

APPENDICES

APPENDIX A

Table A.1: Mean and standard deviation (SD) of As concentrations in *H. cannabinus*, soil sample and control soil (without plants) at final harvest (week 16)

Treatments	As (mg kg ⁻¹)				
	Roots	Stems	Leaves	Soil Sample	Soil Control
Control(dH ₂ O)	0.82±0.15	ND	ND	0.84±0.23	1.27±0.02
12.5 % TL	7.13±0.35	0.78±0.19	0.49±0.11	6.25±0.97	8.25±0.02
25% TL	26.82±1.98	2.34±0.66	1.28±0.32	10.21±2.12	11.32±0.02
50 % TL	20.02±1.26	1.54±0.32	0.94±0.05	10.89±1.85	15.41±0.01
100 % IF	21.51±0.63	1.51±0.43	0.96±0.09	10.86±1.56	3.41±0.10
50% TL + 50% IF	11.77±1.55	0.93±0.05	0.58±0.17	8.21±0.88	12.56±0.04
75 % TL	11.32±1.02	0.87±0.07	0.55±0.08	8.64±2.06	17.53±0.04
100 % TL	9.41±0.78	0.81±0.22	0.52±0.15	7.31±2.65	18.87±0.01
100 % RL	6.67±0.63	0.72±0.26	0.46±0.13	5.86±1.87	18.96±0.50

Table A.2: Mean and standard deviation (SD) of Fe concentrations in *H. cannabinus*, soil sample and control soil (without plants) at final harvest (week 16)

Treatments	Fe (mg kg ⁻¹)				
	Roots	Stems	Leaves	Soil Sample	Soil Control
Control(dH ₂ O)	796.24±10.23	73.20±12.15	30.62±12.65	114.66±38.54	122.01±5.50
12.5 % TL	1309.76±23.56	154.78±23.14	39.31±18.96	134.06±19.54	142.21±11.23
25% TL	1923.81±7.52	182.46±34.23	48.81±4.52	175.17±26.41	201.41±8.40
50 % TL	1692.87±87.62	124.50±26.53	52.46±2.12	161.74±16.35	211.45±2.30
100 % IF	1690.74±58.95	117.99±36.58	51.52±1.52	168.39±12.32	130.08±17..75
50%TL+50%IF	1569.76±85.32	95.60±16.52	46.91±11.63	159.57±19.54	215.47± 11.22
75 % TL	1416.92±75.63	94.90±18.75	45.05±16.53	168.42±16.87	227.46±10.05
100 % TL	1370.96±13.21	92.04±16.54	41.16±5.32	180.08±24.21	231.44±20.04
100 % RL	1264.41±48.63	81.05±19.23	33.44±9.87	180.45±27.14	233.06±11.10

Table A.3: Mean and standard deviation (SD) of CN concentrations in *H. cannabinus*, soil sample and control soil (without plants) at final harvest (week 16)

Treatments	CN (mg kg ⁻¹)				
	Roots	Stems	Leaves	Soil Sample	Soil Control
Control(dH ₂ O)	1.95±0.22	0.47±0.21	0.32±0.05	ND	2.96±0.21
12.5 % TL	7.45±0.21	0.98±0.11	0.54±0.16	5.58±0.52	7.46±1.02
25% TL	20.69±1.29	1.51±0.08	1.38±0.64	5.72±3.05	7.70±0.88
50 % TL	15.49±2.08	1.17±0.04	0.67±0.04	7.35±2.14	7.81±2.10
100 % IF	17.95±0.44	1.21±0.08	0.67±0.08	7.21±0.76	4.10±0.25
50% TL + 50% IF	14.11±1.77	1.05±0.21	0.66±0.24	7.52±1.05	7.71±3.01
75 % TL	12.05±2.13	1.03±0.03	0.57±0.07	7.74±2.06	7.95±1.45
100 % TL	9.02±0.69	1.03±0.10	0.54±0.02	7.81±1.03	7.95±2.09
100 % RL	5.97±1.55	0.95±0.02	0.52±0.12	7.88±0.89	7.97±1.21

Table A.4: Mean and standard deviation (SD) of NH₃-N concentrations in *H. cannabinus*, soil sample and control soil (without plants) at final harvest (week 16)

Treatments	NH ₃ -N (mg kg ⁻¹)				
	Roots	Stems	Leaves	Soil Sample	Soil Control
Control(dH ₂ O)	72.42±7.20	44.40±10.78	18.48±2.14	23.00±5.63	40.84±1.02
12.5 % TL	108.11±6.87	55.68±8.92	33.48±14.13	31.04±2.08	42.15±15.87
25% TL	246.47±16.25	129.09±28.88	62.09±6.85	33.52±7.05	47.84±15.86
50 % TL	222.82±11.82	104.36±17.80	59.84±19.92	33.16±5.68	50.11±2.15
100 % IF	244.13±43.25	108.70±24.58	59.93±16.03	34.11±9.61	50.45±10.66
50% TL+50% IF	227.49±38.75	97.30±21.65	47.76±4.29	33.64±9.62	50.96±1.45
75 % TL	137.82±26.87	63.07±6.17	44.20±8.54	33.83±8.79	53.21±16.52
100 % TL	117.98±12.09	58.05±5.21	29.22±7.09	30.53±5.63	56.14±12.98
100 % RL	100.34±8.41	51.58±11.40	24.45±4.21	30.41±6.84	56.15±10.74

Table A.5: Mean and standard deviation (SD) of As concentrations in *A. mangium*, soil sample and control soil (without plants) at final harvest (week 16)

Treatments	As				
	Roots	Stems	Leaves	Soil Sample	Soil Control
Control	1.19±0.07	0.41±0.02	ND	ND	1.27±0.02
12.5 % TL	11.05±1.02	1.04±0.41	0.64±0.22	7.13±0.08	8.25±0.02
25% TL	33.69±5.32	3.21±1.01	1.68±0.34	11.64±1.02	11.32±0.02
50 % TL	28.63±3.84	2.11±0.08	1.23±0.04	12.43±0.88	15.41±0.01
100 % IF	30.83±1.89	2.11±0.25	1.26±0.16	12.38±0.42	3.41±0.10
50% TL+50%IF	17.42±4.56	1.24±0.39	0.77±0.06	9.34±0.21	12.56±0.04
75 % TL	16.71±5.23	1.19±0.48	0.73±0.12	8.92±0.06	17.53±0.04
100 % TL	13.98±1.71	1.11±0.24	0.68±0.27	8.33±0.33	18.87±0.01
100 % RL	9.8±0.69	0.97±0.07	0.59±0.09	6.67±0.04	18.96±0.50

Table A.6: Mean and standard deviation (SD) of Fe concentrations in *A. mangium*, soil sample and control soil (without plants) at final harvest (week 16)

Treatments	Fe				
	Roots	Stems	Leaves	Soil Sample	Soil Control
Control	1202.34±20.12	99.44±1.22	37.66±1.25	133.01±11.21	122.01±10.21
12.5 % TL	1975.74±14.11	210.50±1.36	48.31±1.42	155.51±1.56	142.21±1.55
25% TL	2902.87±16.24	248.18±4.21	60.04±3.25	203.11±26.21	201.41±23.21
50 % TL	2556.21±15.31	169.33±1.63	64.51±4.66	187.63±2.88	211.45±5.65
±100 % IF	2553.01±12.41	160.47±2.41	63.34±6.35	195.35±10.25	130.08±2.24
50 % TL+50% IF	2374.34±12.11	130.04±1.36	57.78±1.67	185.10±4.15	215.47±1.27
75 % TL	2139.55±4.51	129.08±2.34	55.42±9.81	195.36±2.22	227.46±5.62
100 % TL	2070.15±0.89	125.16±1.38	50.62±5.41	208.84±13.21	231.44±1.64
100 % RL	1907.28±1.05	110.23±7.84	41.13±1.29	209.32±14.66	233.06±5.61

Table A.7: Mean and standard deviation (SD) of CN concentrations in *A. mangium*, soil sample and control soil (without plants) at final harvest (week 16)

Treatments	CN				
	Roots	Stems	Leaves	Soil Sample	Soil Control
Control	1.24±0.21	0.11±0.05	0.39±0.05	1.22±0.21	2.96±0.31
12.5 % TL	10.11±1.25	0.31±0.06	0.65±0.02	6.23±0.42	7.46±0.24
25% TL	27.41±1.28	0.73±0.10	1.34±0.05	6.42±0.06	7.70±0.36
50 % TL	22.77±5.61	0.44±0.04	0.81±0.07	8.23±0.05	7.81±0.34
100 % IF	26.34±2.23	0.47±0.01	0.83±0.02	8.08±1.21	4.10±0.31
50 % TL+50% IF	20.72±1.56	0.35±0.01	0.80±0.06	8.42±1.33	7.71±0.24
75 % TL	17.71±1.64	0.34±0.03	0.69±0.04	8.64±0.74	7.95±0.09
100 % TL	13.23±2.33	0.31±0.01	0.65±0.03	8.71±0.67	7.95±0.04
100 % RL	9.21±4.12	0.29±0.03	0.63±0.03	8.72±1.21	7.97±2.31

Table A.8: Mean and standard deviation (SD) of NH₃-N concentrations in *A. mangium*, soil sample and control soil (without plants) at final harvest (week 16)

Treatments	NH ₃ -N				
	Roots	Stems	Leaves	Soil Sample	Soil Control
Control	104.28±10.24	57.28±1.25	22.12±4.12	25.92±9.52	40.84±8.74
12.5 % TL	155.68±16.54	71.82±4.64	40.18±2.34	35.08±4.16	42.15±3.64
25% TL	334.91±5.61	166.52±1.61	74.53±2.74	37.88±4.35	47.84±2.32
50 % TL	321.85±5.37	134.62±5.41	71.81±3.54	37.41±5.61	50.11±1.11
100 % IF	324.54±7.80	140.23±11.52	71.96±12.33	38.54±2.34	50.45±2.57
50 % TL+50%IF	207.58±5.41	125.55±4.45	57.31±8.97	38.01±1.38	50.96±4.52
75 % TL	198.46±1.34	121.36±6.54	53.04±2.41	38.23±3.54	53.21±3.64
100 % TL	193.88±110.24	74.89±7.15	50.12±4.55	34.50±2.58	56.14±7.56
100 % RL	144.49±12.12	66.54±3.34	29.33±6.88	34.36±4.21	56.15±9.18

Table B.1: Dutch Intervention Standard for surface and deep soil analysis

Parameter	Soil (mg/kg dry matter)		Groundwater (µg/l)	
	Target value	Intervention value	Target value	Intervention value
I metals ^[2]				
antimony (Sb)	3.0	15	0.15	20
arsenic (As)	29.0	55.0	10	60
barium (Ba)	160	625	50	625
beryllium (Be)	1.1	30	0.05	15
cadmium (Cd)	0.8	12	0.4	6
chromium (Cr)	100.0	380	1	30
cobalt (Co)	9.0	240	20	100
copper (Cu)	36.0	190	15	75
nickel (Ni)	35.0	210	15	75
lead (Pb)	85.0	530	15	75
mercury (Hg)	0.3	10.0	0.05	0.3
molybdenum (Mo)	3.0	200	5	300
silver (Ag)	-	15	-	40
selenium (Se)	0.7	100	0.07	160
tellurium (Te)	-	600	-	70
thallium (Tl)	1.0	15	2	7
tin (Sn)	-	900	2.2	50
vanadium (V)	42.0	250	1.2	70
zinc (Zn)	140	720	65	800
II Other inorganic substances ^[3]				
chloride	-	-	100 mg/L	-
cyanide - free	-	20	5	1,500
cyanide - complex	-	50	10	1,500
thiocyanate	-	20	-	1,500
III aromatic compounds ^[4]				
benzene	-	1.1	0.2	30
ethylbenzene	-	110	4	150
toluene	-	320	7	1,000
xlenes (sum)	-	17	0.2	70
styrene (vinylbenzene)	-	86	6	300
phenol	-	14	0.2	2,000
cresols (sum)	-	13	0.2	200
IV polycyclic aromatic				

hydrocarbons (PAH) ^[5]				
PAH (sum of 10)	-	40	-	-
<u>naphthalene</u>	-	-	0.01	70
<u>phenanthrene</u>	-	-	0.003	5
<u>anthracene</u>	-	-	0.0007	5
<u>fluoranthene</u>	-	-	0.003	1
<u>chrysene</u>	-	-	0.003	0.2
<u>benz(a)anthracene</u>	-	-	0.0001	0.5
<u>benzo(a)pyrene</u>	-	-	0.0005	0.05
<u>benzo(k)fluoroanthene</u>	-	-	0.0004	0.05
<u>indeno(1,2,3-cd)pyrene</u>	-	-	0.0004	0.05
<u>benzo(ghi)perylene</u>	-	-	0.0003	0.05
V chlorinated hydrocarbons ^[6]				
a. (volatile) hydrocarbons				
<u>monochloroethene (vinyl chloride)</u>	-	0.1	0.01	5
<u>dichloromethane</u>	-	3.9	0.01	1,000
<u>1,1-dichloroethane</u>	-	15	7	900
<u>1,2-dichloroethane</u>	-	6.4	7	400
<u>1,1-dichloroethene</u>	-	0.3	0.01	10
<u>1,2-dichloroethene (sum)</u>	-	1	0.01	20
<u>dichloropropanes (sum)</u>	-	2	0.8	80
<u>trichloromethane (chloroform)</u>	-	5.6	6	400
<u>1,1,1-trichloroethane</u>	-	15	0.01	300
<u>1,1,2-trichloroethane</u>	-	10	0.01	130
<u>trichloroethene (Tri)</u>	-	2.5	24	500
<u>tetrachloromethane (Tetra)</u>	-	0.7	0.01	10
<u>tetrachloroethene (Per)</u>	-	8.8	0.01	40
b. chlorobenzenes				
<u>monochlorobenzene</u>	-	15	7	180
<u>dichlorobenzenes (sum)</u>	-	19	3	50
<u>trichlorobenzenes (sum)</u>	-	11	0.01	10
<u>tetrachlorobenzenes (sum)</u>	-	2.2	0.01	2.5
<u>pentachlorobenzene</u>	-	6.7	0.003	1
<u>hexachlorobenzene</u>	-	2.0	0.00009	0.5
c. chlorophenols				
<u>monochlorophenols (sum)</u>	-	5.4	0.3	100
<u>dichlorophenols (sum)</u>	-	22	0.2	30
<u>trichlorophenols (sum)</u>	-	22	0.03	10
<u>tetrachlorophenols (sum)</u>	-	21	0.1	10
<u>pentachlorophenol</u>	-	12	0.04	3

d. <u>polychlorinated biphenyls</u> (PCBs)				
polychlorinated biphenyl (sum 7)	-	1	0.01	0.01
e. <u>other chlorinated hydrocarbons</u>				
<u>monochloroanilines</u> (sum)	-	50	-	30
<u>dioxin</u> (sum I-TEQ)	-	0.00018	-	N/A
<u>chloronaphthalene</u> (sum)	-	23	-	6
VI pesticides ^[7]				
a. organochlorine pesticides				
<u>chlordane</u> (sum)	-	4	0.02 ng/L	0.2
<u>DDT</u> (sum)	-	1.7	-	-
<u>DDE</u> (sum)	-	2.3	-	-
<u>DDD</u> (sum)	-	34	-	-
<u>DDT/DDE/DDD</u> (sum)	-	-	0.004 ng/L	0.01
<u>aldrin</u>	-	0.32	0.009 ng/L	-
<u>dieldrin</u>	-	-	0.1 ng/L	-
<u>endrin</u>	-	-	0.04 ng/L	-
<u>drins</u> (sum)	-	4	-	0.1
<u>α-endosulfan</u>	-	4	0.2 ng/L	5
<u>α-HCH</u>	-	17	33 ng/L	-
<u>β-HCH</u>	-	1.6	8 ng/L	-
<u>γ-HCH (Lindane)</u>	-	1.2	9 ng/L	-
<u>HCH-compounds</u> (sum)	-	-	0.05	-
<u>heptachlor</u>	-	4	0.005 ng/L	0.3
<u>heptachlor-epoxide</u> (sum)	-	4	0.005 ng/L	3
b. organophosphorus pesticides				
none				
c. organotin pesticides				
organotin compounds (sum)	-	2.5	0.05 - 16 ng/L	0.7
d. chlorophenoxy-acetic acid herbicides				
<u>MCPA</u>	-	4	0.02	50

e. other pesticides				
<u>atrazine</u>	-	7.1	29 ng/L	150
<u>carbaryl</u>	-	0.45	2 ng/L	50
<u>carbofuran</u>	-	0.017	9 ng/L	100
VII Other substances ^[8]				
<u>asbestos</u>	-	100	-	-
<u>cyclohexanone</u>	-	150	0.5	15,000
<u>dimethyl phthalate</u>	-	82	-	-
<u>diethyl phthalate</u>	-	53	-	-
<u>diisobutyl phthalate</u>	-	17	-	-
<u>dibutyl phthalate</u>	-	36	-	-
<u>butyl benzyl phthalate</u>	-	48	-	-
<u>dihexyl phthalate</u>	-	220	-	-
<u>di(2-ethylhexyl)phthalate</u>	-	60	-	-
<u>phthalates (sum)</u>	-	-	0.5	5
<u>mineral oil</u>	-	5,000	50	600
<u>pyridine</u>	-	11	0.5	30
<u>tetrahydrofuran</u>	-	7	0.5	300
<u>tetrahydrothiophene</u>	-	8.8	0.5	5,000
<u>tetrabromomethane (bromoform)</u>	-	75	-	630

Source: <http://www.ministryofinfrastructureandtheenvironment.nl/> (05.12.11)

Table C.1: Mean and standard deviation (SD) of As concentration in *H. cannabinus* plant parts and leachate solution at final harvest (week 5)

Treatments	As (mg/kg)			
	Roots	Stems	Leaves	Wastewater (mg/L)
Control(dH ₂ O)	ND	ND	ND	ND
12.5 % TL	0.14±0.02	0.04±0.01	0.01±0	0.12±0.02
25% TL	0.28±0.04	0.10±0.03	0.03±0	0.21±0.02
50 % TL	0.18±0.03	0.08±0.02	0.02±0	0.15±0.01
100 % IF	0.18±0.01	0.08±0.01	0.01±0	0.15±0.03
50 % TL + 50 % IF	0.16±0.05	0.07±0.03	0.01±0	0.14±0.03
75 % TL	0.16±0.03	0.07±0.01	0.01±0	0.14±0.01
100 % TL	0.16±0.02	0.07±0.01	ND	0.14±0.04
100 % RL	0.08±0.01	0.02±0	ND	0.08±0.03

Table C.2: Mean and standard deviation (SD) of Fe concentration in *H. cannabinus* plant parts and leachate solution at final harvest (week 5)

Treatments	Fe (mg/kg)			
	Roots	Stems	Leaves	Wastewater (mg/L)
Control(dH ₂ O)	ND	ND	ND	ND
12.5 % TL	2.14±0.03	0.73±0.23	0.35±0.01	1.76±0.05
25% TL	2.48±0.04	0.85±0.11	0.50±0.06	1.21±0.03
50 % TL	2.31±0.0	0.77±0.06	0.42±0.04	1.37±0.14
100 % IF	2.32±1.03	0.76±0.23	0.46±0.03	1.36±0.08
50 % TL + 50 % IF	2.23±0.74	0.80±0.04	0.40±0.14	1.41±0.11
75 % TL	2.20±0.06	0.70±0.04	0.40±0.02	1.39±0.23
100 % TL	2.20±0.14	0.50±0.11	0.37±0.10	1.82±0.07
100 % RL	1.97±0.51	0.41±0.09	0.32±0.03	2.63±0.41

Table C.3: Mean and standard deviation (SD) of CN concentration in *H. cannabinus* plant parts and leachate solution at final harvest (week 5)

Treatments	CN (mg/kg)			
	Roots	Stems	Leaves	Wastewater (mg/L)
Control(dH ₂ O)	ND	ND	ND	ND
12.5 % TL	0.37±0.03	0.11±0.03	0.09±0.01	0.28±0.03
25% TL	0.52±0.12	0.13±0.01	0.12±0.03	0.33±0.01
50 % TL	0.44±0.06	0.11±0.04	0.10±0.03	0.30±0.02
100 % IF	0.40±0.01	0.10±0.0	0.10±0.0	0.27±0.0
50 % TL + 50 % IF	0.45±0.13	0.11±0.06	0.10±0.01	0.35±0.03
75 % TL	0.36±0.04	0.11±0.01	0.10±0.0	0.29±0.03
100 % TL	0.31±0.09	0.10±0.0	0.06±0.01	0.29±0.01
100 % RL	0.20±0.02	0.05±0.02	0.04±0.01	0.30±0.04

Table C.4: Mean and standard deviation (SD) of NH₃-N concentration in *H. cannabinus* plant parts and leachate solution at final harvest (week 5)

Treatments	NH ₃ -N (mg/kg)			
	Roots	Stems	Leaves	Wastewater (mg/L)
Control(dH ₂ O)	ND	ND	ND	ND
12.5 % TL	1.19±0.06	0.23±0.02	0.11±0.0	1.66±0.11
25% TL	1.64±0.24	0.52±0.03	0.25±0.01	1.74±0.03
50 % TL	1.28±0.13	0.42±0.0	0.25±0.03	1.47±0.07
100 % IF	1.34±0.0	0.36±0.11	0.16±0.03	1.54±0.06
50 % TL + 50 % IF	1.28±0.11	0.31±0.03	0.13±0.04	2.00±0.22
75 % TL	1.04±0.06	0.19±0.07	0.11±0.06	1.70±0.31
100 % TL	0.97±0.04	0.19±0.06	0.11±0.1	1.67±0.14
100 % RL	0.56±0.0	0.07±0.0	0.08±0.01	2.43±0.20

Table C.5: Mean and standard deviation (SD) of As concentrations (mg g⁻¹) in *A.mangium* plant parts and leachate solution at final harvest (week 5)

Treatments	As			
	Roots	Stems	Leaves	Wastewater (mg/L)
Control(dH ₂ O)	ND	ND	ND	ND
12.5 % TL	0.34±0.03	0.01±0	0.01±	0.21±0.03
25% TL	0.57±0.04	0.04±0	0.02±0	0.29±0.01
50 % TL	0.42±0.01	0.03±0.01	0.01±0	0.24±0.0
100 % IF	0.43±0.11	0.03±0	0.01±0	0.26±0.10
50 % TL + 50 % IF	0.33±0.06	0.02±0	0.01±0	0.20±0.03
75 % TL	0.26±0.11	0.02±0	0.01±0	0.17±0.03
100 % TL	0.22±0.01	0.01±0	ND	0.18±0.01
100 % RL	0.11±0.0	ND	ND	0.43±0.04

Table C.6: Mean and standard deviation (SD) of Fe concentrations (mg g⁻¹) in *A.mangium* plant parts and leachate solution at final harvest (week 5)

Treatments	Fe			
	Roots	Stems	Leaves	Wastewater (mg/L)
Control(dH ₂ O)	ND	ND	ND	ND
12.5 % TL	2.06±0.11	0.33±0.04	0.26±0.02	1.94±0.05
25% TL	3.08±0.04	0.77±0.05	0.55±0.11	1.41±0.0
50 % TL	2.86±0.16	0.48±0.01	0.41±0.03	1.54±0.03
100 % IF	2.90±0.23	0.51±0.16	0.42±0.08	1.54±0.06
50 % TL + 50 % IF	2.62±0.09	0.41±0.04	0.30±0.06	1.39±0.03
75 % TL	2.35±0.07	0.38±0.11	0.26±0.01	1.45±0.04
100 % TL	2.17±0.0	0.32±0.03	0.22±0.03	2.13±0.0
100 % RL	1.75±0.06	0.29±0.0	0.20±0.05	2.40±0.08

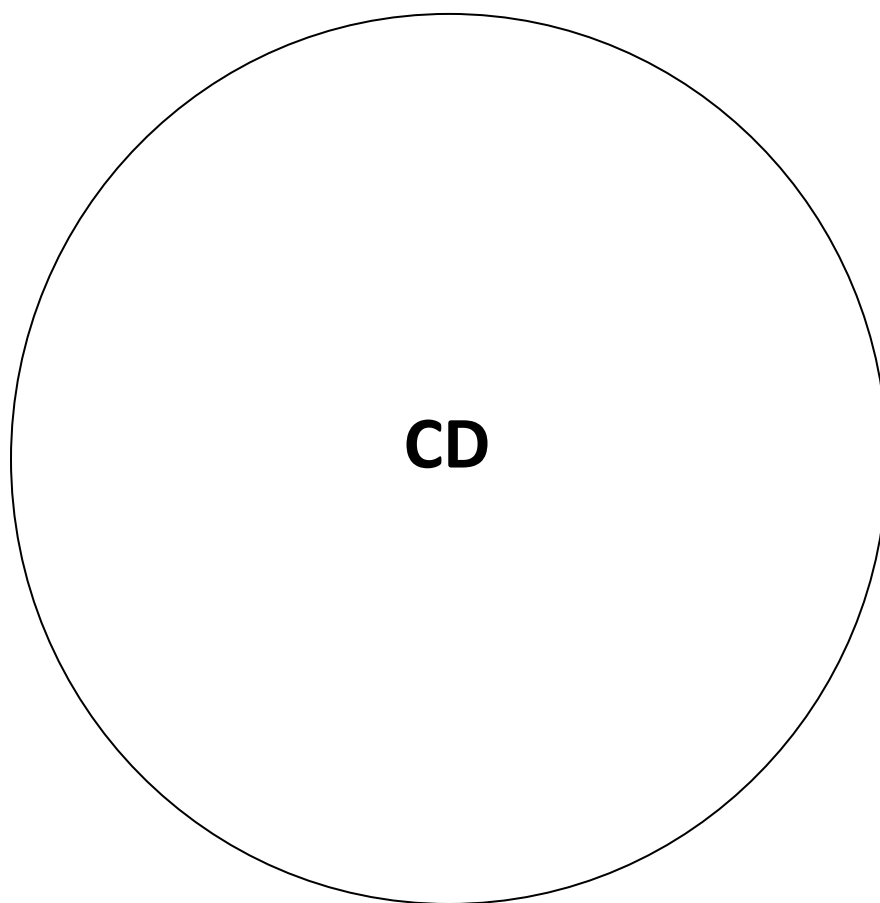
Table C.7: Mean and standard deviation (SD) of CN concentrations (mg g^{-1}) in *A.mangium* plant parts and leachate solution at final harvest (week 5)

Treatments	CN			
	Roots	Stems	Leaves	Wastewater (mg/L)
Control(dH_2O)	ND	ND	ND	ND
12.5 % TL	0.36 $\pm$ 0.02	0.07 $\pm$ 0.01	0.01 $\pm$ 0.0	0.22 $\pm$ 0.04
25% TL	0.60 $\pm$ 0.06	0.12 $\pm$ 0.02	0.12 $\pm$ 0.04	0.34 $\pm$ 0.05
50 % TL	0.50 $\pm$ 0.21	0.11 $\pm$ 0.0	0.08 $\pm$ 0.02	0.31 $\pm$ 0.01
100 % IF	0.51 $\pm$ 0.06	0.12 $\pm$ 0.03	0.09 $\pm$ 0.01	0.31 $\pm$ 0.03
50 % TL + 50 % IF	0.48 $\pm$ 0.07	0.10 $\pm$ 0.02	0.06 $\pm$ 0.02	0.32 $\pm$ 0.01
75 % TL	0.44 $\pm$ 0.18	0.08 $\pm$ 0.02	0.04 $\pm$ 0.0	0.33 $\pm$ 0.03
100 % TL	0.35 $\pm$ 0.06	0.06 $\pm$ 0.01	0.02 $\pm$ 0.0	0.30 $\pm$ 0.10
100 % RL	0.20 $\pm$ 0.02	0.02 $\pm$ 0.0	0.01 $\pm$ 0.0	0.65 $\pm$ 0.08

Table C.8: Mean and standard deviation (SD) of $\text{NH}_3\text{-N}$ concentrations (mg g^{-1}) in *A.mangium* plant parts and leachate solution at final harvest (week 5)

Treatments	$\text{NH}_3\text{-N}$			
	Roots	Stems	Leaves	Wastewater (mg/L)
Control(dH_2O)	ND	ND	ND	ND
12.5 % TL	1.32 $\pm$ 0.13	0.20 $\pm$ 0.03	0.15 $\pm$ 0.03	1.20 $\pm$ 0.0
25% TL	1.69 $\pm$ 0.10	0.44 $\pm$ 0.03	0.23 $\pm$ 0.11	1.17 $\pm$ 0.06
50 % TL	1.48 $\pm$ 0.06	0.29 $\pm$ 0.04	0.21 $\pm$ 0.05	1.16 $\pm$ 0.07
100 % IF	1.48 $\pm$ 0.0	0.30 $\pm$ 0.06	0.22 $\pm$ 0.10	1.16 $\pm$ 0.24
50 % TL + 50 % IF	1.42 $\pm$ 0.06	0.24 $\pm$ 0.12	0.20 $\pm$ 0.03	1.16 $\pm$ 0.34
75 % TL	1.32 $\pm$ 0.04	0.21 $\pm$ 0.02	0.18 $\pm$ 0.04	1.13 $\pm$ 0.06
100 % TL	1.23 $\pm$ 0.21	0.19 $\pm$ 0.06	0.15 $\pm$ 0.03	1.15 $\pm$ 0.02
100 % RL	0.65 $\pm$ 0.04	0.13 $\pm$ 0.02	0.11 $\pm$ 0.01	1.03 $\pm$ 0.03

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