

7. APENDICES

Appendix 1. Average GSH (\pm S.E.) (nmol/g wet wt.) and Coefficient of Variance Nile Tilapia Gills Exposed to Chronic Treatment of Copper in Four Expose Periode for 20 Days (n=9)

Expose Period	Concentration	Average GSH (\pm S.E.) (nmol/g wet wt.)	Coefficient of Variation (%)
Expose 1	Control	306.25 (\pm 45.44)	44,52
	1/20	180.42 (\pm 13.87)	23,07
	1/10	311.53 (\pm 4.72)	4,55
	1/5	371.81 (\pm 18.34)	14,80
Expose 2	Control	722.50 (\pm 125.69)	52,19
	1/20	2873.06 (\pm 865.10)	90,33
	1/10	1385.97 (\pm 564.12)	122,11
	1/5	395.14 (\pm 17.59)	13,36
Expose 3	Control	265.86 (\pm 16.60)	18,80
	1/20	549.44 (\pm 267.62)	146,12
	1/10	294.58 (\pm 25.14)	25,60
	1/5	256.25 (\pm 11.51)	13,47
Elimination	Control	292.50 (\pm 52.03)	53,37
	1/20	354.44 (\pm 18.30)	15,49
	1/10	376.67 (\pm 20.03)	15,95
	1/5	305.14 (\pm 8.57)	8,43

Appendix 2. Average GSH (\pm S.E.) (nmol/g wet wt.) and Coefficient of Variance Nile Tilapia Muscles Exposed to Chronic Treatment of Copper in Four Expose Periode for 20 Days (n=9)

Expose Period	Concentration	Average GSH (\pm S.E.) (nmol/g wet wt.)	Coefficient of Variation (%)
Expose 1	Control	160.56 (\pm 19.16)	35,80
	1/20	225.56 (\pm 22.99)	30,57
	1/10	249.44 (\pm 7.68)	9,24
	1/5	224.86 (\pm 8.24)	10,99
Expose 2	Control	349.17 (\pm 62.80)	53,95
	1/20	458.89 (\pm 22.06)	14,42
	1/10	402.78 (\pm 19.68)	14,66
	1/5	449.31 (\pm 19.02)	12,70
Expose 3	Control	250.00 (\pm 5.29)	6,35
	1/20	250.00 (\pm 10.93)	13,12
	1/10	196.94 (\pm 10.50)	16,00
	1/5	237.92 (\pm 10.02)	12,64
Elimination	Control	389.58 (\pm 23.84)	19,13
	1/20	942.08 (\pm 491.58)	156,54
	1/10	295.69 (\pm 19.93)	20,22
	1/5	382.78 (\pm 20.77)	16,27

Appendix 3. Average GSH (\pm S.E.) (nmol/g wet wt.) and Coefficient of Variance Nile Tilapia Liver Exposed to Chronic Treatment of Copper in Four Expose Periode for 20 Days (n=9)

Expose Period	Concentration	Average GSH (\pm S.E.) (nmol/g wet wt.)	Coefficient of Variation (%)
Expose 1	Control	160.92 (\pm 13.48)	25,11
	1/20	180.42 (\pm 5.81)	9,67
	1/10	210.83 (\pm 25.44)	36,20
	1/5	207.5 (\pm 7.39)	10,69
Expose 2	Control	625.25 (\pm 100.90)	53,95
	1/20	653.61 (\pm 60.89)	14,42
	1/10	515.28 (\pm 22.10)	14,66
	1/5	684.17 (\pm 71.70)	12,70
Expose 3	Control	287.50 (\pm 14.51)	15,14
	1/20	259.72 (\pm 13.03)	15,05
	1/10	235.97 (\pm 12.49)	15,87
	1/5	546.39 (\pm 303.67)	166,73
Elimination	Control	493.75 (\pm 27.10)	16,46
	1/20	403.19 (\pm 27.39)	20,38
	1/10	387.50 (\pm 9.21)	7,13
	1/5	364.72 (\pm 25.98)	21,37

Appendix 4. Average GSH (\pm S.E.) (nmol/g wet wt.) and Coefficient of Variance Nile Tilapia Gills Exposed to Chronic Treatment of Cadmium in Four Expose Periode for 20 Days (n=9)

Expose Period	Concentration	Average GSH (\pm S.E.) (nmol/g wet wt.)	Coefficient of Variation (%)
Expose 1	Control	302.08 (\pm 46.19)	45,87
	1/20	309.72 (\pm 17.10)	16,56
	1/10	414.86 (\pm 7.99)	5,78
	1/5	388.61 (\pm 11.49)	8,87
Expose 2	Control	220.42 (\pm 35.10)	47,77
	1/20	415.97 (\pm 18.23)	13,15
	1/10	453.89 (\pm 15.88)	10,49
	1/5	436.39 (\pm 19.27)	13,25
Expose 3	Control	192.50 (\pm 10.70)	16,68
	1/20	240.28 (\pm 16.67)	20,82
	1/10	217.08 (\pm 27.82)	38,45
	1/5	336.39 (\pm 31.23)	27,85
Elimination	Control	227.08 (\pm 22.07)	29,15
	1/20	290.56 (\pm 37.27)	38,48
	1/10	152.64 (\pm 20.04)	39,39
	1/5	229.72 (\pm 16.29)	21,27

Appendix 5. Average GSH (\pm S.E.) (nmol/g wet wt.) and Coefficient of Variance Nile Tilapia Muscles Exposed to Chronic Treatment of Cadmium in Four Expose Periode for 20 Days (n=9)

Expose Period	Concentration	Average GSH (\pm S.E.) (nmol/g wet wt.)	Coefficient of Variation (%)
Expose 1	Control	374.03 (\pm 9.80)	7,86
	1/20	315.90 (\pm 8.46)	8,04
	1/10	361.53 (\pm 13.79)	11,44
	1/5	322.50 (\pm 13.10)	12,19
Expose 2	Control	393.33 (\pm 26.46)	20,18
	1/20	335.28 (\pm 10.17)	9,10
	1/10	412.78 (\pm 6.27)	4,55
	1/5	335.42 (\pm 25.87)	23,14
Expose 3	Control	177.92 (\pm 25.03)	42,20
	1/20	252.22 (\pm 17.71)	21,07
	1/10	184.44 (\pm 16.93)	27,54
	1/5	278.61 (\pm 22.11)	23,81
Elimination	Control	244.44 (\pm 14.27)	17,51
	1/20	254.72 (\pm 14.06)	16,56
	1/10	206.94 (\pm 16.90)	24,50
	1/5	192.36 (\pm 7.23)	11,28

Appendix 6. Average GSH (\pm S.E.) (nmol/g wet wt.) and Coefficient of Variance Nile Tilapia Liver Exposed to Chronic Treatment of Cadmium in Four Expose Periode for 20 Days (n=9)

Expose Period	Concentration	Average GSH (\pm S.E.) (nmol/g wet wt.)	Coefficient of Variation (%)
Expose 1	Control	409.86 (\pm 33.50)	24,52
	1/20	314.72 (\pm 17.73)	16,90
	1/10	406.11 (\pm 26.63)	19,67
	1/5	363.33 (\pm 8.25)	6,81
Expose 2	Control	505.42 (\pm 31.36)	18,62
	1/20	362.64 (\pm 24.18)	20,00
	1/10	465.83 (\pm 15.48)	9,97
	1/5	572.78 (\pm 48.59)	25,45
Expose 3	Control	246.94 (\pm 42.52)	51,65
	1/20	396.81 (\pm 45.29)	34,24
	1/10	391.25 (\pm 34.20)	26,22
	1/5	350.69 (\pm 19.60)	16,76
Elimination	Control	354.31 (\pm 26.31)	22,27
	1/20	255.00 (\pm 36.22)	42,61
	1/10	320.28 (\pm 15.08)	14,13
	1/5	373.47 (\pm 53.35)	42,85