

paraquat dichloride

49-paraquat dichloride (CAS# 1910-42-5)																
Table 1a. Sub-lethal acute poisoning (single dose): Clinical observations (time related)																
Ref No.	Reference (linked to full source)	Case No.	Case age/sex	Case category	Dose: g	Notes (case, dose, time)	Time (exposure to sampling): h	Notes (blood sample)	Blood conc.: mg/l	Blood conc.: µM	Metabolite Blood conc.: mg/l	Metabolite Blood conc.: µM	Symptoms and signs	Treatment	Time (exposure to recovery): h	
1	SWPC 1991	1	16F	S, A			3	sr, (d)	0.0025	0.01			0h:G, V; 48h:K, E, L, 96h: R	ST, AR	NR	
2	Higenbottam 1979	1					84	sr, (d)	0.0002	0.0011						
		2	27M	S, A		(a)	3	pl	0.12	0.64			0h:NS; I:K,L; 120h:R	NR	336	
		3	27M	S, A	11	(b)	8		0.05	0.27			0h:MS; I:L,R; 14d:P	(f)	NR	
3	Okonek 1979	4	47M	S, A		(a)	4		0.116	0.62			0h:NS; 48h: F, AP	ST	120	
		5	16F	S, A		(b)	34	pl	1.12	6.01			ba:MS, V; 0h:G; I:KF, L, P	0h:ST; 2h:HP (g)		
		5						72	pl, y	0.20	1.07			(f)		
		5						96	pl	0.05	0.27					308
		6	17M	S, A		(b)	15.5	pl	1.44	7.73			KF, HA, HCF	ST; 12h:HP (g), HD,		
		6						72	pl, y	0.19	1.02			(f)		
4	Mascie-Taylor 1983	6					120	pl	0.10	0.54					648	
		7	NR	NR			4.5		0.72	3.87			NR	ST, HP 8h		
		8	NR	NR			2		0.61	3.28			NR	ST, HP 9h		
5	Demeere 1984	9	NR	NR			9		0.60	3.22			NR	ST, HP 3h		
		10	32M	S, A		(b), ET	72	wb, (e)	6.0	32.21			0h:MS, G; I:P, K	ST, FD, HD, AR, (f)	504	
		11	42M	S, A		(c)	5		2.3	12.35			0h:NS; 72h:HS	ST; 6h:FD	334	
6	Hendy 1984	11					10		0.28	1.50			96h:P, CY, K	4d:HP 2 × 6h	1344	
		12	44M	NR			1		5.0	26.85			NR	ST/NR		
		12						12	y	0.07	0.38					
		12						24		0.05	0.27					
8	Suzuki 1989	13	30F	NR	NR	(b)	1.5	pl	2.4	12.89			NR	NR	NR	
		14	57F	NR	NR	(b)	65	pl	0.13	0.70			NR	NR	NR	
		15	36M	NR	NR	(b)	3.3	pl	0.89	4.78			NR	NR	NR	
		16	27F	NR	NR	(b)	7.2	pl	0.34	1.83			NR	NR	NR	
		17	23F	NR	NR	(b)	22.1	pl	0.11	0.59			NR	NR	NR	
		18	49M	NR	NR	(b)	51	pl	0.037	0.20			NR	NR	NR	
		19	32F	NR	NR	(b)	15	pl	0.075	0.40			NR	NR	NR	
9	Perriens 1992	20	NR	NR	NR		5		0.46	2.47			ST	NR		
		21	NR	NR	NR		2		1.1	5.91			ST	NR		
		22	NR	NR	NR	NR		1		3.3	17.72			ST	NR	
		23	NR	NR	NR	NR		5		0.31	1.66			ST		
		24	NR	NR	NR	NR		21		0.013	0.07				NR	
10	Lin 1994	25	29F	S, A	3		20		0.18	0.97			G	ST		
		25						144		0.03	0.16					408
11	Lheureux 1995	26	59M	S, A	12		4	sr	28.0	150.33			KF, LF	3h: ST; 5h: HD		
		26												11h:(h)		

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Footnotes [General Glossary (via link) lists definitions of common abbreviations (general terms, symptoms and signs, treatment)]															
MW paraquat dichloride = 257.2															
MW paraquat base = 186.3															
(a) Weedol granules.															
(b) Gramoxone solution.															
(c) dissolved Weedol p.o.+ 60 mg i.v.															
(d) probably unit error.															
(e) probably a method with quantification problems.															
(f) hypoxic ventilation.															
(g) 14 days, 8 h/day.															
(h) desferrioxamine and N-acetylcystein treatment.															
Table 1b. Sub-lethal acute poisoning (single dose): Clinical observations (without time information)															
Ref No.	Reference (linked to full source)	Case No.	Case age/sex	Case category	Dose: g	Notes (case, dose, time)	Time (exposure to sampling): h	Notes (blood sample)	Blood conc.: mg/l	Blood conc.: µM	Metabolite Blood conc.: mg/l	Metabolite Blood conc.: µM	Symptoms and signs	Treatment	Time (exposure to recovery): h
no cases															
Footnotes [General Glossary (via link) lists definitions of common abbreviations (general terms, symptoms and signs, treatment)]															
MW paraquat dichloride = 257.2															
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Table 2a. Lethal acute poisoning (single dose): Clinical observations (time related)																		
Ref No.	Reference (linked to full source)	Case No.	Case age/sex	Case category	Dose: g	Notes (case, dose, time)	Time (exposure to sampling): h	Notes (blood sample)	Blood conc.: mg/l	Blood conc.: µM	Metabolite Blood conc.: mg/l	Metabolite Blood conc.: µM	Symptoms and signs	Treatment	Time (exposure to death): h			
1	SPC 1994	1	63M	S, A			0.75	sr	19.6	105.23			PE, L, K	ST, HP				
		1					4.75	sr	15.8	84.83								
		1					9.75	sr	3.91	20.99								
		1					15.8	sr	2.61	14.01								
		1					23	sr	0.93	4.99								
		1					35	sr	1.27	6.82								
2	AAPCC 1987:89	2	22M	S, A			1.5		29.5	158.39			V; 24h:F 36h:P	ST; E4:HP	36			
		2					3.5		7.3	39.19			12h: HP; 46h: AR					
		2					12		0.75	4.03								
		2					30		0.38	2.04								
3	AAPCC 1991:152	3	41M	S, A			20		5	26.85			0h:V, MS, LP; 16h:H, LP	0h: ST, AB, CR				
		3							0			I:CA, RA		NR				
4	BGPC 1991:44625	4	50	S, A		(a)	6.5	wb	11	59.06			58h:R; L, KF	ST, FD, HP	NR			
		4					11.5	wb	1.26	6.76								
5	NPC	5	38	NR			48		0.12	0.64			24h:MS; 48h:G, L, KF; 96h: ST, HP, HD, AR, R		168			
		6					37	NR		48		6	31.21		12h:MA	NR	24	
6	IPC	7	32M	S, A			2	sr	7.7	41.34			NR	NR				
7	Tompsett 1970	8	46F	UA		(a), ET	72		0.55	2.95			NR	NR				
8	Fairshter 1976	9	17M	UA			216		1.1	5.91			ba:V; 0h:MS; 24-72h:F, K; 48-552h:AR					
		9					264	y	0.4	215			P,L; 72-552h:R (g)	120h:HD	28			
		9					456		0.35	1.88								
		10					16M	S, A		48		14.2	76.24			0h:MS; 48h:K,L	0h:ST, FD	
		10								168		1.94	10.42			P; 336h:R (g)	9,5h:HD; I:HD 4-6h/d25d	
		10					504		0.79	4.24				600				
9	Higenbottam 1979	11	56F			(a)	3	pl	0.94	5.05			0h:MS, G; 96h:P,K,L; 6d:R 0L:P, L, K	ST, AR	114			
		12					28M	S, A		(a)	4	pl	0.42	2.25			0h:G, R I:P, K, L; 0L:P, H	AR
10	Nakai 1981	13	18F	S, A		(a)	35	sr	3.5	18.79			0h:G; 14h:R, K I:CY, LP, M	0h:ST; 14h:AR	42			
11	Tabei 1982	14	59M	S, A		(b)	4		245	1315.41			K,L,R	5h:HP 3h				
		14					8	y	1	5.37								
		14					15		25	134.23					19			
12	Mascie-Taylor 1983	15	NR	NR		(a)	9		0.48	2.58			NR	ST, HP 3h				
		16					M	NR		(a)	21		0.59	3.17			NR	ST, HP 10h

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13	Ikebuchi 1987	17	61F	NR	(a)	1		300	1610.70			NR	NR
		17		NR	(a)	15	y	4	21.48				
		17				24		2.5	13.42				
		18	42F	NR	(a)	6		15	80.54			NR	NR
		18				7.5	y	2	10.74				
		18				10		4	21.28				
		18				17.5		1	5.37				
		19	46M	NR	(a)	15		1	5.37			NR	NR
		19				18	y	0,4	2.15				
		19				35		0,3	1.61				
		20	51M	NR	(a)	5		10	53.69			NR	NR
		20				7.5	y	3	16.11				
		20				15		5	26.85				
		20				31		0.7	3.76				
		21	57M	NR	(a)	4		900	4832.1			NR	NR
		21				8		700	3758.3				
		21				15	y	100	536.9				
		21				18		100	536.9				
		22	32M	NR	(a)	6		200	1073.8				
		22				17	y	7	37.58			NR	NR
		22				20		8.5	45.64				
		22				35		2.3	12.35				

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14	Suzuki 1989	23	56F	NR	(a), (i)	5.9	pl	31.35	168.32			NR	NR	43
		24	47M	NR	(a), (i)	5.1	pl	69.41	372.65			NR	NR	25
		25	50M	NR	(a), (i)	10	pl	20.73	111.3			CA	CR	13
		26	31F	NR	(a), (i)	8.3	pl	17.73	95.19			CA, (c)	CR	41
		27	46F	NR	(a), (i)	18.5	pl	17.42	93.53			NR	NR	34
		28	53M	NR	(a), (i)	21.5	pl	8.72	46.81			NR	NR	40
		29	34M	NR	(a), (i)	3.4	pl	27.44	147.33			NR	NR	22
		30	48M	NR	(a), (i)	8.3	pl	4.90	26.3			NR	NR	79
		31	34M	NR	(a), (i)	2.5	pl	79.52	426.94			NR	NR	22
		32	16M	NR	(a), (i)	2.7	pl	4.71	25.3			CA	CR	68
		33	35M	NR	(a), (i)	37.9	pl	0.89	4.8			CA	CR	255
		34	67F	NR	(a), (i)	3.8	pl	36.05	193.55			NR	NR	29
		35	52F	NR	(a), (i)	51.4	pl	3.41	18.3			NR	NR	93
		36	39F	NR	(a), (i)	3	pl	16.02	86.01			NR	NR	161
		37	48F	NR	(a), (i)	11.7	pl	0.74	4			NR	NR	227
		38	46M	NR	(a), (i)	37.6	pl	2.31	12.4			NR	NR	52
		39	40M	NR	(a), (i)	6.1	pl	8.42	45.21			NR	NR	90
		40	57M	NR	(a), (i)	53.7	pl	2.96	15.9			NR	NR	73
		41	44F	NR	(a), (i)	20.8	pl	4.27	22.9			NR	NR	103
		42	44M	NR	(a), (i)	10.6	pl	13.41	72			NR	NR	25
		43	60M	NR	(a), (i)	7.6	pl	97.35	522.67			CA	CR	11
		44	58F	NR	(a), (i)	54.8	pl	0.37	2			NR	NR	289
		45	38M	NR	(a), (i)	9.3	pl	3.04	16.3			NR	NR	79
		46	52M	NR	(a), (i)	49.9	pl	1.84	9.9			NR	NR	332
		47	49M	NR	(a), (i)	2.3	pl	198.3	1064.67			NR	NR	20
		48	53F	NR	(a), (i)	3.8	pl	3.18	17.1			(d)	NR	107
		49	60M	NR	(a), (i)	2.6	pl	112.2	602.4			NR	NR	20
		50	20M	NR	(a), (i)	8.9	pl	0.76	4.1			NR	NR	179
		51	24M	NR	(a), (i)	24.3	pl	0.30	1.6			L	HP	766
		52	64F	NR	(a), (i)	1	pl	56.09	301.15			NR	NR	12
		53	34F	NR	(a), (i)	2.9	pl	4.15	22.3			NR	NR	227
		54	43F	NR	(a), (i)	90.3	pl	0.32	1.7			NR	NR	480
		55	44M	NR	(a), (i)	4	pl	21.83	117.21			NR	HP	162
		56	52M	NR	(a), (i)	76.2	pl	1.12	6			NR	NR	84
		57	60F	NR	(a), (i)	3.8	pl	1857	9970			C, CA	CR	9
		58	25F	NR	(a), (i)	68.7	pl	1.56	8.4			NR	NR	208

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15	Dubettier 1990	59	26M	S, A			48		0.14	0.75			KF,R,G	ST, (e),HD,CH	408
		59													
16	Franzen 1991	60	23M	S, A			5	sr	2.5	13.42			G; 24h:KF; 48h:R	4h:ST; FD	
		60					8	sr	1.3	6.98				6.25h:HP	
		60					10	sr	0.3	1.61				72h:AR	
		60					48	sr	0.8	4.3					360
17	Böhler 1992	61	49M	S, A			4	pl	6.8	36.51			C,G	2h:ST; 4h:HP	
		61					9	pl	0.23	1.23					
		61					11	pl	0.11	0.59					
		61					14	pl	0.02	0.11					50
18	Florkowski 1992	62	37M	S, A		(a)	3.5	pl	1.72	9.23			0h:G; 0-15h:K,P; 15h:K,P,KF	ST; 96h:PD; 168h:ST	312
		62					7.5	pl	0.59	3.17			K	ST	312
19	Casey 1994	63	59M	S, A			8		1.1	5.91			G,R,KF,HF,C	ST, (f)	240
20	Köppel 1994	64	52F	S, A			96		1	5.37			G,R,KF, (h)	ST,CH,HP,AR	
<b>Footnotes [General Glossary (via link) lists definitions of common abbreviations (general terms, symptoms and signs, treatment)]</b>															
MW paraquat dichloride = 257.2															
MW paraquat base = 186.3															
(a) Gramoxone solution.															
(b) Weedol granules.															
(c) acute myocardial infarction.															
(d) sepsis.															
(e) including N-acetylcysteine and desferrioxamine, selenium and vitamin treatment.															
(f) methylene blue.															
(g) pulmonary fibrosis.															
(h) and myopathy.															
(i) 49/51 cases were p.o.S, A; one was i.v. S, A, and one was U, A.															

Table 2b. Lethal acute poisoning (single dose): Clinical observations (without time information)															
Ref No.	Reference (linked to full source)	Case No.	Case age/sex	Case category	Dose: g	Notes (case, dose, time)	Time (exposure to sampling): h	Notes (blood sample)	Blood conc.: mg/l	Blood conc.: µM	Metabolite Blood conc.: mg/l	Metabolite Blood conc.: µM	Symptoms and signs	Treatment	Time (exposure to death): h
1	AAPCC 1988:114	1	34M	NR	NR	NR		sr	0.192	1			MS; 48h; V, L 48-360h: CA	HD, HP; E96h: AR	E360
2	BGFC 1982	2	52	S, A	NR	NR		wb	10	53.7			G, H, KF; 48h:R	ST, HP, AR	NR
	NPC	3	63	NR	NR	NR			130	697.9			C, R, K	HD, HP; E96h: AR	NR
Footnotes [General Glossary (via link) lists definitions of common abbreviations (general terms, symptoms and signs, treatment)]															
MW paraquat dichloride = 257.2															
MW paraquat base = 186.3															
Table 3a. Post-mortem observations (time related)															
Ref No.	Reference (linked to full source)	Case No.	Case age/sex	Case category	Dose: g	Notes (case, dose, time)	Time (exposure to sampling): h	Notes (blood sample)	Blood conc.: mg/l	Blood conc.: µM	Metabolite Blood conc.: mg/l	Metabolite Blood conc.: µM	Symptoms and signs	Treatment	Time (exposure to death): h
no cases															
Footnotes [General Glossary (via link) lists definitions of common abbreviations (general terms, symptoms and signs, treatment)]															
MW paraquat dichloride = 257.2															
MW paraquat base = 186.3															

Table 3b. Post-mortem observations (without time information)															
Ref No.	Reference (linked to full source)	Case No.	Case age/sex	Case category	Dose: g	Notes (case, dose, time)	Time (exposure to sampling): h	Notes (blood sample)	Blood conc.: mg/l	Blood conc.: µM	Metabolite Blood conc.: mg/l	Metabolite Blood conc.: µM	Symptoms and signs	Treatment	Time (exposure to death): h
1	IPC 1991	1	63M	S, A					61	327.5			MS,R	ST	15
2	IPC 1992	2	23M	S, A					29.1	156.2			G,PE,KF,H	ST	48
3	IPC 1993	3	62M	S, A					13	69.8			G,KF,R	ST	144
4	IPC 1994	4	33M	S, A				sr	9.3	49.9			0h:V; G,MS	ST	18
5	Carson 1976	5	36M	S, A		(a)		T	1.2	6.4			NR	NR	52
		6	51M	S, A		(b)		T	0.2	1.1			NR	NR	69
		7	61M	U, A		(a)			4.4	23.6			NR	NR	36
		8	49F	S, A		(a)		T	7.6	40.8			NR	NR	16
		9	22M	S, A		(a)		T	3.6	19.3			NR	NR	16
		10	59F	S, A		(a)		T	52	279.2			NR	NR	18
		11	37M	S, A		(a)		T	6.4	34.4			NR	NR	18
		12	43F	S, A		(a)		T	0.6	3.2			NR	NR	144
		13	28M	S, A		(a)		T	2.6	14			NR	NR	33
		14	44M	S, A		(a)		T	0.9	4.8			NR	NR	38
		15	30M	S, A		(a)		T	1.4	7.5			NR	NR	22
		16	59F	S, A		(a)		T	0.2	1.1			NR	NR	60
Footnotes [General Glossary (via link) lists definitions of common abbreviations (general terms, symptoms and signs, treatment)]															
MW paraquat dichloride = 257.2															
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(a) Gramoxone solution.															
(b) Weedol granules.															