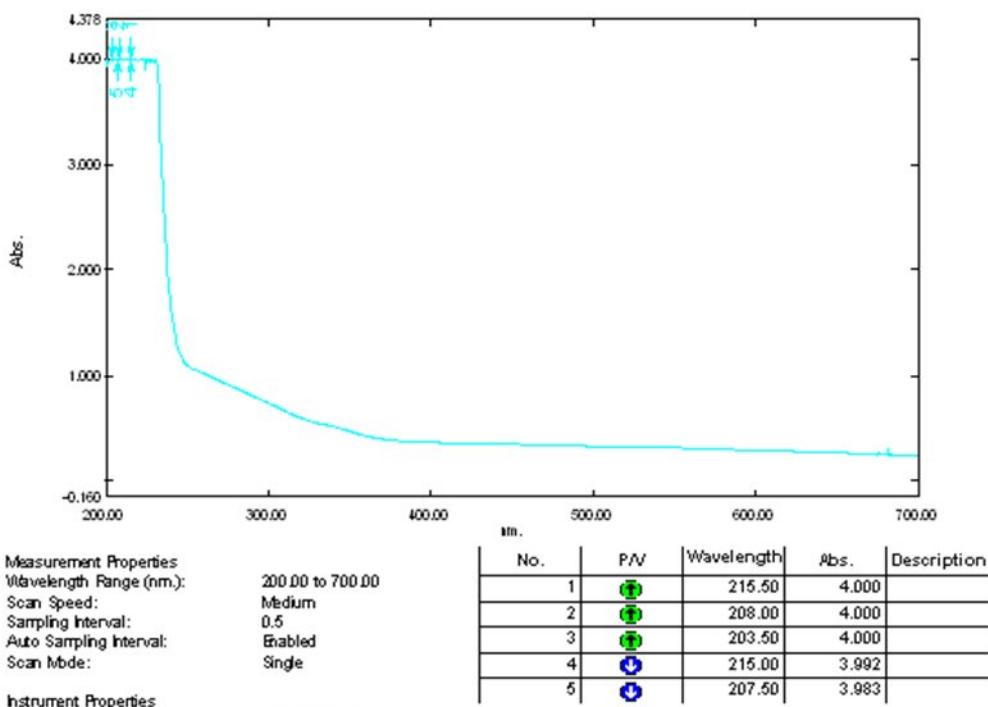


Data Set: AgNp 0,001 + triazo 24 jam - RawData

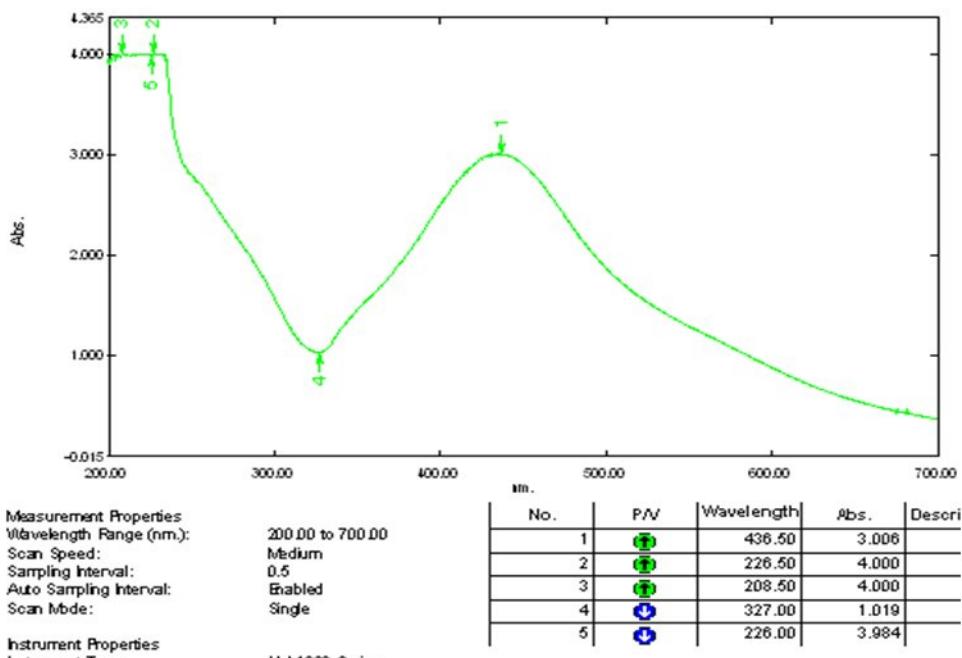




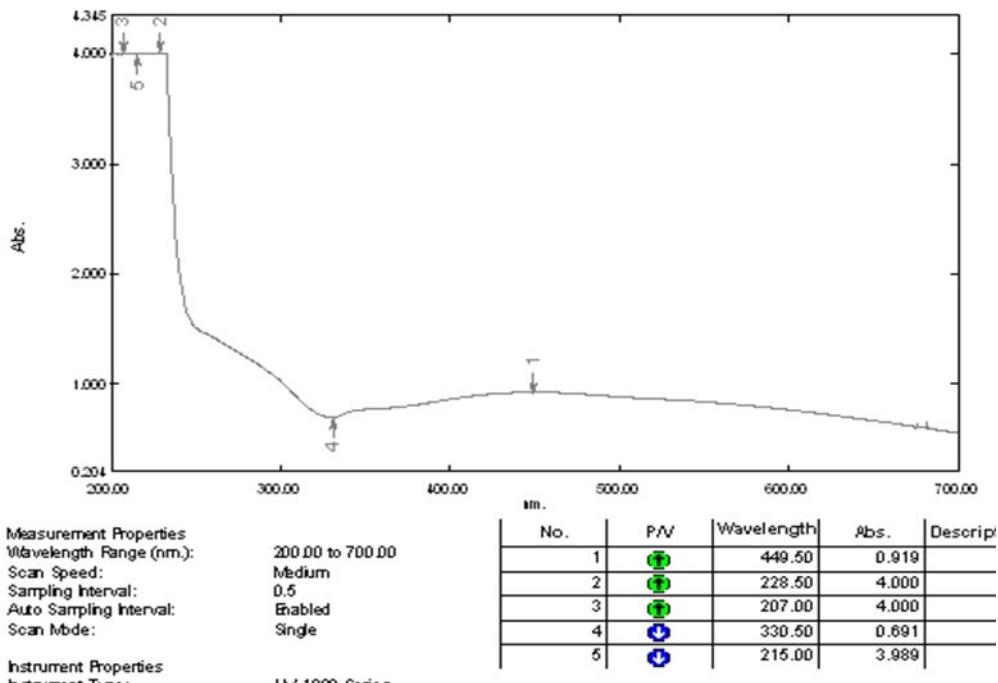
Data Set: AgNP 0,001 M (III) 4 minggu. - RawData



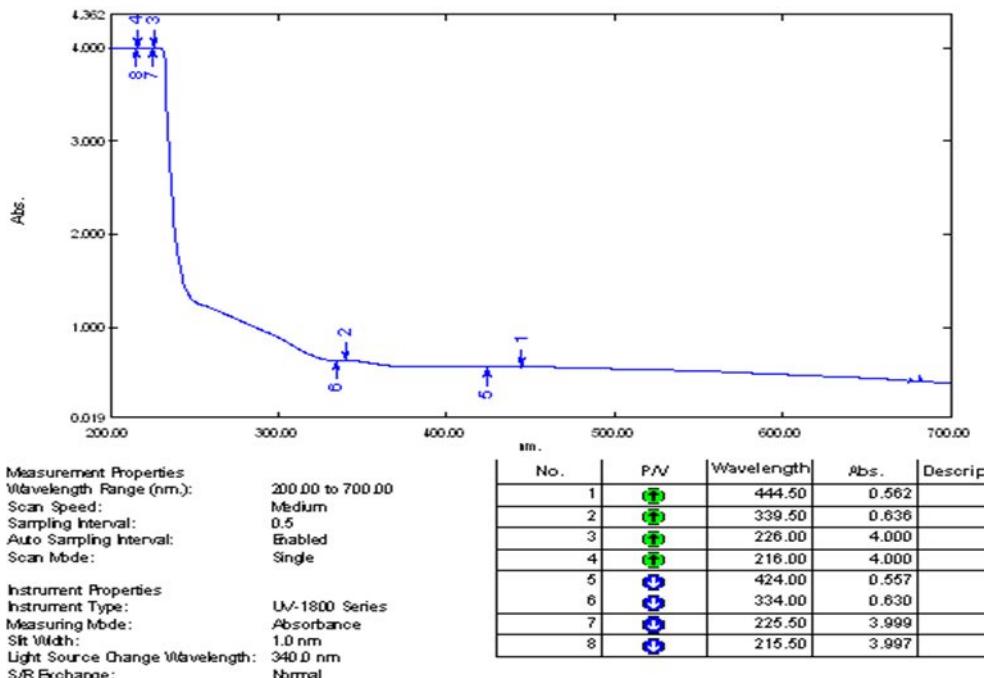
Data Set: AgNP 0,001 M (III) - RawData



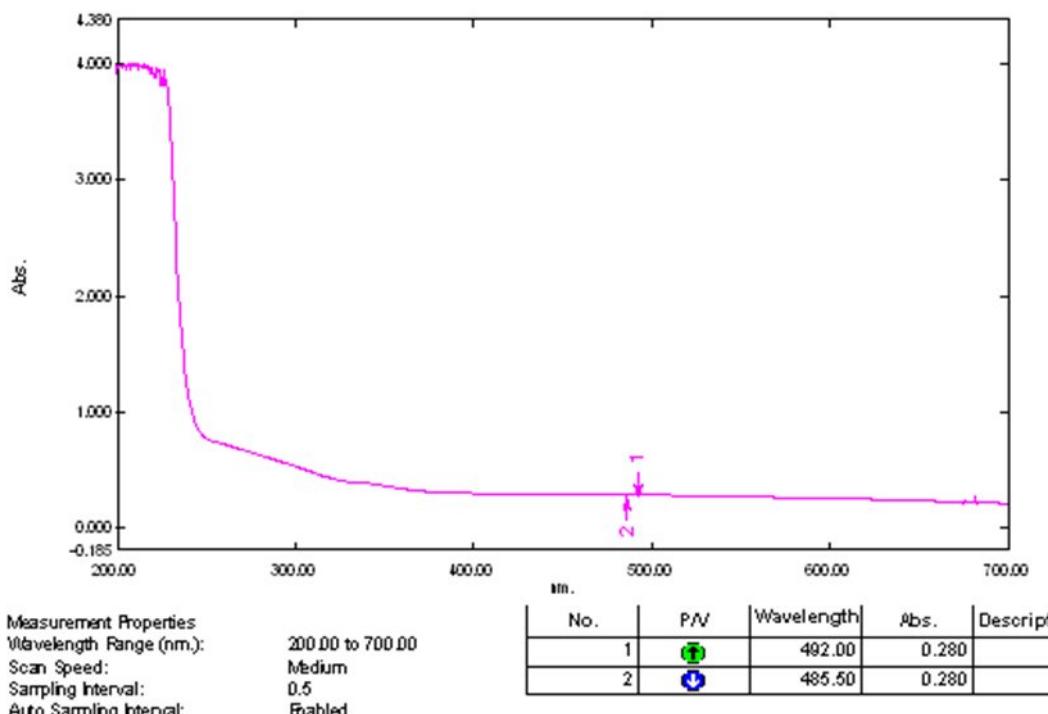
Data Set: AgNP 0,001 M (III) 1 minggu - RawData



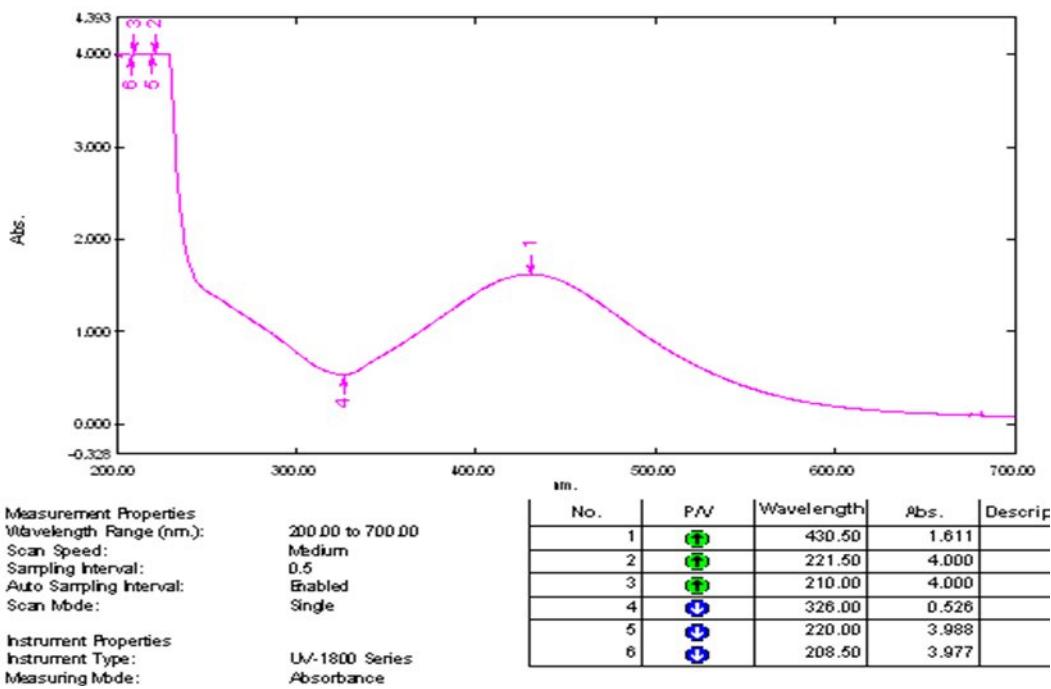
Data Set: AgNP 0,001 M (III) 2 minggu - RawData



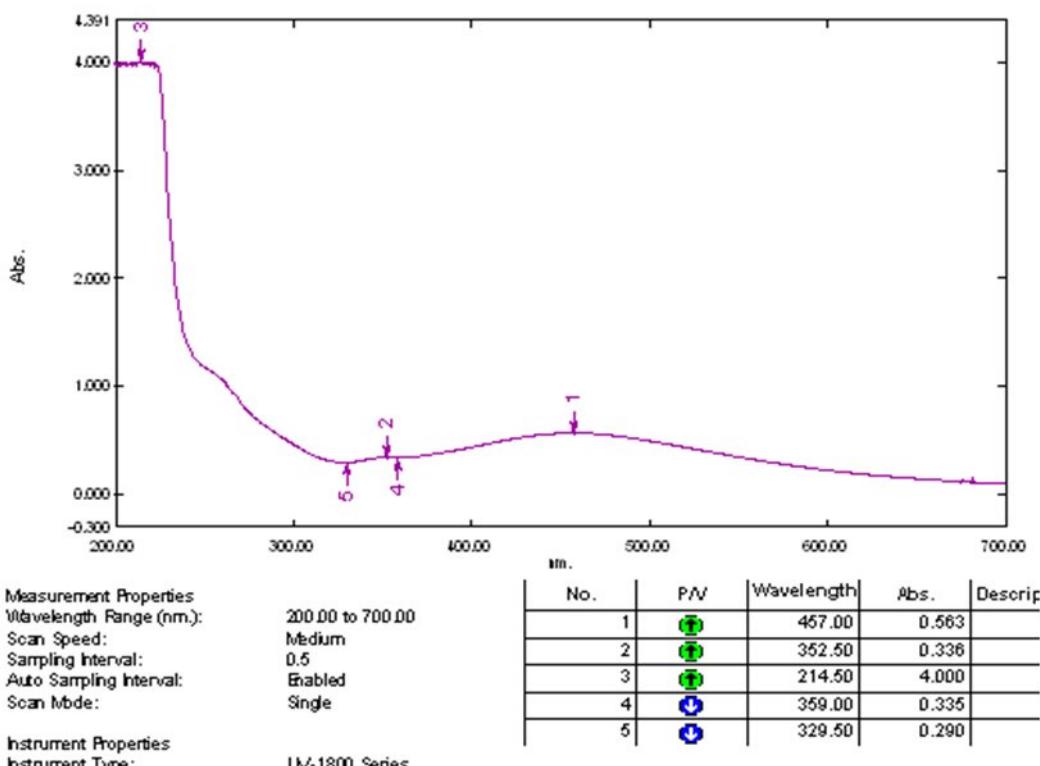
Data Set: AgNP 0,001 M (III) 3 mggu - RawData



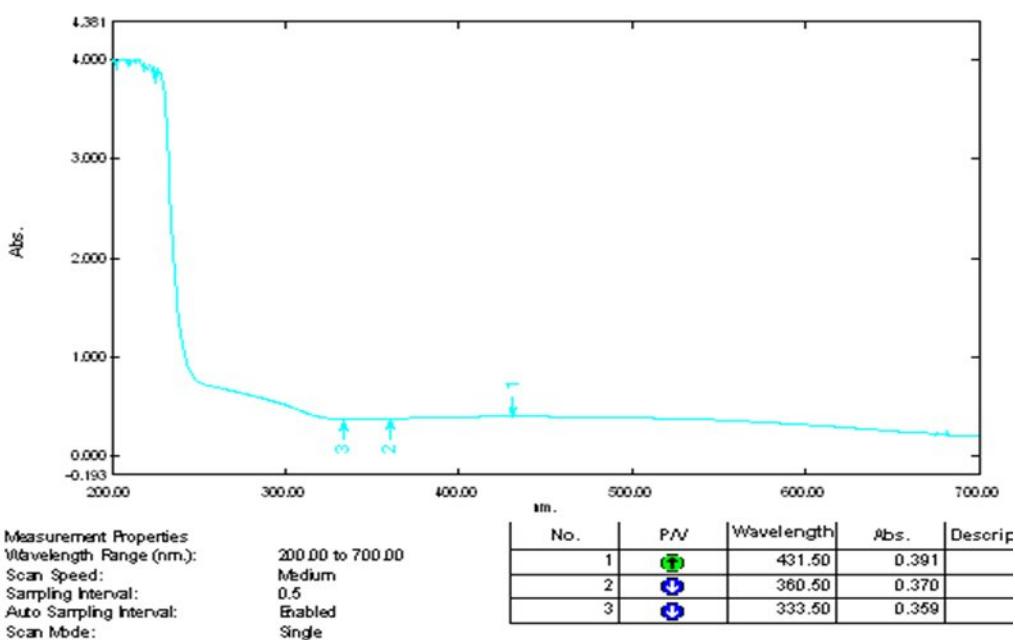
Data Set: AgNP 0,001 M (II) - RawData



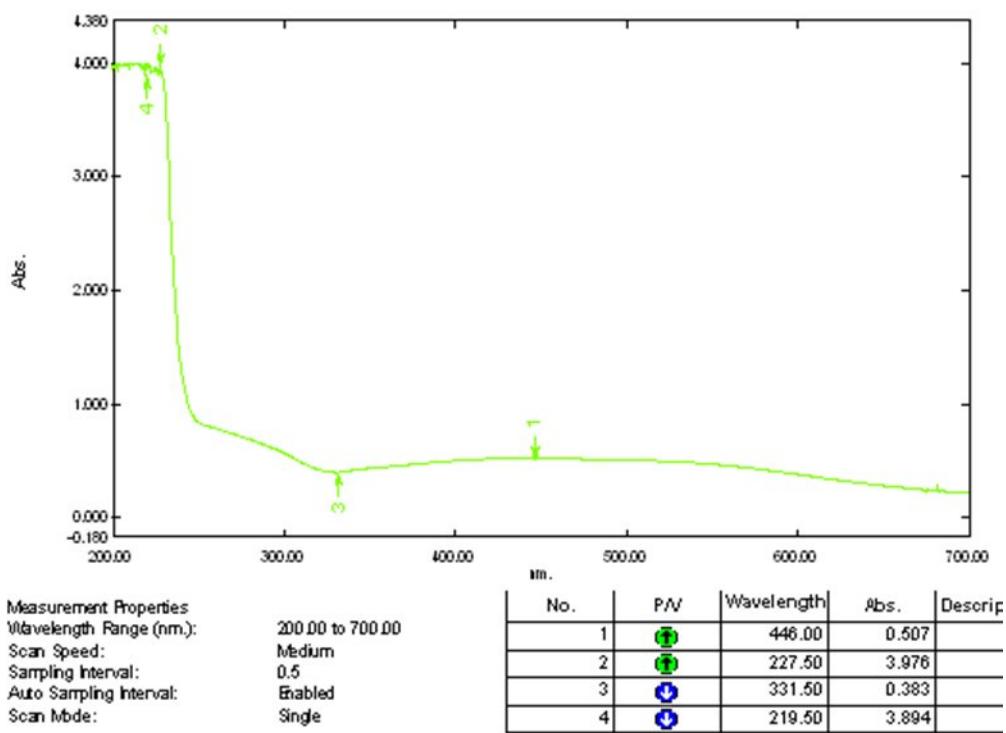
Data Set: AgNp 0,001 M + triazofos 10-5 - RawData



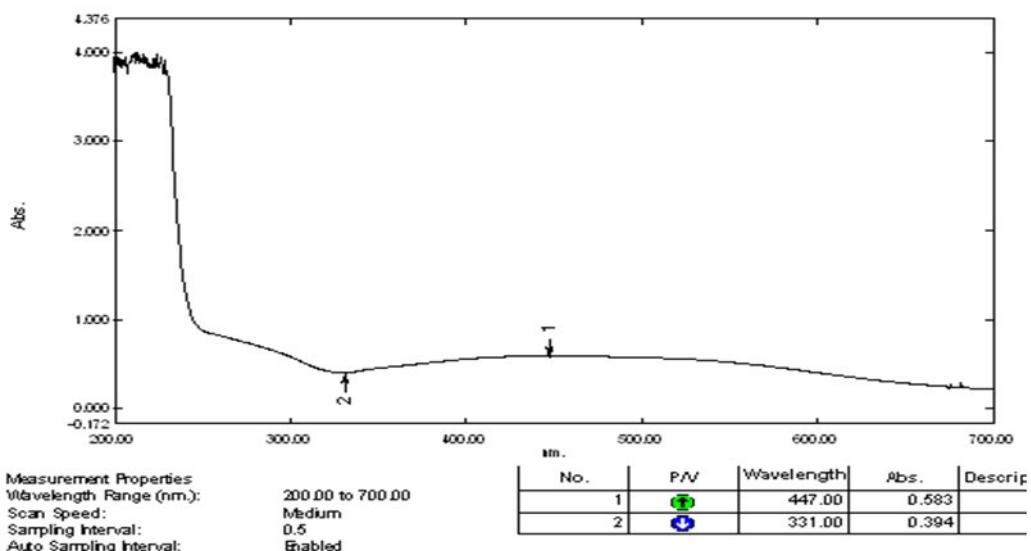
Data Set: AgNP 0,001 M (II) 4 minggu - RawData



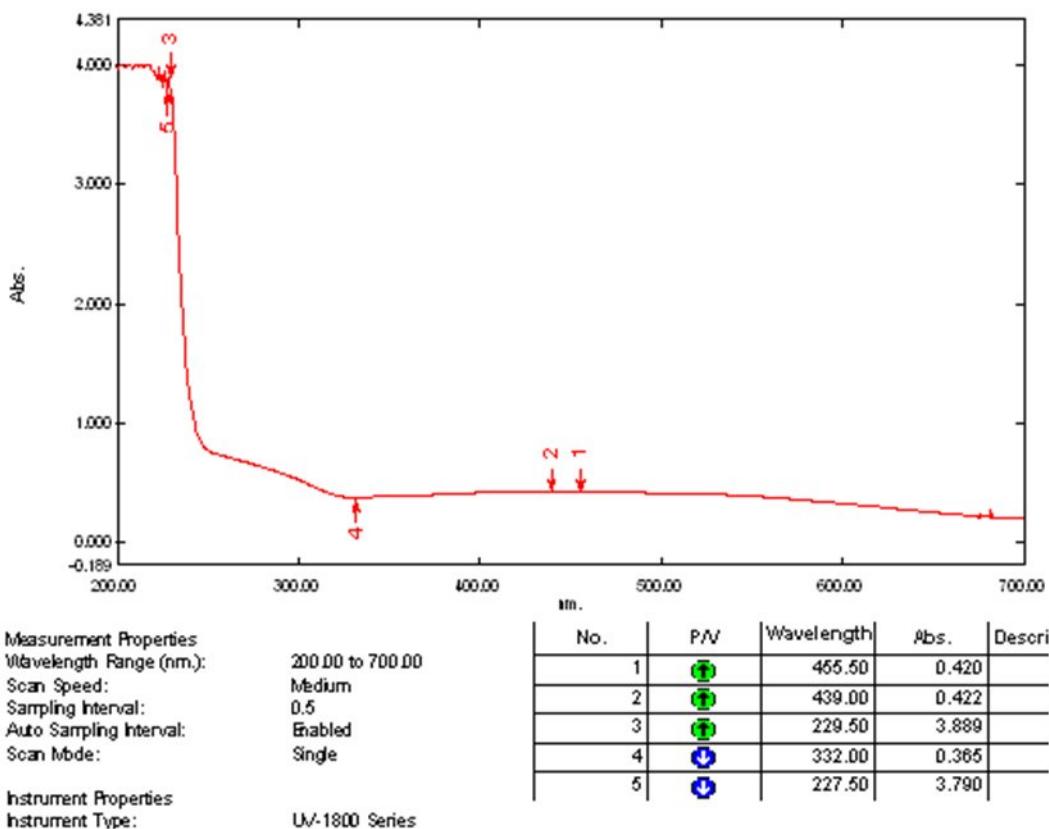
Data Set: AgNP 0,001 M (II) 2 minggu - RawData



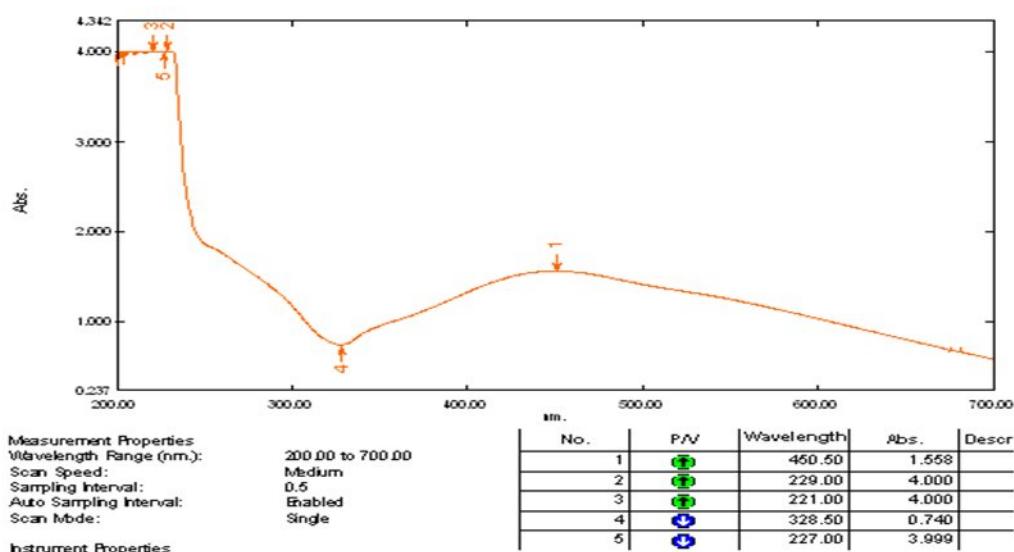
Data Set: AgNP 0,001 M (II) 1 minggu - RawData



Data Set: AgNP 0,001 M (II) 3 minggu - RawData



Data Set: AgNP (III) + as asetat - RawData



Lampiran 13. Tabel kisaran pengukuran berdasarkan absorbansi sensor pestisida terhadap triazofos

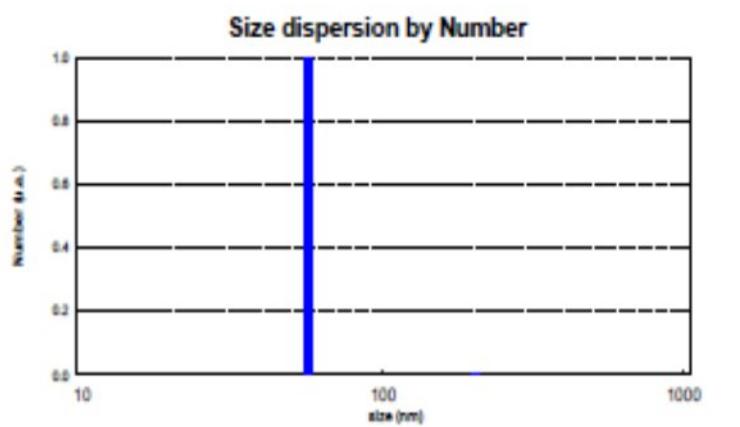
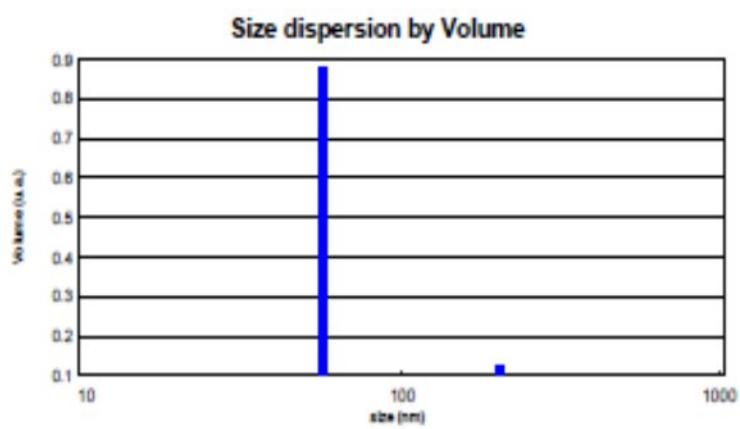
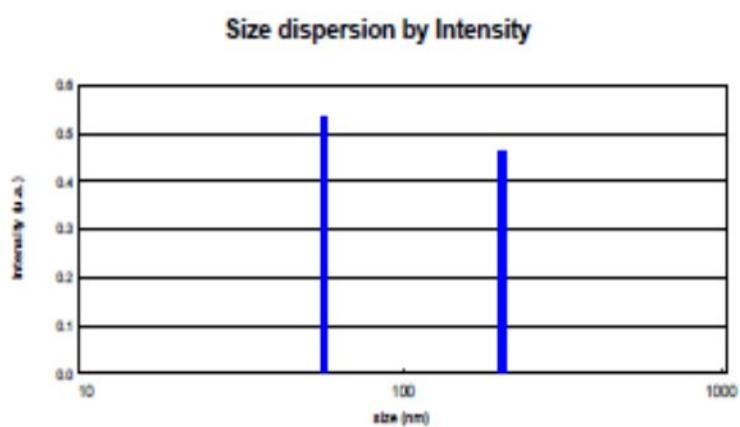
Konsentrasi (-log)	Abs (A)
3	0.6
4	0.46
5	0.455
6	0.428
7	0.406
Kisaran Pengukuran	4 - 7
R²	0.9426
Pers. Regresi linear	$y = -0,0189 x + 0,5412$

Lampiran 14. Hasil Pengujian PSA

 NanoQ Report									
Sample									
Name : Ag Np 0.01									
Measured on : 6/9/2013 13:40:04	Mode: Acquisition								
by : admin	Profile: Admin								
Comments from user:									
SOP									
Name defaultSOP	<u>Operating mode</u> Statistical								
<u>Dispersant / solvant properties</u> <table border="1"> <tr> <td>Refractive Index (nd) : 1.33</td> <td>Particles refractive index</td> </tr> <tr> <td>Viscosity : 0.894</td> <td>Real Part : 1.339</td> </tr> <tr> <td></td> <td>Imaginary Part : 0.10</td> </tr> </table>		Refractive Index (nd) : 1.33	Particles refractive index	Viscosity : 0.894	Real Part : 1.339		Imaginary Part : 0.10		
Refractive Index (nd) : 1.33	Particles refractive index								
Viscosity : 0.894	Real Part : 1.339								
	Imaginary Part : 0.10								
<u>Device settings</u> <table border="1"> <tr> <td>Time interval : 2.000µs</td> <td><u>SOP comment:</u></td> </tr> <tr> <td>Number of channels : 600</td> <td>Default Procedure</td> </tr> </table>		Time interval : 2.000µs	<u>SOP comment:</u>	Number of channels : 600	Default Procedure				
Time interval : 2.000µs	<u>SOP comment:</u>								
Number of channels : 600	Default Procedure								
<u>Analysis mode</u>	<input checked="" type="checkbox"/> Cumulants <input checked="" type="checkbox"/> Pade-Laplace	<u>Results</u>	<input checked="" type="checkbox"/> Intensity <input checked="" type="checkbox"/> Volume <input checked="" type="checkbox"/> Number						
<u>Measure conditions</u> <table border="1"> <tr> <td>Temperature : 25.0°C</td> <td>Duration : 0h 1min 25s</td> </tr> <tr> <td>Acquisitions : 15</td> <td>Laser power : 50%</td> </tr> <tr> <td>Average count rate : 4 103.23 kcps</td> <td>DTC position : DOWN</td> </tr> <tr> <td></td> <td>Wavelength : 657.00</td> </tr> </table>		Temperature : 25.0°C	Duration : 0h 1min 25s	Acquisitions : 15	Laser power : 50%	Average count rate : 4 103.23 kcps	DTC position : DOWN		Wavelength : 657.00
Temperature : 25.0°C	Duration : 0h 1min 25s								
Acquisitions : 15	Laser power : 50%								
Average count rate : 4 103.23 kcps	DTC position : DOWN								
	Wavelength : 657.00								

Pade-Laplace method

Dv10: 56.25	Dv50: 56.25	Dv90: 204.23
Dmean Intensity: 124.96	Dmean volume: 74.53	Dmean number: 56.68

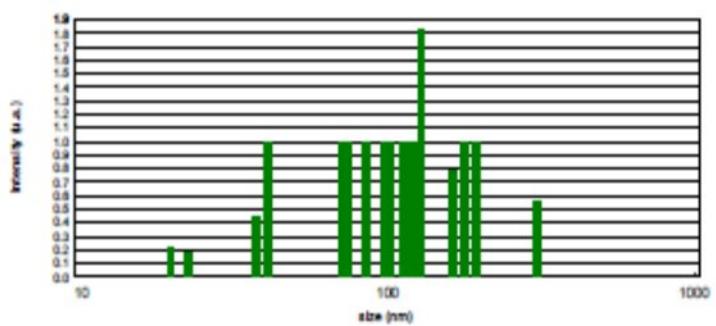


Size (nm)	Intensity	Number	Volume
56.25	0.53	1.00	0.88
204.23	0.46	0.00	0.12

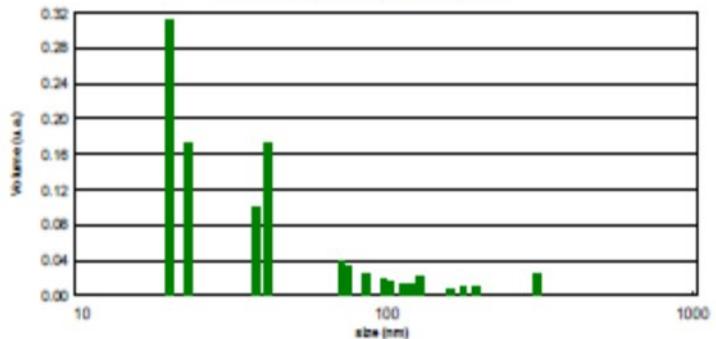
Statistical method

Dv10: 19.50	Dv50: 37.16	Dv90: 112.23
Dmean Intensity: 117.07	Dmean volume: 51.56	Dmean number: 21.97

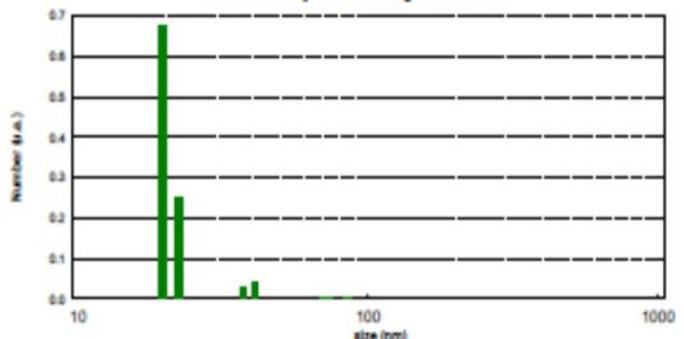
Size dispersion by Intensity



Size dispersion by Volume

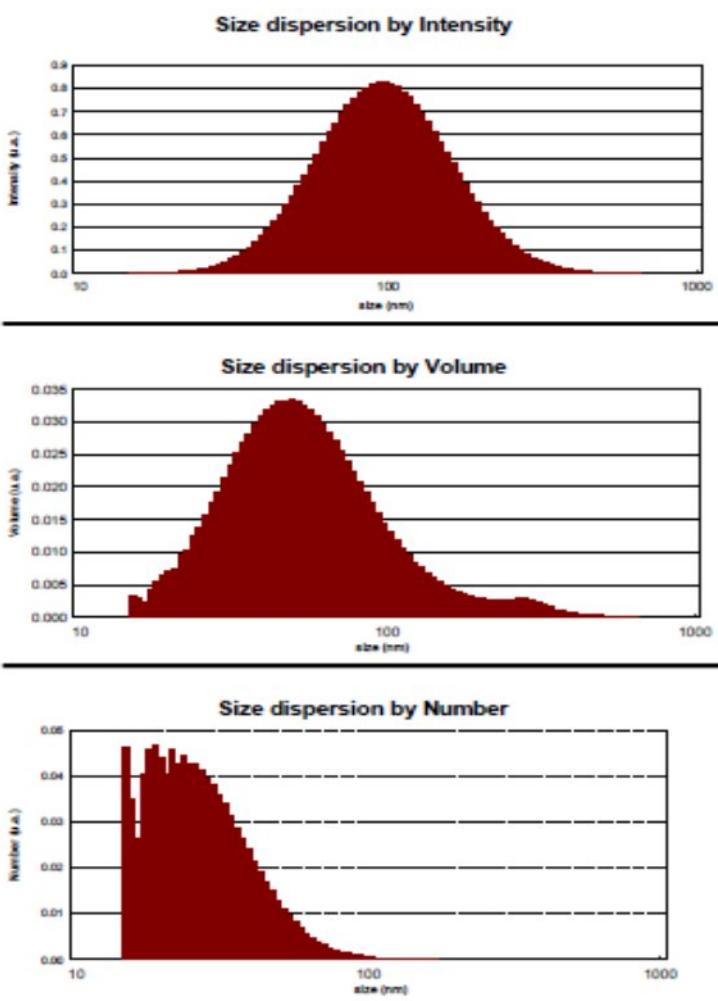


Size dispersion by Number



Size (nm)	Intensity	Number	Volume
19.50	0.21	0.67	0.31
22.39	0.18	0.25	0.17
37.16	0.45	0.03	0.10
40.75	1.00	0.04	0.17
70.81	1.00	0.00	0.04
74.15	1.00	0.00	0.03
85.14	1.00	0.00	0.02
97.75	1.00	0.00	0.02
102.36	1.00	0.00	0.02
112.23	1.00	0.00	0.01
117.52	1.00	0.00	0.01
123.06	1.00	0.00	0.01
128.86	1.82	0.00	0.02
162.22	0.79	0.00	0.01
177.88	1.00	0.00	0.01
195.04	1.00	0.00	0.01
309.11	0.55	0.00	0.03

<i>Cumulants method</i>				Zaverage (nm):	92.64
Dv10:	25.71	Dv50:	51.30	Dv90:	117.52
Dmean Intensity:	108.97	Dmean volume:	66.77	Dmean number:	28.67
PDI:	0.2600				



Size (nm)	Intensity	Number	Volume
14.80	0.00	0.05	0.00
15.49	0.00	0.04	0.00
16.22	0.00	0.03	0.00
16.99	0.00	0.04	0.00
17.79	0.00	0.05	0.01
18.63	0.00	0.05	0.01
19.50	0.01	0.04	0.01
20.42	0.01	0.04	0.01
21.39	0.01	0.05	0.01
22.39	0.01	0.04	0.01
23.45	0.02	0.04	0.01
24.55	0.02	0.04	0.01
25.71	0.03	0.04	0.02
26.92	0.03	0.04	0.02
28.19	0.04	0.04	0.02
29.52	0.05	0.04	0.02
30.91	0.06	0.04	0.02
32.37	0.08	0.03	0.03
33.89	0.10	0.03	0.03
35.49	0.11	0.03	0.03
37.16	0.14	0.03	0.03
38.91	0.16	0.02	0.03
40.75	0.19	0.02	0.03
42.67	0.22	0.02	0.03
44.68	0.26	0.02	0.03
46.79	0.30	0.01	0.03
48.99	0.34	0.01	0.03
51.30	0.38	0.01	0.03
53.72	0.43	0.01	0.03
56.25	0.47	0.01	0.03
58.90	0.52	0.01	0.03
61.68	0.56	0.01	0.03
64.58	0.61	0.00	0.03
67.63	0.65	0.00	0.03
70.81	0.69	0.00	0.03
74.15	0.73	0.00	0.02
77.65	0.76	0.00	0.02
81.30	0.79	0.00	0.02
85.14	0.81	0.00	0.02
89.15	0.82	0.00	0.02
93.35	0.83	0.00	0.02
97.75	0.83	0.00	0.01
102.36	0.82	0.00	0.01
107.18	0.81	0.00	0.01
112.23	0.79	0.00	0.01
117.52	0.76	0.00	0.01
123.06	0.73	0.00	0.01
128.86	0.70	0.00	0.01
134.93	0.66	0.00	0.01
141.29	0.61	0.00	0.01
147.95	0.57	0.00	0.01
154.92	0.52	0.00	0.00
162.22	0.48	0.00	0.00
169.87	0.43	0.00	0.00
177.88	0.39	0.00	0.00
186.26	0.35	0.00	0.00
196.04	0.31	0.00	0.00
204.23	0.27	0.00	0.00
213.85	0.23	0.00	0.00
223.93	0.20	0.00	0.00
234.49	0.17	0.00	0.00
245.54	0.15	0.00	0.00
257.11	0.12	0.00	0.00
269.22	0.10	0.00	0.00
281.91	0.08	0.00	0.00
295.20	0.07	0.00	0.00
309.11	0.06	0.00	0.00
323.68	0.05	0.00	0.00
338.93	0.04	0.00	0.00
354.91	0.03	0.00	0.00
371.63	0.02	0.00	0.00
389.15	0.02	0.00	0.00
407.49	0.01	0.00	0.00
426.69	0.01	0.00	0.00
446.80	0.01	0.00	0.00
457.86	0.01	0.00	0.00
489.91	0.00	0.00	0.00
513.00	0.00	0.00	0.00
537.17	0.00	0.00	0.00
562.49	0.00	0.00	0.00
589.00	0.00	0.00	0.00
616.76	0.00	0.00	0.00
645.83	0.00	0.00	0.00

Lampiran 16. Foto Hasil Penelitian



AgNP sebelum distirrer



AgNP telah terbentuk



Ekstrak Ubi jalar ungu



Sianidin klorida + AgNP



Diazinon + AgNP



Uji fitokimia ubi jalar ungu



Triazofos + AgNP



Sensor pestisida



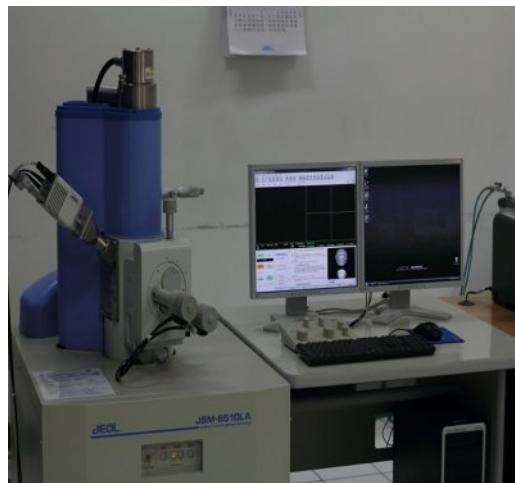
Aplikasi Sensor pestisida



Spray Dryer



Spektroskopi UV-Vis



Scanning Electron Microscopy



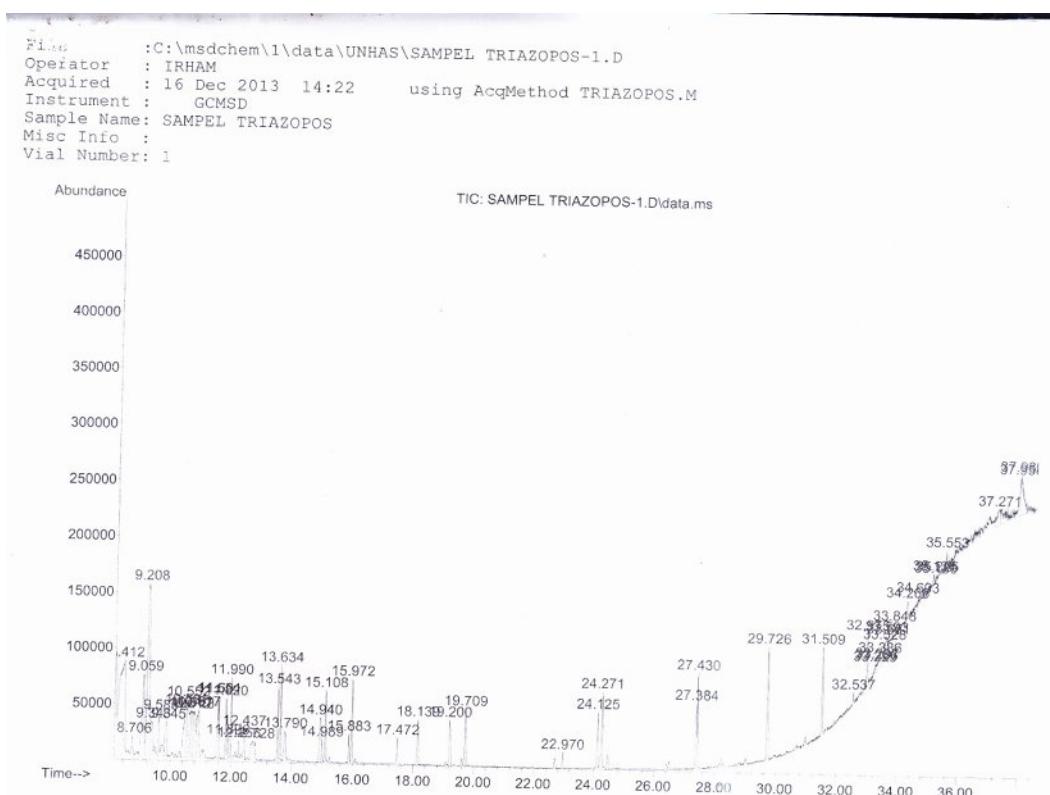
Particle Size Analyzer



Alat XRD



Alat SEM EDS



Library Search Report

Data Path : C:\msdchem\1\data\UNHAS\
 Data File : SAMPLEL TRIAZOPOS-1.D
 Acq On : 16 Dec 2013 14:22
 Operator : IRHAM
 Sample : SAMPLEL TRIAZOPOS
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

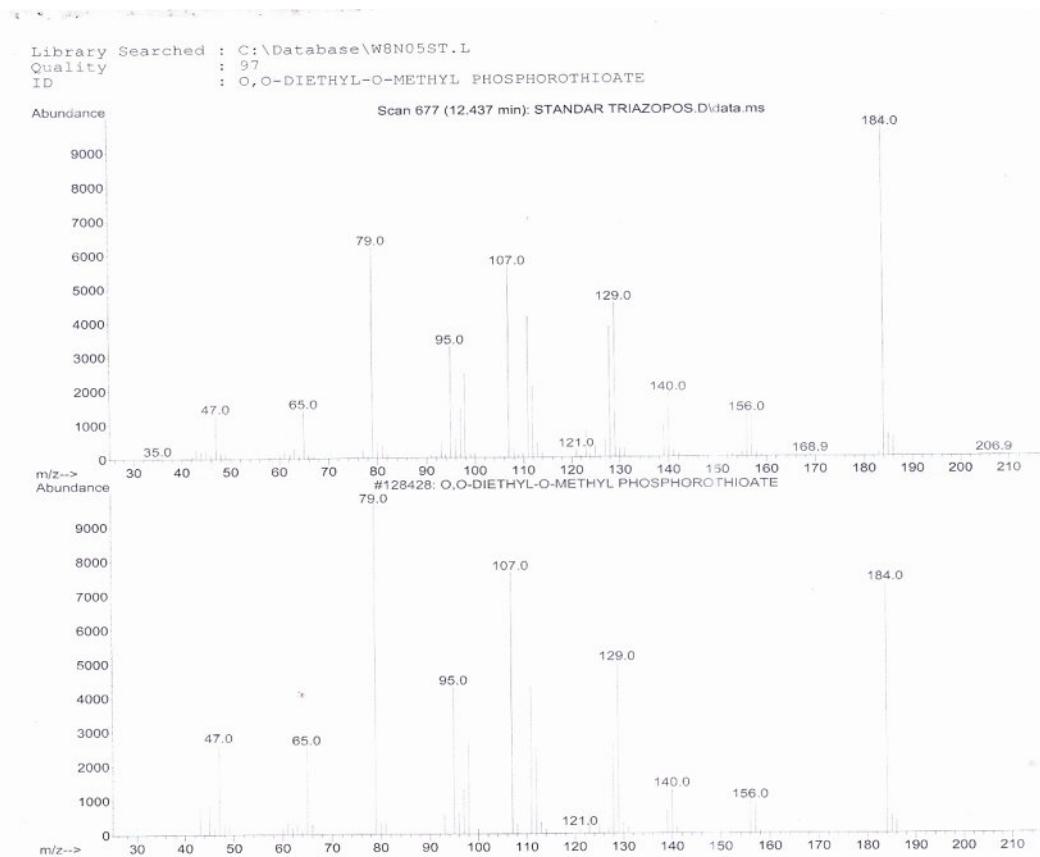
Search Libraries: C:\Database\W8N05ST.L Minimum Quality: 0

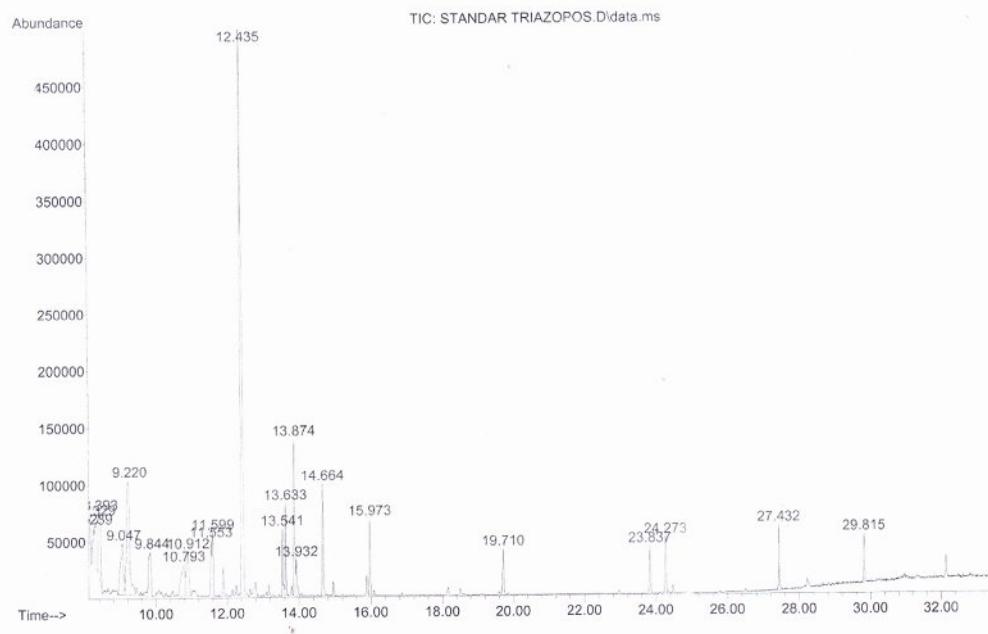
Unknown Spectrum: Apex
 Integration Events: ChemStation Integrator - events.e

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
			5,5-DIMETHYL-1-(TRIMETHYLSIYL)-5H-DIBENZO[B,D]SILOLE # S 4-TRIMETHYL-SIYL-9,9-DIMETHYL-9-SILAFLUORENE	462315	058263-56-2	38
			\$ 5,5-DIMETHYL-1-(TRIMETHYLSIYL)-5H-DIBENZO[B,D]SILOLE \$ 5,5-DIMETHYL-1-(TRIMETHYLSIYL)-5H-DIBENZO[B,D]SILOLE (COMPUTER-GENERATED NAME)			
			4-Trimethylsilyl-9,9-dimethyl-9-silafluorene \$ 5,5-Dimethyl-1-(trimethylsilyl)-5H-dibenzo[b,d]silole #	462844	058263-56-2	38
20	12.437	0.89	C:\Database\W8N05ST.L			
			O,O-DIETHYL-O-METHYL PHOSPHOROTHIOATE	128428	000000-00-0	98
			5-(ETHYNYL)NON-1-EN-8-YN-5-OL NAPHTHALENE, 2-(1,1-DIMETHYLETHYL)-S 2-TERT-BUTYLNAPHTHALENE \$.BET	213692	000000-00-0	37
			A.-TERT-BUTYLNAPHTHALENE \$ 2-(1,1-DIMETHYLETHYL)NAPHTHALENE \$ 2-(1,1-DIMETHYLETHYL)NAPHTHALENE \$ 2-(TERT-BUTYL)NAPHTHALENE \$ BETA-TERT-BUTYLNAPHTHALENE \$ NAPHTHALENE, 2-(1,1-DIMETHYLETHYL)-S 2-TERT-BUTYLNAPHTHALENE \$.BET	372967	002876-35-9	35

Signal : TIC: SAMPEL TRIAZOPOS-1.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	8.412	14	51	67	PV 2	72363	7786977	80.66%	10.371%
2	8.706	85	96	110	PV 2	16399	499828	5.18%	0.666%
3	9.059	131	151	162	VV	72151	3693087	38.26%	4.919%
4	9.208	162	174	193	VV 5	152481	9653838	100.00%	12.857%
5	9.343	193	195	209	VV	30318	1291680	13.38%	1.720%
6	9.585	224	233	241	VV 7	38308	1171540	12.14%	1.560%
7	9.845	262	274	285	VV 3	30988	1581039	16.38%	2.106%
8	10.501	352	376	379	PV 3	44313	2907017	30.11%	3.872%
9	10.552	379	384	391	VV 7	50516	2015005	20.87%	2.684%
10	10.612	391	393	399	VV 9	39523	1119107	11.59%	1.490%
11	10.667	399	401	406	VV 7	41718	1150621	11.92%	1.532%
12	10.713	406	409	412	VV 4	40669	921886	9.55%	1.228%
13	10.917	428	440	452	VV	41973	2200305	22.79%	2.930%
14	11.554	515	540	543	PV	55294	1260293	13.05%	1.679%
15	11.601	543	547	557	VV	55678	1331731	13.79%	1.774%
16	11.820	557	581	587	VV	54151	1004004	10.40%	1.337%
17	11.896	587	593	599	VV	19260	444149	4.60%	0.592%
18	11.990	599	607	616	VV	70015	1203055	12.46%	1.602%
19	12.256	642	649	656	BV	15030	282001	2.92%	0.376%
20	12.437	668	677	686	VV 3	27008	670974	6.95%	0.894%





Unknown Spectrum: Apex
 Integration Events: ChemStation Integrator - events.e

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
			THYL-3-PHENYL- \$ 2-(DIMETHYLAMINO)-3-PHENYLBENZO[B]THIOPHENE BENZENE, 1-METHOXY-2-[(4-NITROPHENYL)ETHYNYL]- \$ 1-(2'-METHOXYPHENYL)-2-(P-NITROPHENYL)ACETYLENE \$ 2-METHOXY-4'-NITRO-DIPHENYLACETYLENE	450980	122134-97-8	59
11	12.437	30.20	C:\Database\W8N05ST.L			
			O,O-DIETHYL-O-METHYL PHOSPHOROTHIO ATE	128428	000000-00-0	97
			CYCLOHEXANE CARBOXYLIC ACID, 1-METHYL-2-OXO-, ETHYL ESTER \$ ETHYL 1-METHYL-2-OXOCYCLOHEXANE CARBOXYLATE	372995	005453-94-1	27
			# \$ 1-METHYL-2-CYCLOHEXANONE CARBOXYLIC ACID ETHYL ESTER \$ 2-METHYL-2-CARBETHOXYSUBSTITUTED CYCLOHEXANONE \$ ETHYL 1-METHYL-2-OXOCYCLOHEXANE CARBOXYLATE			
			E \$ ETHYL 1-METHYL PHENOL, 2,4-DINITRO- \$ 2,4-DINITROPHENOL \$.ALPHA.-DINITROPHENOL \$ 1-'ALPHA-2,4-DINITROPHENOL \$ 1-HYDROXY-2,4-DINITROBENZENE \$ 2,4-DINITROPHENOL \$ 2,4-DINITROFENOL \$ 2,4-DINITROFENOL [DUTCH] \$ 2,4-DNP \$ AI3-01535 \$ AID S-019513 \$ ALDIFE	372796	000051-28-5	16

Signal : TIC: STANDAR TRIAZOPOS.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	8.239	9	24	27	BV 2	23562	346853	2.17%	0.654%
2	8.329	27	38	42	VV	41580	1989551	12.43%	3.753%
3	8.393	42	48	63	VV	54969	3014274	18.83%	5.685%
4	9.047	130	149	160	PV 2	44869	2688192	16.79%	5.070%
5	9.220	160	176	207	VV 4	99606	6107799	38.15%	11.520%
6	9.844	221	274	283	BB 4	38284	2279843	14.24%	4.300%
7	10.793	380	421	427	BV 3	27217	2043554	12.76%	3.854%
8	10.912	427	440	452	VV 2	38533	2007776	12.54%	3.787%
9	11.553	528	539	542	BV	47387	982448	6.14%	1.853%
10	11.599	542	547	558	VB	54760	1335701	8.34%	2.519%
11	12.435	658	677	701	VB	540159	16010157	100.00%	30.197%
12	13.541	837	849	858	BV	58439	1092189	6.82%	2.060%
13	13.633	858	863	873	VB	79379	1241652	7.76%	2.342%
14	13.874	893	901	906	VV	135286	2859256	17.86%	5.393%
15	13.932	906	910	926	VB 2	31279	768024	4.80%	1.449%