

APPENDIX A

Registry of Cytotoxicity
List of 347 Chemicals
(Sorted by IC50 and LD50 Values)

Appendix A

Registry of Cytotoxicity: List of 347 Chemicals Sorted by IC50 (mM)

RC No	MEIC No	Chemical	IC 50x (mM)	Oral Rat or Mouse LD50 (mmol/kg)	Oral Rat or Mouse LD50 (mg/kg)
2		Actinomycin D	0.000081	0.0057	7.2
3		Aminopterin	0.000012	0.0068	3.0
132		Triphenyltin hydroxide	0.000049	0.12	44.0
6		Colchicine	0.000054	0.015	6.0
133		Cytochalasin D	0.000092	0.071	36.0
8		Digitoxin	0.00011	0.073	55.8
134		Rotenone	0.00013	0.33	130.2
9		Amethopterin	0.00014	0.3	136.4
10		Emetine	0.00016	0.14	67.3
135		2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.0002	0.00035	0.1
11		Doxorubicin * HCl	0.00033	1.2	696.0
12		Puromycin	0.00033	1.43	674.4
136		Diethyldithiocarbamate sodium* 3H2O	0.00039	6.66	1500.7
137		Triethyltin chloride	0.00046	0.021	5.1
138		Tributyltin chloride	0.00054	0.37	120.4
139		Retinol	0.00054	6.98	1999.8
140		6-Thioguanine	0.00057	0.96	160.5
13		Cycloheximide	0.00059	0.0071	2.0
141		Cytosine arabinoside	0.00068	12.9	3137.9
142		Methylmercury chloride	0.00071	0.23	57.7
143		Triethylene melamine	0.00078	0.005	1.0
14		Mitomycin C	0.00084	0.042	14.0
144		Sodium bichromate VI	0.00093	0.19	49.8
15		8-Azaguanine	0.0013	9.86	1500.1
145		Potassium chromate VI	0.0015	0.93	180.6
146		Potassium bichromate VI	0.002	0.65	191.2
16		Azaserine	0.002	0.98	169.7
147		Mitoxantrone	0.0024	1.32	586.8
148		Nitrogen mustard * HCl	0.0026	0.052	10.0
17		5-Fluorouracil	0.0026	1.77	230.3
149		Chromium VI trioxide	0.0027	0.8	80.0
150		Cis-platinum	0.0028	0.086	25.8
151		Hexachlorocyclopentadiene	0.0031	0.41	111.8
152		8-Hydroxyquinoline	0.0033	8.27	1200.6
18		Captan	0.0039	33.3	10009.6
153	26	Arsenic III trioxide	0.0042	0.1	19.8
154		Maneb	0.0042	16.9	4500.6
155		Benzalkonium chloride	0.0052	1.1	401.5
156		Stearyltrimethylammonium chloride	0.006	1.54	536.1
20		Cadmium II chloride	0.0064	0.48	88.0
157	38	Hexachlorophene	0.0079	0.15	61.0
21		6-Mercaptopurine	0.008	1.84	280.0
158		Dichlorophene	0.0083	10	2691.3
22	6	Digoxin	0.0085	0.023	18.0
23		Daraprim	0.0089	0.51	126.9
159		Hexadecyltrimethylammonium bromide	0.0089	1.12	408.3
25		Thio-TEPA	0.011	0.2	37.8
160		N-Methyl-N'-nitro-N-nitrosoguanidine	0.012	0.61	89.7
26		Kelthane	0.012	1.55	574.2
161		Silver I nitrate	0.013	0.29	49.3
27		Chlorpromazine	0.014	0.44	140.3
29	28	Mercury II chloride	0.015	0.0037	1.0
162		Chlorhexidine	0.015	18.2	9200.5
31	41	Chloroquine diphosphate	0.017	1.88	969.9
164		Oxatomide	0.019	3.31	1412.1
163		Cetyltrimethylammonium chloride	0.021	1.31	474.4
165		Isoproterenol * HCl	0.022	8.96	2219.8
166		Triisooctylamine	0.023	4.58	1620.2
33		p-Chloromercuribenzoic acid	0.024	0.07	25.0
167		p,p'-DDD	0.024	0.35	112.0
168		Dicoumarol	0.027	2.11	709.6
169		Epinephrine bitartrate	0.028	0.012	4.0
170	29	Thioridazine * HCl	0.029	0.88	358.2
35		Flufenamic acid	0.029	0.97	272.8
171		Fumagillin	0.031	4.36	1999.5
37		Aflatoxin B1	0.034	0.016	5.0
172		Nabam	0.035	1.54	394.8
173	39	Pentachlorophenol	0.036	0.19	50.6
174		Ambazone	0.038	3.16	749.9
175		Norepinephrine	0.039	0.12	20.3
176		Papaverine	0.045	0.96	325.8
177		Busulphan	0.046	0.0076	1.9
178		Salicylanilide	0.046	11.3	2409.7

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RC No	MEIC No	Chemical	IC 50x (mM)	Oral Rat or Mouse LD50 (mmol/kg)	Oral Rat or Mouse LD50 (mg/kg)
179		Acrolein	0.047	0.82	46.0
180		p-Phenylenediamine	0.05	0.74	80.0
181	30	Thallium I sulfate	0.054	0.057	28.8
38		Imipramine * HCl	0.054	0.96	304.2
182		Triton X-100	0.055	2.78	1798.7
39		2,4-Dichlorophenol	0.055	3.56	580.3
183	5	Amitriptyline	0.056	1.15	319.1
184		Butylated hydroxytoluene	0.056	4.04	890.4
185		Heptachlor	0.059	0.11	41.1
186		Zineb	0.059	18.9	5211.3
40		Chlordan	0.06	1.12	458.9
41		Chloroquine sulfate	0.06	2.6	1086.8
42		p-Aminophenol	0.062	15.2	1658.9
187		4-Hexylresorcinol	0.064	2.83	549.9
43		Aldrin	0.067	0.11	40.1
44		Hydroxyzine * HCl	0.067	2.31	950.4
188		t-Butyl hydroquinone	0.069	4.81	799.6
189		Antimycin	0.07	0.45	112.6
45		Quinine * HCl	0.075	1.72	620.8
190		Chlorambucil	0.076	0.25	76.1
191		Dimenhydrinate	0.076	2.81	1320.8
192		1,3-Bis(2-chloroethyl)- 1-nitrosourea	0.078	0.093	19.9
193		5-Azacytidine	0.079	2.34	571.5
47		Naftipramide	0.084	3.45	1029.7
48		Mefenamic acid	0.087	3.27	789.1
49		Parathion	0.093	0.0069	2.0
194		p-Toluyldiamine	0.094	0.83	101.4
50		Trypan blue	0.095	6.43	6204.2
195		p,p'-DDA	0.099	2.1	590.4
196	40	VerapamilHCl	0.1	0.22	108.0
197		p,p'-DDE	0.1	2.77	880.9
51		Disulfoton	0.11	0.0073	2.0
198		loxynil	0.11	0.3	111.3
199		Cupric chloride	0.11	1.04	139.8
52		all-trans-Retinoic acid	0.11	6.66	2001.2
200		Dimethylaminoethyl methacrylate (polymer)	0.11	11.1	1745.4
53	43	Quinidine sulfate	0.12	1.08	456.3
54	23	Propranolol * HCl	0.12	1.59	470.4
201		13-cis-Retinoic acid	0.12	11.3	3395.4
202		Formaldehyde	0.12	26.6	798.8
55		Zinc II chloride	0.13	2.57	350.2
56		Manganese II chloride *4 H2O	0.13	7.5	1484.4
57		L-Dopa	0.13	9.03	1780.8
203		Thallium I acetate	0.14	0.13	34.2
204		Azathioprine	0.14	1.93	535.2
58		Dihydralazine sulfate	0.14	2.84	818.8
59		Tetracycline * HCl	0.14	13.4	6444.6
205		Versalide	0.15	1.22	315.3
60		Indomethacin	0.16	0.034	12.2
61		p,p'-DDT	0.16	0.32	113.4
62		Cobalt II chloride	0.16	0.62	80.5
206		Diquat dibromide	0.16	0.67	230.5
63	4	Diazepam	0.16	2.49	709.1
207		Dieldrin	0.18	0.12	45.7
64		Bendiocarb	0.18	0.8	178.6
208		Undecylenic acid	0.18	13.6	2506.6
209		Propylparaben	0.18	35.1	6325.7
65		Oxyphenbutazone	0.19	3.08	999.2
210		p-Nitrophenol	0.2	2.52	350.6
67	15	Malathion	0.2	2.68	885.4
211		Catechol	0.2	35.3	3887.2
68		2,4-Dinitrophenol	0.21	0.16	29.5
69		Secobarbital sodium	0.21	0.48	124.9
70	49	Atropine sulfate	0.22	0.92	622.7
212		p-Cresol	0.22	1.91	206.6
213		Ammonium persulfate	0.23	3.59	819.3
214		Thymol	0.23	6.52	979.6
71		Diphenhydramine * HCl	0.24	2.93	855.1
215		Chlorotetracycline	0.24	5.22	2500.0
72		Butylated hydroxyanisole	0.24	12.2	2199.3
216		Refortan	0.25	10.1	3162.3
73		Carbaryl	0.26	1.24	249.5
74		Nickel II chloride	0.27	0.81	105.0

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RC No	MEIC No	Chemical	IC 50x (mM)	Oral Rat or Mouse LD50 (mmol/kg)	Oral Rat or Mouse LD50 (mg/kg)
75		Trichlorfon	0.27	1.75	450.5
76		Sodium dodecyl sulfate	0.27	4.45	1288.0
217		Amrinone	0.28	0.54	101.1
218		o-Phenylenediamine	0.31	9.89	1069.7
78		6-Methylcoumarin	0.31	10.5	1681.9
79		Phenylbutazone	0.32	1.22	376.3
80		2-Thiouracil	0.32	7.8	999.6
219		Hydralazine	0.33	0.56	89.7
81	27	Cupric sulfate * 5 H2O	0.33	1.2	299.6
238		Imidazolidinyl urea	0.36	9.34	2598.9
220		m-Dinitrobenzene	0.39	0.49	82.4
82	44	Diphenylhydantoin	0.39	0.79	199.3
221		2-Nitro-p-phenylenediamine	0.39	20.1	3078.5
222		Glibenclamide	0.4	6.58	3250.8
223	32	Lindane	0.41	0.26	75.6
224		n-Butyl benzoate	0.41	28.8	5133.6
225		Ammonium sulfide	0.42	3.29	168.2
226		Dodecylbenzene sodiumsulfonate	0.42	3.62	1261.6
227	46	Sodium oxalate	0.44	1.16	155.4
228		2,4,5-Trichlorophenoxyacetic acid	0.44	1.17	298.9
229	22	Dextropropoxyphene * HCl	0.49	0.22	82.7
230	42	Orphenadrine * HCl	0.49	1.39	425.2
231		Tween 80	0.49	19.1	25021.0
232		o-Cresol	0.52	1.12	121.1
233		Ibuprofen	0.52	4.89	1008.9
234		Phenylthiourea	0.54	0.02	3.0
235	25	Paraquat	0.54	0.31	57.7
83		Thiopental	0.55	2.48	601.1
84		Amobarbital	0.56	1.52	344.0
236		Hydrogen peroxide 90%	0.56	58.8	2000.4
85		Metamizol	0.58	21.5	7189.2
237		Beryllium II sulfate	0.61	0.78	82.0
239		m-Cresol	0.66	2.24	242.3
240		Pentoxifylline	0.66	4.98	1386.2
86	31	Warfarin	0.67	1.05	323.8
241		Sodium azide	0.71	0.69	44.9
87		Pentobarbital sodium	0.71	0.81	201.1
242		1,2,4-Trichlorobenzene	0.71	4.17	756.6
243		p-Anisidine	0.73	11.4	1404.1
244		Doxylamine succinate	0.75	1.21	470.1
88		Dibutyl phthalate	0.76	43.1	11998.2
89	16	2,4-Dichlorophenoxyacetic acid	0.77	1.67	369.1
90		Iproniazid	0.79	2.04	365.7
91	45	Chloramphenicol	0.79	10.5	3393.1
245		Resorcinol	0.8	2.73	300.6
246	37	Barium II nitrate	0.81	1.36	355.4
247		(+)-Thalidomide	0.81	1.55	400.3
92		Di(2-ethylhexyl)phthalate	0.84	79.4	31015.2
93		Sulfisoxazole	0.85	25.4	6790.2
248		m-Aminophenol	0.86	15.2	1658.9
94		Menthol	0.95	20.3	3172.9
249		3-Cyano-2-morpholino-5-(pyrid-4-yl)-pyridine (Chemical 122)	0.96	1.3	346.2
250		Valproate sodium	1	10.2	1695.4
251		Scopolamine * HBr	1.08	3.3	1268.2
95		Salicylamide	1.08	13.8	1892.7
252	19	Potassium cyanide	1.12	0.15	9.8
96		Cygon	1.24	0.66	151.3
97		Phenacetin	1.27	9.21	1650.8
253		Isoxepac	1.33	0.74	198.5
254		Buflomedil	1.35	1.19	365.8
98		Methylparaben	1.42	11.5	1749.8
255		Sodium monochloroacetate	1.45	0.65	75.7
99		Nalidixic acid	1.5	5.81	1349.4
256		Tin II chloride	1.51	3.69	699.6
257		Isononylaldehyde	1.52	22.8	3243.8
100		L-Ascorbic acid	1.52	67.6	11907.1
101		Glutethimide	1.56	2.76	599.7
102		Acrylamide	1.61	2.39	169.9
258		Diethyl sebacate	1.63	56	14470.4
259		Methyl salicylate	1.7	5.83	887.1
260		Coumarin	1.71	2	292.3
103	18	Nicotine	1.79	0.31	50.3

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RC No	MEIC No	Chemical	IC 50x (mM)	Oral Rat or Mouse LD50 (mmol/kg)	Oral Rat or Mouse LD50 (mg/kg)
104		Tolbutamide	1.81	9.62	2601.1
105	21	Theophylline	1.83	3.33	600.0
261	3	Ferrous sulfate	1.85	2.1	319.0
106	14	Sodium I fluoride	1.85	4.29	180.1
262	47	Amphetamine sulfate	1.97	0.15	55.3
107	2	Acetylsalicylic acid	2.27	5.55	999.9
108		Gibberellic acid	2.3	18.2	6304.7
109		Frusemide	2.33	7.86	2599.8
110		Acrylonitrile	2.42	1.54	81.7
263		Acetaldehyde	2.45	43.8	1929.8
111		Clofibrilic acid	2.61	5.82	1249.3
112	48	Caffeine	2.64	0.99	192.3
264		Chloral hydrate	2.65	2.9	479.7
113	1	Acetaminophen	2.71	15.9	2403.8
265		Streptomycin sulfate	2.73	0.34	495.6
114		Natulan * HCl	2.74	3.04	783.7
266		Potassium hexacyanoferrate III	2.82	9.02	2970.0
267		p-Hydroxybenzoic acid	2.92	15.9	2196.3
115	12	Phenol	3.01	4.4	414.1
268		1-Octanol	3.06	13.7	1784.6
116		Cyclophosphamide * H2O	3.12	0.34	94.9
269		Potassium I fluoride	3.13	4.22	245.2
117		Di(2-ethylhexyl)adipate	3.15	24.6	9117.7
270		Propionaldehyde	3.25	24.3	1411.6
271		Styrene	3.3	48	4999.7
272		Salicylic acid	3.38	6.45	890.9
273		Bromobenzene	3.46	17.2	2700.7
274		L-Cysteine	3.56	5.45	660.4
275		Nitritotriacetic acid	3.61	7.69	1470.0
276		Ambuphylline	3.67	2.23	600.7
118	24	Phenobarbital	3.81	0.7	162.6
277		Potassium cyanate	4.14	10.4	843.6
278		Phenylephrine * HCl	4.16	1.72	350.3
279		Thioacetamide	4.17	4.01	301.3
280		Theophylline sodium acetate	4.19	2.22	582.2
281		1,2-Dibromomethane	4.2	0.62	107.8
119		Sodium salicylate	4.33	9.99	1599.5
282		(-)-Phenylephrine	4.45	2.09	349.5
283		Milrinone	4.77	0.43	90.8
120		5-Aminosalicylic acid	5.07	50.6	7749.4
121		Aminophenazone	5.39	4.32	999.3
284		Ammonium chloride	5.52	30.8	1647.8
122		Diethyl phthalate	5.52	38.7	8601.5
285		Caffeine sodium benzoate	5.67	2.54	859.4
286		Benzylpenicillin sodium	5.73	19.4	6914.2
287		Benzylalcohol	5.81	11.4	1232.9
288		1-Heptanol	6.25	28	3254.4
289		Tetrachloroethene	6.54	53.4	8854.8
290		Sodium sulfite	6.78	6.51	820.5
291		Aniline	6.9	4.72	439.6
292		Allylalcohol	6.94	1.1	63.9
293		Diisopropylamine dichloroacetate	7	7.39	1700.9
123	35	Isoniazid	7.49	4.74	650.1
294		Trichloroacetic acid	8.19	30.6	4999.4
295		2,5-Hexanedione	8.45	23.7	2705.6
124		Acetazolamide	8.49	19.3	4289.6
125	34	Carbon tetrachloride	8.51	18.2	2799.3
296		Homatropine methylbromide	9	3.24	1199.9
297	11	1,1,1-Trichloroethane	10.3	77.2	10298.5
298		Dichloroacetic acid	11.5	21.9	2823.8
299		Imidazole	11.5	27.6	1879.3
300		Antipyrine	11.6	9.56	1799.7
301	17	Xylene	12	40.5	4300.3
302		Nitrobenzene	12.2	5.2	640.2
303		Theophylline sodium	12.4	2.19	445.0
304		Calcium II chloride	12.4	9.01	999.9
305		n-Butanal	12.8	34.5	2488.1
306		Anisole	13.2	34.2	3698.7
307		2-Ethylbutanal	13.2	39.7	3977.1
308	33	Chloroform	13.4	7.61	908.4
309		Isobutanal	13.5	39	2812.7
126		Triethyl citrate	14.7	25.3	6990.9
310		Tributylamine	15.4	2.91	539.5

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RC No	MEIC No	Chemical	IC 50x (mM)	Oral Rat or Mouse LD50 (mmol/kg)	Oral Rat or Mouse LD50 (mg/kg)
311		1-Hexanol	15.4	7.04	719.5
312		Benzoic acid	15.7	20.7	2528.1
313		Xanthinol nicotinate	15.8	32.5	14121.6
314		Saccharin	16.4	92.8	17000.0
315		Isobenzoic furano dione	17	27.1	4014.1
316		Toluene	17.1	54.3	5003.7
317		Barbital sodium	18.6	3.88	800.1
318		Trifluoroacetic acid	20.5	1.75	199.6
127		Dimethyl phthalate	23.4	35.5	6894.1
319		Methylpentinol	23.8	5.35	525.2
320		N,N-Dimethylacetamide	24.2	58.4	5089.0
321		Acetic acid	24.3	55.1	3309.3
322		1-Pentanol	24.9	34.4	3033.0
323		Urethan	25.9	28.1	2504.0
324		2-Butoxyethanol	26	12.5	1477.5
325		Cyclohexanol	26.3	20.6	2063.7
326		Halothane	31.1	28.8	5684.8
327	20	Lithium I sulfate	33.7	10.8	1187.4
328	36	Dichloromethane	34.9	18.8	1596.7
329		Sodium cyclamate	35.4	75.8	15254.0
330		Sulfuric acid	36	21.8	2138.1
331		Strontium II chloride	36.4	14.2	2251.0
332		1,4-Dioxane	38.1	47.7	4203.3
333		Lithium I chloride	38.6	17.9	758.8
334		Isobutanol	40.1	33.2	2461.4
335		Potassium hexacyanoferrate II	42.3	17.4	6409.6
336		Nicotinamide	44.4	28.7	3505.4
337		Pyridine	46.9	11.3	893.9
338		1-Butanol	52.5	10.7	793.3
339		1-Nitropropane	57.9	5.11	455.4
340		Diethylene glycol	62.1	139	14753.5
341		Lactic acid	66	41.4	3729.7
342		Piperazine	67.2	22.1	1904.1
343		Magnesium II chloride * 6 H2O	70.4	39.8	8092.5
344	13	Sodium chloride	75.9	51.3	2998.0
345		Sodium I bromide	77.4	33.4	3504.3
346	50	Potassium I chloride	82	34.9	2601.8
347		Thiourea	86	1.64	124.9
348		1-Propanol	96.5	89.8	5397.9
349		Ethyl methyl ketone	104	47.1	3396.9
350		Tetrahydrofurfuryl alcohol	111	24.5	2502.7
351		Dimethylformamide	114	38.3	2800.1
352		1,2,6-Hexanetriol	123	119	15969.8
353		Ethyl acetate	128	125	11015.0
128	10	2-Propanol	167	97.2	5842.7
354		1,3,5-Trioxane	213	8.88	800.0
355		D-Glucose	226	143	25765.7
356		2-Methoxyethanol	251	32.3	2458.4
129		Dimethyl sulfoxide	252	252	19691.3
357		Propylene glycol	342	263	20016.9
358		Acetonitrile	368	92.5	3798.1
130	9	Ethanol	379	304	14008.3
359		Acetone	444	168	9759.1
360	7	Ethylene glycol	555	138	8567.0
131		Glycerol	624	137	12619.1
361	8	Methanol	930	406	13012.3
Reference					
Halle, W. 1998. Toxizitätsprüfungen in Zellkulturen für eine Vorhersage der akuten Toxizität (LD50) zur Einsparung von Tierversuchen. Life Sciences/Lebenswissenschaften, Volume 1, 94 pp., Jülich: Forschungszentrum Jülich.					

Appendix A

Registry of Cytotoxicity: List of 347 Chemicals Sorted by LD50 (mg/kg)

RC No	MEIC No	Chemical	IC 50x (mM)	Oral Rat or Mouse LD50 (mmol/kg)	Oral Rat or Mouse LD50 (mg/kg)
135		2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.0002	0.00035	0.1
29	28	Mercury II chloride	0.015	0.0037	1.0
143		Triethylene melamine	0.00078	0.005	1.0
177		Busulphan	0.046	0.0076	1.9
13		Cycloheximide	0.00059	0.0071	2.0
51		Disulfoton	0.11	0.0073	2.0
49		Parathion	0.093	0.0069	2.0
3		Aminopterin	0.000012	0.0068	3.0
234		Phenylthiourea	0.54	0.02	3.0
169		Epinephrine bitartrate	0.028	0.012	4.0
37		Aflatoxin B1	0.034	0.016	5.0
137		Triethyltin chloride	0.00046	0.021	5.1
6		Colchicine	0.000054	0.015	6.0
2		Actinomycin D	0.0000081	0.0057	7.2
252	19	Potassium cyanide	1.12	0.15	9.8
148		Nitrogen mustard * HCl	0.0026	0.052	10.0
60		Indomethacin	0.16	0.034	12.2
14		Mitomycin C	0.00084	0.042	14.0
22	6	Digoxin	0.0085	0.023	18.0
153	26	Arsenic III trioxide	0.0042	0.1	19.8
192		1,3-Bis(2-chloroethyl)- 1-nitrosourea	0.078	0.093	19.9
175		Norepinephrine	0.039	0.12	20.3
33		p-Chloromercuribenzoic acid	0.024	0.07	25.0
150		Cis-platinum	0.0028	0.086	25.8
181	30	Thallium I sulfate	0.054	0.057	28.8
68		2,4-Dinitrophenol	0.21	0.16	29.5
203		Thallium I acetate	0.14	0.13	34.2
133		Cytochalasin D	0.000092	0.071	36.0
25		Thio-TEPA	0.011	0.2	37.8
43		Aldrin	0.067	0.11	40.1
185		Heptachlor	0.059	0.11	41.1
132		Triphenyltin hydroxide	0.000049	0.12	44.0
241		Sodium azide	0.71	0.69	44.9
207		Dieldrin	0.18	0.12	45.7
179		Acrolein	0.047	0.82	46.0
161		Silver I nitrate	0.013	0.29	49.3
144		Sodium bichromate VI	0.00093	0.19	49.8
103	18	Nicotine	1.79	0.31	50.3
173	39	Pentachlorophenol	0.036	0.19	50.6
262	47	Amphetamine sulfate	1.97	0.15	55.3
8		Digitoxin	0.00011	0.073	55.8
235	25	Paraquat	0.54	0.31	57.7
142		Methylmercury chloride	0.00071	0.23	57.7
157	38	Hexachlorophene	0.0079	0.15	61.0
292		Allyl alcohol	6.94	1.1	63.9
10		Emetine	0.00016	0.14	67.3
223	32	Lindane	0.41	0.26	75.6
255		Sodium monochloroacetate	1.45	0.65	75.7
190		Chlorambucil	0.076	0.25	76.1
149		Chromium VI trioxide	0.0027	0.8	80.0
180		p-Phenylenediamine	0.05	0.74	80.0
62		Cobalt II chloride	0.16	0.62	80.5
110		Acrylonitrile	2.42	1.54	81.7
237		Beryllium II sulfate	0.61	0.78	82.0
220		m-Dinitrobenzene	0.39	0.49	82.4
229	22	Dextropropoxyphene * HCl	0.49	0.22	82.7
20		Cadmium II chloride	0.0064	0.48	88.0
219		Hydralazine	0.33	0.56	89.7
160		N-Methyl-N'-nitro-N-nitrosoguanidine	0.012	0.61	89.7
283		Milrinone	4.77	0.43	90.8
116		Cyclophosphamide * H2O	3.12	0.34	94.9
217		Amrinone	0.28	0.54	101.1
194		p-Toluyldiamine	0.094	0.83	101.4
74		Nickel II chloride	0.27	0.81	105.0
281		1,2-Dibromomethane	4.2	0.62	107.8
196	40	VerapamilHCl	0.1	0.22	108.0
198		Ioxynil	0.11	0.3	111.3
151		Hexachlorocyclopentadiene	0.0031	0.41	111.8
167		p,p'-DDD	0.024	0.35	112.0
189		Antimycin	0.07	0.45	112.6
61		p,p'-DDT	0.16	0.32	113.4
138		Tributyltin chloride	0.00054	0.37	120.4
232		o-Cresol	0.52	1.12	121.1

Appendix A

Registry of Cytotoxicity: List of 347 Chemicals Sorted by LD50 (mg/kg)

RC No	MEIC No	Chemical	IC 50x (mM)	Oral Rat or Mouse LD50 (mmol/kg)	Oral Rat or Mouse LD50 (mg/kg)
347		Thiourea	86	1.64	124.9
69		Secobarbital sodium	0.21	0.48	124.9
23		Daraprim	0.0089	0.51	126.9
134		Rotenone	0.00013	0.33	130.2
9		Amethopterin	0.00014	0.3	136.4
199		Cupric chloride	0.11	1.04	139.8
27		Chlorpromazine	0.014	0.44	140.3
96		Cygon	1.24	0.66	151.3
227	46	Sodium oxalate	0.44	1.16	155.4
140		6-Thioguanine	0.00057	0.96	160.5
118	24	Phenobarbital	3.81	0.7	162.6
225		Ammonium sulfide	0.42	3.29	168.2
16		Azaserine	0.002	0.98	169.7
102		Acrylamide	1.61	2.39	169.9
64		Bendiocarb	0.18	0.8	178.6
106	14	Sodium I fluoride	1.85	4.29	180.1
145		Potassium chromate VI	0.0015	0.93	180.6
146		Potassium bichromate VI	0.002	0.65	191.2
112	48	Caffeine	2.64	0.99	192.3
253		Isoxepac	1.33	0.74	198.5
82	44	Diphenylhydantoin	0.39	0.79	199.3
318		Trifluoroacetic acid	20.5	1.75	199.6
87		Pentobarbital sodium	0.71	0.81	201.1
212		p-Cresol	0.22	1.91	206.6
17		5-Fluorouracil	0.0026	1.77	230.3
206		Diquat dibromide	0.16	0.67	230.5
239		m-Cresol	0.66	2.24	242.3
269		Potassium I fluoride	3.13	4.22	245.2
73		Carbaryl	0.26	1.24	249.5
35		Flufenamic acid	0.029	0.97	272.8
21		6-Mercaptopurine	0.008	1.84	280.0
260		Coumarin	1.71	2	292.3
228		2,4,5-Trichlorophenoxyacetic acid	0.44	1.17	298.9
81	27	Cupric sulfate * 5 H2O	0.33	1.2	299.6
245		Resorcinol	0.8	2.73	300.6
279		Thioacetamide	4.17	4.01	301.3
38		Imipramine * HCl	0.054	0.96	304.2
205		Versalide	0.15	1.22	315.3
261	3	Ferrous sulfate	1.85	2.1	319.0
183	5	Amitriptyline	0.056	1.15	319.1
86	31	Warfarin	0.67	1.05	323.8
176		Papaverine	0.045	0.96	325.8
84		Amobarbital	0.56	1.52	344.0
249		3-Cyano-2-morpholino-5-(pyrid-4-yl)-pyridine (Chemical 122)	0.96	1.3	346.2
282		(-)-Phenylephrine	4.45	2.09	349.5
55		Zinc II chloride	0.13	2.57	350.2
278		Phenylephrine * HCl	4.16	1.72	350.3
210		p-Nitrophenol	0.2	2.52	350.6
246	37	Barium II nitrate	0.81	1.36	355.4
170	29	Thioridazine * HCl	0.029	0.88	358.2
90		Iproniazid	0.79	2.04	365.7
254		Buflomedil	1.35	1.19	365.8
89	16	2,4-Dichlorophenoxyacetic acid	0.77	1.67	369.1
79		Phenylbutazone	0.32	1.22	376.3
172		Nabam	0.035	1.54	394.8
247		(+)-Thalidomide	0.81	1.55	400.3
155		Benzalkonium chloride	0.0052	1.1	401.5
159		Hexadecyltrimethylammonium bromide	0.0089	1.12	408.3
115	12	Phenol	3.01	4.4	414.1
230	42	Orphenadrine * HCl	0.49	1.39	425.2
291		Aniline	6.9	4.72	439.6
303		Theophylline sodium	12.4	2.19	445.0
75		Trichlorfon	0.27	1.75	450.5
339		1-Nitropropane	57.9	5.11	455.4
53	43	Quinidine sulfate	0.12	1.08	456.3
40		Chlordan	0.06	1.12	458.9
244		Doxylamine succinate	0.75	1.21	470.1
54	23	Propranolol * HCl	0.12	1.59	470.4
163		Cetyltrimethylammonium chloride	0.021	1.31	474.4
264		Chloral hydrate	2.65	2.9	479.7
265		Streptomycin sulfate	2.73	0.34	495.6
319		Methylpentinol	23.8	5.35	525.2

Appendix A

Registry of Cytotoxicity: List of 347 Chemicals Sorted by LD50 (mg/kg)

RC No	MEIC No	Chemical	IC 50x (mM)	Oral Rat or Mouse LD50 (mmol/kg)	Oral Rat or Mouse LD50 (mg/kg)
204		Azathioprine	0.14	1.93	535.2
156		Stearyltrimethylammonium chloride	0.006	1.54	536.1
310		Tributylamine	15.4	2.91	539.5
187		4-Hexylresorcinol	0.064	2.83	549.9
193		5-Azacytidine	0.079	2.34	571.5
26		Kelthane	0.012	1.55	574.2
39		2,4-Dichlorophenol	0.055	3.56	580.3
280		Theophylline sodium acetate	4.19	2.22	582.2
147		Mitoxantrone	0.0024	1.32	586.8
195		p,p'-DDA	0.099	2.1	590.4
101		Glutethimide	1.56	2.76	599.7
105	21	Theophylline	1.83	3.33	600.0
276		Ambuphylline	3.67	2.23	600.7
83		Thiopental	0.55	2.48	601.1
45		Quinine * HCl	0.075	1.72	620.8
70	49	Atropine sulfate	0.22	0.92	622.7
302		Nitrobenzene	12.2	5.2	640.2
123	35	Isoniazid	7.49	4.74	650.1
274		L-Cysteine	3.56	5.45	660.4
12		Puromycin	0.00033	1.43	674.4
11		Doxorubicin * HCl	0.00033	1.2	696.0
256		Tin II chloride	1.51	3.69	699.6
63	4	Diazepam	0.16	2.49	709.1
168		Dicoumarol	0.027	2.11	709.6
311		1-Hexanol	15.4	7.04	719.5
174		Ambazone	0.038	3.16	749.9
242		1,2,4-Trichlorobenzene	0.71	4.17	756.6
333		Lithium I chloride	38.6	17.9	758.8
114		Natulan * HCl	2.74	3.04	783.7
48		Mefenamic acid	0.087	3.27	789.1
338		1-Butanol	52.5	10.7	793.3
202		Formaldehyde	0.12	26.6	798.8
188		t-Butyl hydroquinone	0.069	4.81	799.6
354		1,3,5-Trioxane	213	8.88	800.0
317		Barbital sodium	18.6	3.88	800.1
58		Dihydralazine sulfate	0.14	2.84	818.8
213		Ammonium persulfate	0.23	3.59	819.3
290		Sodium sulfite	6.78	6.51	820.5
277		Potassium cyanate	4.14	10.4	843.6
71		Diphenhydramine * HCl	0.24	2.93	855.1
285		Caffeine sodium benzoate	5.67	2.54	859.4
197		p,p'-DDE	0.1	2.77	880.9
67	15	Malathion	0.2	2.68	885.4
259		Methyl salicylate	1.7	5.83	887.1
184		Butylated hydroxytoluene	0.056	4.04	890.4
272		Salicylic acid	3.38	6.45	890.9
337		Pyridine	46.9	11.3	893.9
308	33	Chloroform	13.4	7.61	908.4
44		Hydroxyzine * HCl	0.067	2.31	950.4
31	41	Chloroquine diphosphate	0.017	1.88	969.9
214		Thymol	0.23	6.52	979.6
65		Oxyphenbutazone	0.19	3.08	999.2
121		Aminophenazone	5.39	4.32	999.3
80		2-Thiouracil	0.32	7.8	999.6
304		Calcium II chloride	12.4	9.01	999.9
107	2	Acetylsalicylic acid	2.27	5.55	999.9
233		Ibuprofen	0.52	4.89	1008.9
47		Naftipramide	0.084	3.45	1029.7
218		o-Phenylenediamine	0.31	9.89	1069.7
41		Chloroquine sulfate	0.06	2.6	1086.8
327	20	Lithium I sulfate	33.7	10.8	1187.4
296		Homatropine methylbromide	9	3.24	1199.9
152		8-Hydroxyquinoline	0.0033	8.27	1200.6
287		Benzylalcohol	5.81	11.4	1232.9
111		Clofibric acid	2.61	5.82	1249.3
226		Dodecylbenzene sodiumsulfonate	0.42	3.62	1261.6
251		Scopolamine * HBr	1.08	3.3	1268.2
76		Sodium dodecyl sulfate	0.27	4.45	1288.0
191		Dimenhydrinate	0.076	2.81	1320.8
99		Nalidixic acid	1.5	5.81	1349.4
240		Pentoxifylline	0.66	4.98	1386.2
243		p-Anisidine	0.73	11.4	1404.1
270		Propionaldehyde	3.25	24.3	1411.6

Appendix A

Registry of Cytotoxicity: List of 347 Chemicals Sorted by LD50 (mg/kg)

RC No	MEIC No	Chemical	IC 50x (mM)	Oral Rat or Mouse LD50 (mmol/kg)	Oral Rat or Mouse LD50 (mg/kg)
164		Oxatamide	0.019	3.31	1412.1
275		Nitritotriacetic acid	3.61	7.69	1470.0
324		2-Butoxyethanol	26	12.5	1477.5
56		Manganese II chloride *4 H2O	0.13	7.5	1484.4
15		8-Azaguanine	0.0013	9.86	1500.1
136		Diethyldithiocarbamate sodium* 3H2O	0.00039	6.66	1500.7
328	36	Dichloromethane	34.9	18.8	1596.7
119		Sodium salicylate	4.33	9.99	1599.5
166		Triisooctylamine	0.023	4.58	1620.2
284		Ammonium chloride	5.52	30.8	1647.8
97		Phenacetin	1.27	9.21	1650.8
42		p-Aminophenol	0.062	15.2	1658.9
248		m-Aminophenol	0.86	15.2	1658.9
78		6-Methylcoumarin	0.31	10.5	1681.9
250		Valproate sodium	1	10.2	1695.4
293		Diisopropylamine dichloroacetate	7	7.39	1700.9
200		Dimethylaminoethyl methacrylate (polymer)	0.11	11.1	1745.4
98		Methylparaben	1.42	11.5	1749.8
57		L-Dopa	0.13	9.03	1780.8
268		1-Octanol	3.06	13.7	1784.6
182		Triton X-100	0.055	2.78	1798.7
300		Antipyrine	11.6	9.56	1799.7
299		Imidazole	11.5	27.6	1879.3
95		Salicylamide	1.08	13.8	1892.7
342		Piperazine	67.2	22.1	1904.1
263		Acetaldehyde	2.45	43.8	1929.8
171		Fumagillin	0.031	4.36	1999.5
139		Retinol	0.00054	6.98	1999.8
236		Hydrogen peroxide 90%	0.56	58.8	2000.4
52		all-trans-Retinoic acid	0.11	6.66	2001.2
325		Cyclohexanol	26.3	20.6	2063.7
330		Sulfuric acid	36	21.8	2138.1
267		p-Hydroxybenzoic acid	2.92	15.9	2196.3
72		Butylated hydroxyanisole	0.24	12.2	2199.3
165		Isoproterenol * HCl	0.022	8.96	2219.8
331		Strontium II chloride	36.4	14.2	2251.0
113	1	Acetaminophen	2.71	15.9	2403.8
178		Salicylanilide	0.046	11.3	2409.7
356		2-Methoxyethanol	251	32.3	2458.4
334		Isobutanol	40.1	33.2	2461.4
305		n-Butanal	12.8	34.5	2488.1
215		Chlorotetracycline	0.24	5.22	2500.0
350		Tetrahydrofurfuryl alcohol	111	24.5	2502.7
323		Urethan	25.9	28.1	2504.0
208		Undecylenic acid	0.18	13.6	2506.6
312		Benzoic acid	15.7	20.7	2528.1
238		Imidazolidinyl urea	0.36	9.34	2598.9
109		Frusemide	2.33	7.86	2599.8
104		Tolbutamide	1.81	9.62	2601.1
346	50	Potassium I chloride	82	34.9	2601.8
158		Dichlorophene	0.0083	10	2691.3
273		Bromobenzene	3.46	17.2	2700.7
295		2,5-Hexanedione	8.45	23.7	2705.6
125	34	Carbon tetrachloride	8.51	18.2	2799.3
351		Dimethylformamide	114	38.3	2800.1
309		Isobutanol	13.5	39	2812.7
298		Dichloroacetic acid	11.5	21.9	2823.8
266		Potassium hexacyanoferrate III	2.82	9.02	2970.0
344	13	Sodium chloride	75.9	51.3	2998.0
322		1-Pentanol	24.9	34.4	3033.0
221		2-Nitro-p-phenylenediamine	0.39	20.1	3078.5
141		Cytosine arabinoside	0.00068	12.9	3137.9
216		Refortan	0.25	10.1	3162.3
94		Menthol	0.95	20.3	3172.9
257		Isononylaldehyde	1.52	22.8	3243.8
222		Glibenclamide	0.4	6.58	3250.8
288		1-Heptanol	6.25	28	3254.4
321		Acetic acid	24.3	55.1	3309.3
91	45	Chloramphenicol	0.79	10.5	3393.1
201		13-cis-Retinoic acid	0.12	11.3	3395.4
349		Ethyl methyl ketone	104	47.1	3396.9
345		Sodium I bromide	77.4	33.4	3504.3
336		Nicotinamide	44.4	28.7	3505.4

Appendix A

Registry of Cytotoxicity: List of 347 Chemicals Sorted by LD50 (mg/kg)

RC No	MEIC No	Chemical	IC 50x (mM)	Oral Rat or Mouse LD50 (mmol/kg)	Oral Rat or Mouse LD50 (mg/kg)
306		Anisole	13.2	34.2	3698.7
341		Lactic acid	66	41.4	3729.7
358		Acetonitrile	368	92.5	3798.1
211		Catechol	0.2	35.3	3887.2
307		2-Ethylbutanal	13.2	39.7	3977.1
315		Isobenzoic furano dione	17	27.1	4014.1
332		1,4-Dioxane	38.1	47.7	4203.3
124		Acetazolamide	8.49	19.3	4289.6
301	17	Xylene	12	40.5	4300.3
154		Maneb	0.0042	16.9	4500.6
294		Trichloroacetic acid	8.19	30.6	4999.4
271		Styrene	3.3	48	4999.7
316		Toluene	17.1	54.3	5003.7
320		N,N-Dimethylacetamide	24.2	58.4	5089.0
224		n-Butyl benzoate	0.41	28.8	5133.6
186		Zineb	0.059	18.9	5211.3
348		1-Propanol	96.5	89.8	5397.9
326		Halothane	31.1	28.8	5684.8
128	10	2-Propanol	167	97.2	5842.7
50		Trypan blue	0.095	6.43	6204.2
108		Gibberellic acid	2.3	18.2	6304.7
209		Propylparaben	0.18	35.1	6325.7
335		Potassium hexacyanoferrate II	42.3	17.4	6409.6
59		Tetracycline * HCl	0.14	13.4	6444.6
93		Sulfisoxazole	0.85	25.4	6790.2
127		Dimethyl phthalate	23.4	35.5	6894.1
286		Benzylpenicillin sodium	5.73	19.4	6914.2
126		Triethyl citrate	14.7	25.3	6990.9
85		Metamizol	0.58	21.5	7189.2
120		5-Aminosalicylic acid	5.07	50.6	7749.4
343		Magnesium II chloride * 6 H2O	70.4	39.8	8092.5
360	7	Ethylene glycol	555	138	8567.0
122		Diethyl phthalate	5.52	38.7	8601.5
289		Tetrachloroethene	6.54	53.4	8854.8
117		Di(2-ethylhexyl)adipate	3.15	24.6	9117.7
162		Chlorhexidine	0.015	18.2	9200.5
359		Acetone	444	168	9759.1
18		Captan	0.0039	33.3	10009.6
297	11	1,1,1-Trichloroethane	10.3	77.2	10298.5
353		Ethyl acetate	128	125	11015.0
100		L-Ascorbic acid	1.52	67.6	11907.1
88		Dibutyl phthalate	0.76	43.1	11998.2
131		Glycerol	624	137	12619.1
361	8	Methanol	930	406	13012.3
130	9	Ethanol	379	304	14008.3
313		Xanthinol nicotinate	15.8	32.5	14121.6
258		Diethyl sebacate	1.63	56	14470.4
340		Diethylene glycol	62.1	139	14753.5
329		Sodium cyclamate	35.4	75.8	15254.0
352		1,2,6-Hexanetriol	123	119	15969.8
314		Saccharin	16.4	92.8	17000.0
129		Dimethyl sulfoxide	252	252	19691.3
357		Propylene glycol	342	263	20016.9
231		Tween 80	0.49	19.1	25021.0
355		D-Glucose	226	143	25765.7
92		Di(2-ethylhexyl)phthalate	0.84	79.4	31015.2
Reference					
Halle, W. 1998. Toxizitätsprüfungen in Zellkulturen für eine Vorhersage der akuten Toxizität (LD50) zur Einsparung von Tierversuchen. Life Sciences/Lebenswissenschaften, Volume 1, 94 pp., Jülich: Forschungszentrum Jülich.					