Days	Parameters		Control	Treated	
				Limited dose	High dose
30	N.A.	Hyperdiploidy	0.4 ± 0.05	2.2 ± 0.73**	2.8 ± 1.02**
		Hypodiploidy	0.0 ± 0. 00	0.± 0.00^{ns}	0.2 ± 0.2^{ns}
	Structural aberrations	Clumping	0.2 ± 0.04	1.6 ± 0.68**	1.8 + 0.58**
		Stickiness	0.1 ± 0.08	1.6 ± 0.93**	2.0 + 0.55**
		End to end association	0.1 ± 0.02	1.4 ± 0.51**	1.6 ± 0.75**
		Centric fusion	0.1 ± 0.02	1.2 ± 0.73**	1.3 ± 0.73**
		Centromeric attenuation	0.2 ± 0.03	3.0 ± 1.00**	3.4 ± 0.51**
		Gap	0.0 ± 0. 00	0.2 ± 0.20^{ns}	0.6 ± 0.24**
		Break	0.0 ± 0. 00	0.6 ± 0.04*	1.0 ± 0.63**
		Deletion	0.0 ± 0. 00	1.6 ± 0.81**	2.0 + 0.89**
		Ring	0.0 ± 0. 00	0.2 ± 0.02^{ns}	0.4 ± 0.4^{ns}
	Total damage cells		1.5 ± 0.86	13.6 ± 1.72**	17.1 ± 1.1**
60	N.A.	Hyperdiploidy	0.4 ± 0.01	2.2 ± 0.86**	4.2 ± 1.10**
		Hypodiploidy	0.0 ± 0. 00	0.2 ± 0.02^{ns}	0.4 ± 0.09^{ns}
	Structural aberrations	Clumping	0.2 ± 0.03	2.0 ± 0.84**	2.2 + 0.86**
		Stickiness	0.3 ± 0.03	2.0 ± 1.30**	2.4 + 1.69**
		End to end association	0.0 ± 0.00	2.6 ± 0.87**	3.6 ± 1.60**
		Centric fusion	0.2 ± 0.02	3.8 ± 1.70**	4.4 ± 1.30**
		Centromeric attenuation	0.2 ± 0.05	4.2 ± 0.66**	5.8 ± 0.66**
		Gap	0.0 ± 0. 00	0.8 ± 0.58^{ns}	1.6 ± 0.81**
		Break	0.0 ± 0. 00	1.4 ± 0.40*	1.8 ± 0.80**
		Deletion	0.2 ± 0. 07	3.8 ± 1.70**	3.8 + 1.30**
		Ring	0.1 ± 0. 05	1.0 ± 0.32**	1.0 ± 0.03**
	Total damage cells		1.6 ± 0.09	23.8 ± 1.90**	31.2 ± 1.9**
90	N.A.	Hyperdiploidy	0.2 ± 0.05	2.6 ± 0.75**	4.8 ± 0.86**
		Hypodiploidy	0.0 ± 0. 00	0.2 ± 0.20^{ns}	0.2 ± 0.20^{ns}
	Structural aberrations	Clumping	0.2 ± 0.02	2.2 ± 1.07**	2.4 + 1.20**
		Stickiness	0.2 ± 0.01	3.0 ± 1.14**	3.4 + 0.70**
		End to end association	0.0 ± 0.00	3.2 ± 1.20**	3.8 ± 1.20**
		Centric fusion	0.1 ± 0.05	4.6 ± 1.60**	4.4 ± 1.20**
		Centromeric attenuation	0.2 ± 0.03	5.2 ± 0.86**	6.4 ± 0.70**
		Gap	0.0 ± 0. 00	1.6 ± 0.25**	1.6 ± 0.70**
		Break	0.0 ± 0. 00	1.8 ± 0.740*	1.8 ± 0.80*
		Deletion	0.1 ± 0. 05	4.0 ± 1.10**	8.6 + 0.70**
		Ring	0.1 ± 0. 09	1.8 ± 0.74**	2.6 ± 0.20**
	Total damage cells		1.7 ± 0.81	30.2 ± 3.20**	40.0 ± 2.03**

Resuls are expressed of the mean ± standard errors of 5 rats ; ns = Non-significant

N. A = Numerical aberrations ; * = Significant ; ** = Highly significant

Days	Parameters		Control	Treated	
				Limited dose	High dose
30	N.A.	Hyperdiploidy	0.4 ± 0.05	2.2 ± 0.73**	2.8 ± 1.02**
		Hypodiploidy	0.0 ± 0. 00	0.± 0.00^{ns}	0.2 ± 0.2^{ns}
	Structural aberrations	Clumping	0.2 ± 0.04	1.6 ± 0.68**	1.8 + 0.58**
		Stickiness	0.1 ± 0.08	1.6 ± 0.93**	2.0 + 0.55**
		End to end association	0.1 ± 0.02	1.4 ± 0.51**	1.6 ± 0.75**
		Centric fusion	0.1 ± 0.02	1.2 ± 0.73**	1.3 ± 0.73**
		Centromeric attenuation	0.2 ± 0.03	3.0 ± 1.00**	3.4 ± 0.51**
		Gap	0.0 ± 0. 00	0.2 ± 0.20^{ns}	0.6 ± 0.24**
		Break	0.0 ± 0. 00	0.6 ± 0.04*	1.0 ± 0.63**
		Deletion	0.0 ± 0. 00	1.6 ± 0.81**	2.0 + 0.89**
		Ring	0.0 ± 0. 00	0.2 ± 0.02^{ns}	0.4 ± 0.4^{ns}
	Total damage cells		1.5 ± 0.86	13.6 ± 1.72**	17.1 ± 1.1**
60	N.A.	Hyperdiploidy	0.4 ± 0.01	2.2 ± 0.86**	4.2 ± 1.10**
		Hypodiploidy	0.0 ± 0. 00	0.2 ± 0.02^{ns}	0.4 ± 0.09^{ns}
	Structural aberrations	Clumping	0.2 ± 0.03	2.0 ± 0.84**	2.2 + 0.86**
		Stickiness	0.3 ± 0.03	2.0 ± 1.30**	2.4 + 1.69**
		End to end association	0.0 ± 0.00	2.6 ± 0.87**	3.6 ± 1.60**
		Centric fusion	0.2 ± 0.02	3.8 ± 1.70**	4.4 ± 1.30**
		Centromeric attenuation	0.2 ± 0.05	4.2 ± 0.66**	5.8 ± 0.66**
		Gap	0.0 ± 0. 00	0.8 ± 0.58^{ns}	1.6 ± 0.81**
		Break	0.0 ± 0. 00	1.4 ± 0.40*	1.8 ± 0.80**
		Deletion	0.2 ± 0. 07	3.8 ± 1.70**	3.8 + 1.30**
		Ring	0.1 ± 0. 05	1.0 ± 0.32**	1.0 ± 0.03**
	Total damage cells		1.6 ± 0.09	23.8 ± 1.90**	31.2 ± 1.9**
90	N.A.	Hyperdiploidy	0.2 ± 0.05	2.6 ± 0.75**	4.8 ± 0.86**
		Hypodiploidy	0.0 ± 0. 00	0.2 ± 0.20^{ns}	0.2 ± 0.20^{ns}
	Structural aberrations	Clumping	0.2 ± 0.02	2.2 ± 1.07**	2.4 + 1.20**
		Stickiness	0.2 ± 0.01	3.0 ± 1.14**	3.4 + 0.70**
		End to end association	0.0 ± 0.00	3.2 ± 1.20**	3.8 ± 1.20**
		Centric fusion	0.1 ± 0.05	4.6 ± 1.60**	4.4 ± 1.20**
		Centromeric attenuation	0.2 ± 0.03	5.2 ± 0.86**	6.4 ± 0.70**
		Gap	0.0 ± 0. 00	1.6 ± 0.25**	1.6 ± 0.70**
		Break	0.0 ± 0. 00	1.8 ± 0.740*	1.8 ± 0.80*
		Deletion	0.1 ± 0. 05	4.0 ± 1.10**	8.6 + 0.70**
		Ring	0.1 ± 0. 09	1.8 ± 0.74**	2.6 ± 0.20**
	Total damage cells		1.7 ± 0.81	30.2 ± 3.20**	40.0 ± 2.03**

Resuls are expressed of the mean ± standard errors of 5 rats ; ns = Non-significant

N. A = Numerical aberrations ; * = Significant ; ** = Highly significant

Days	Parameters		Control	Treated	
				Limited dose	High dose
30	N.A.	Hyperdiploidy	0.4 ± 0.05	0.6 ± 0.04^{ns}	0.8 ± 0.04*
		Hypodiploidy	0.0 ± 0. 00	0.0 ± 0.00^{ns}	0.0 ± 0.0^{ns}
	Structural aberrations	Clumping	0.2 ± 0.04	0.4 ± 0.02^{ns}	0.6 ± 0.05*
		Stickiness	0.1 ± 0.08	0.3 ± 0.01^{ns}	0.5 ± 0.03^{ns}
		End to end association	0.1 ± 0.02	0.2 ± 0.03^{ns}	0.4 ± 0.02*
		Centric fusion	0.1 ± 0.02	0.3 ± 0.02^{ns}	0.4 ± 0.03*
		Centromeric attenuation	0.2 ± 0.03	0.5 ± 0.04*	0.6 ± 0.05*
		Gap	0.0 ± 0. 00	0.0 ± 0.00^{ns}	0.1 ± 0.01ns
		Break	0.0 ± 0. 00	0.4 ± 0.04*	0.5 ± 0.02*
		Deletion	0.0 ± 0. 00	0.4 ± 0.03*	0.6 ± 0.02*
		Ring	0.0 ± 0. 00	0.0 ± 0.00^{ns}	0.0 ± 0.00^{ns}
	Total damage cells		1.5 ± 0.86	3.1 ± 0.4^{ns}	4.5 ± 0.03*
60	N.A.	Hyperdiplidy	0.4 ± 0.01	0.5 ± 0.04^{ns}	0.8 ± 0.03*
		Hyperdiplidy	0.0 ± 0. 00	0.1 ± 0.01^{ns}	0.3 ± 0.02*
	Structural aberrations	Clumping	0.2 ± 0.37	0.3 ± 0.02^{ns}	0.4 ± 0.03^{ns}
		Stickiness	0.3 ± 0.33	0.4 ± 0.04^{ns}	0.6 ± 0.04^{ns}
		End to end association	0.0 ± 0.00	0.3 ± 0.01*	0.7 ± 0.02*
		Centric fusion	0.2 ± 0.02	0.3 ± 0.04^{ns}	0.6 ± 0.04*
		Centromeric attenuation	0.2 ± 0.05	0.3 ± 0.02^{ns}	0.5 ± 0.03*
		Gap	0.0 ± 0. 00	0.0 ± 0.00^{ns}	0.1 ± 0.01^{ns}
		Break	0.0 ± 0. 00	0.0 ± 0.00^{ns}	0.1 ± 0.01^{ns}
		Deletion	0.2 ± 0. 07	0.3 ± 0.02^{ns}	0.5 ± 0.03*
		Ring	0.1 ± 0. 05	0.4 ± 0.02^{ns}	0.5 ± 0.03*
	Total damage cells		1.6 ± 0.98	2.9 ± 0.04^{ns}	5.1 ± 0.05*
90	N.A.	Hyperdiplidy	0.2 ± 0.05	0.3 ± 0.01^{ns}	0.8 ± 0.02*
		Hyperdiplidy	0.0 ± 0. 00	0.0 ± 0.00^{ns}	0.1 ± 0.01^{ns}
	Structural aberrations	Clumping	0.2 ± 0.02	0.4 ± 0.02ns	0.6 ± 0.03^{ns}
		Stickiness	0.2 ± 0.01	0.6 ± 0.04*	0.8 ± 0.02*
		End to end association	0.0 ± 0.00	0.0 ± 0.00^{ns}	0.4 ± 0.01*
		Centric fusion	0.1 ± 0.05	0.2 ± 0.02^{ns}	0.6 ± 0.02*
		Centromeric attenuation	0.2 ± 0.03	0.4 ± 0.02^{ns}	0.8 ± 0.02*
		Gap	0.0 ± 0. 00	0.0 ± 0.00^{ns}	0.2 ± 0.02^{ns}
		Break	0.0 ± 0. 00	0.0 ± 0.00^{ns}	0.3 ± 0.04^{ns}
		Deletion	0.1 ± 0. 05	0.2 ± 0.01^{ns}	0.4 ± 0.02^{ns}
		Ring	0.1 ± 0. 09	0.2 ± 0.01^{ns}	0.8 ± 0.04**
	Total damage cells		1.7 ± 0.81	2.5 ± 0.04ns	5.8 ± 0.06*

Resuls are expressed of the mean ± standard errors of 5 rats ; ns = Non-significant

N. A = Numerical aberrations ; * = Significant ; ** = Highly significant

Parameters	Days	Dose	Tissues	
			Brain	Liver
DNA ug/g	30	Control	173.09 ± 4.02	197.6 ± 6.8
		Limited dose	182.03 ± 2.7 **	201.0 + 2.5*
		High dose	189.00 ± 2.3**	208.4 + 2.3**
	60	Control	175.1 ± 6.8	206.9 ± 5.2
		Limited dose	184.8 ± 1.2 **	211.3 ± 6.1*
		High dose	185.7 ± 6.7**	216.2 ± 3.3**
	90	Control	175.1 ± 5.7	216.0 ± 2.6
		Limited dose	182.1 ± 1.2**	221.9 ± 1.5*
		High dose	188.1 ± 9.0**	228.8 ± 4.3**
RNA ug/g	30	Control	180.5 ± 6.5	721.1 ± 9.3
		Limited dose	185.9 ± 4.7^{ns}	730.0 ± 0.2*
		High dose	190.0 ± 2.9**	734.1 ± 0.1**
	60	Control	184.6 ± 4.0	722.0 ± 19.82
		Limited dose	190.1 ± 3.2*	730.1 ± 5.4**
		High dose	196.0 ± 1.5**	736.2 ± 8.2**
	90	Control	189.1 ± 6.1	723.1 ± 2.9
		Limited dose	192.0 ± 2.1^{ns}	734.0 ± 1.0**
		High dose	199.8 ± 4.1**	736.6 ± 0.4**
Total protein mg/g	30	Control	94.9 ± 6.8	167.1 ± 1.4
		Limited dose	100.9 ± 3.3*	175.2 ± 7.8*
		High dose	110.2 ± 4.8**	177.5 ± 5.3**
	60	Control	95.1 ± 6.4	170.3 ± 1.2
		Limited dose	105.1 ± 1.2**	174.3 ± 2.3*
		High dose	107.2 ± 4.5**	178.9 ± 2.3**
	90	Control	96.3 ± 4.9	172.8 ± 1.4
		Limited dose	102.6 ± 2.9*	176.2 ± 5.1*
		High dose	106.2 ± 2.6**	182.1 ± 1.4**

Resuls are expressed of the mean ± standard errors of 10 rats ; ns = Non-significant

* = Significant ($p < 0.05$) ; ** = Highly significant ($p < 0.01$)

Limited dose = 0.011 mg / kg body weight ; High dose = 0.022 mg /kg body weig

Parameters	Days	Dose	Tissues	
			Brain	Liver
DNA ug/g	30	Control	176.1 ± 3.2	198.5 ± 6.4
		Limited dose	176.8 ± 4.0$^{n.s}$	199.0 + 5.3$^{n.s}$
		High dose	178.1 ± 3.1$^{n.s}$	199.8 + 5.1$^{n.s}$
	60	Control	174.2 ± 6.4	214.6 ± 5.2
		Limited dose	178.1 ± 5.3$^{n.s}$	216.4 ± 6.1$^{n.s}$
		High dose	180.0 ± 4.6$^{n.s}$	218.5 ± 6.2$^{n.s}$
	90	Control	176.1 ± 6.2	214.3 ± 2.8
		Limited dose	177.5 ± 6.8$^{n.s}$	218.6 ± 3.1$^{n.s}$
		High dose	179.4 + 5.1$^{n.s}$	220.8 + 3.6$^{n.s}$
RNA ug/g	30	Control	181.0 ± 5.6	720.1 ± 0.2
		Limited dose	184.0 ± 5.8^{ns}	725.2 ± 1.4$^{n.s}$
		High dose	188.1 ± 6.4$^{n.s}$	726.4 ± 2.5$^{n.s}$
	60	Control	182.8 ± 4.1	722.5 ± 18.2
		Limited dose	186.1 ± 6.2$^{n.s}$	724.6 ± 12.4$^{n.s}$
		High dose	189.0 ± 5.4$^{n.s}$	728.5 ± 16.7$^{n.s}$
	90	Control	190.1 ± 5.1	725.3 ± 20.4
		Limited dose	194.2 ± 6.2^{ns}	730.1 ± 18.2$^{n.s}$
		High dose	196.4 + 8.0$^{n.s}$	732.2 + 19.4$^{n.s}$
Total protein mg/g	30	Control	95.2 ± 7.1	168.1 ± 1.5
		Limited dose	98.5 ± 7.5$^{n.s}$	172.5 ± 2.4$^{n.s}$
		High dose	101.1 ± 8.6$^{n.s}$	173.2 ± 1.6$^{n.s}$
	60	Control	94.8 ± 5.2	171.0 ± 1.3
		Limited dose	96.4 ± 6.4$^{n.s}$	175.6 ± 2.4$^{n.s}$
		High dose	104.6 ± 4.6*	188.4 ± 4.6$^{n.s}$
	90	Control	89.5 ± 6.1	175.7 ± 2.4
		Limited dose	93.4 ± 6.5$^{n.s}$	177.8 ± 3.2$^{n.s}$
		High dose	100.7 + 5.4*	180.9 + 4.1$^{n.s}$

Resuls are expressed of the mean ± standard errors of 10 rats ; ns = Non-significant
* = Significant ;
Limited dose = 0.011 mg / kg body weight ; High dose = 0.022 mg /kg body weight