

ATC Results for the RC Rat-Only Weight Regression**2000 mg/kg Upper Limit**

Results for 46 chemicals for the 3T3 NRU and 47 chemicals for the NHK NRU
(see notes to Table 6-5 for chemicals excluded).

Summary of Animals Used and Deaths by Cell Type

Cell Type	Sigma	Method	No. Animals Dead	% Animals Dead	Std. Error (dosed)	No. Animals Dosed	Difference	P-value*	% Savings
NHK	0.12	Cyto	2.30	24.9%	0.342	9.22	1.62	0.0002	14.9%
		Default	2.97	27.4%	0.208	10.84			
	0.25	Cyto	2.45	26.3%	0.325	9.29	1.58	0.0009	14.5%
		Default	3.14	28.9%	0.189	10.87			
	0.5	Cyto	2.78	29.4%	0.297	9.45	1.49	< .0001	13.6%
		Default	3.47	31.8%	0.155	10.93			
	1.25	Cyto	3.52	36.2%	0.229	9.74	1.26	< .0001	11.5%
		Default	4.24	38.5%	0.094	11.00			
	2	Cyto	3.89	39.0%	0.212	9.97	1.13	< .0001	10.2%
		Default	4.57	41.1%	0.065	11.10			
Average Animal Difference:							1.42		
ST3	0.12	Cyto	2.33	26.3%	0.361	8.84	1.97	< .0001	18.2%
		Default	3.03	28.0%	0.211	10.81			
	0.25	Cyto	2.49	27.7%	0.343	8.98	1.86	< .0001	17.1%
		Default	3.21	29.6%	0.191	10.84			
	0.5	Cyto	2.82	30.6%	0.314	9.21	1.68	< .0001	15.5%
		Default	3.55	32.6%	0.157	10.90			
	1.25	Cyto	3.56	36.9%	0.247	9.65	1.33	< .0001	12.1%
		Default	4.29	39.1%	0.096	10.98			
	2	Cyto	3.96	39.8%	0.219	9.97	1.13	< .0001	10.2%
		Default	4.61	41.6%	0.067	11.10			
Average Animal Difference:							1.59		

Summary of Animals Used by GHS Toxicity Category and Cell Type

Category	Cell Type	Sigma	Method	No. Animals Dead	Std. Error (dosed)	No. Animals Dosed	Difference	P-value*	% Savings	
1	NHK	0.12	Cyto	6.94	0.807	6.97	2.03	0.0313	22.6%	
			Default	8.98	0.002	9.00				
		0.25	Cyto	6.82	0.845	7.06	2.04	0.0469	22.4%	
			Default	8.85	0.052	9.09				
		0.5	Cyto	6.61	0.880	7.32	2.05	0.0313	21.9%	
			Default	8.66	0.115	9.37				
		1.25	Cyto	6.19	0.854	8.02	2.02	0.0313	20.1%	
		Default	8.10	0.121	10.04					
	2	Cyto	5.92	0.873	8.54	2.04	0.2188	19.3%		
		Default	7.69	0.098	10.57					
	Average Animal Difference:							2.04		
	3T3	0.12	Cyto	6.41	0.853	6.43	2.57	0.0156	28.5%	
			Default	8.97	0.001	9.00				
		0.25	Cyto	6.29	0.849	6.52	2.56	0.0156	28.2%	
		Default	8.85	0.047	9.09					
0.5		Cyto	6.11	0.840	6.83	2.52	0.0156	27.0%		
		Default	8.65	0.111	9.35					
1.25		Cyto	5.75	0.847	7.52	2.50	0.0156	24.9%		
	Default	8.10	0.114	10.02						
2	Cyto	5.53	0.855	7.99	2.60	0.0156	24.5%			
	Default	7.69	0.092	10.59						
Average Animal Difference:							2.55			
2	NHK	0.12	Cyto	2.96	0.172	9.35	2.79	0.0625	23.0%	
			Default	5.82	0.085	12.14				
		0.25	Cyto	2.91	0.247	9.55	2.62	0.0625	21.5%	
			Default	5.70	0.065	12.17				
		0.5	Cyto	3.23	0.303	9.72	2.48	0.0625	20.3%	
			Default	5.86	0.039	12.20				
		1.25	Cyto	3.81	0.365	9.02	2.98	0.0625	24.9%	
		Default	6.31	0.076	12.01					
	2	Cyto	3.87	0.411	8.55	3.30	0.0625	27.9%		
		Default	6.33	0.040	11.85					
	Average Animal Difference:							2.83		
	3T3	0.12	Cyto	3.53	0.542	9.94	2.20	0.1250	18.1%	
			Default	5.82	0.080	12.13				
		0.25	Cyto	3.50	0.525	10.14	2.02	0.1250	16.6%	
		Default	5.68	0.063	12.16					
0.5		Cyto	3.84	0.521	10.33	1.88	0.0625	15.4%		
		Default	5.89	0.052	12.22					
1.25		Cyto	4.53	0.490	9.91	2.08	0.0625	17.3%		
	Default	6.30	0.055	11.99						
2	Cyto	4.65	0.583	9.64	2.24	0.0625	18.8%			
	Default	6.33	0.046	11.88						
Average Animal Difference:							2.08			

Summary of Animals Used by GHS Toxicity Category and Cell Type

Category	Cell Type	Sigma	Method	No. Animals Dead	Std. Error (dosed)	No. Animals Dosed	Difference	P-value*	% Savings	
3	NHK	0.12	Cyto	3.05	0.778	9.97	-0.23	> .9999	-2.4%	
			Default	3.55	0.490	9.74				
		0.25	Cyto	3.02	0.530	9.98	0.17	> .9999	1.7%	
			Default	3.73	0.494	10.15				
		0.5	Cyto	3.29	0.335	10.30	0.45	> .9999	4.2%	
			Default	4.13	0.388	10.75				
		1.25	Cyto	3.93	0.293	10.56	1.08	0.0938	9.2%	
			Default	4.95	0.166	11.63				
	2	Cyto	4.25	0.455	10.35	1.41	0.0313	12.0%		
		Default	5.34	0.065	11.75					
	Average Animal Difference:							0.57		
	3T3	0.12	Cyto	3.03	0.119	9.23	0.48	0.6875	5.0%	
			Default	3.54	0.477	9.72				
		0.25	Cyto	3.05	0.129	9.48	0.65	0.4375	6.4%	
			Default	3.73	0.476	10.14				
		0.5	Cyto	3.30	0.102	9.94	0.76	0.4375	7.1%	
			Default	4.15	0.373	10.70				
		1.25	Cyto	3.99	0.324	10.48	1.16	0.0313	10.0%	
			Default	4.98	0.165	11.64				
	2	Cyto	4.37	0.381	10.51	1.24	0.0313	10.6%		
	Default	5.35	0.067	11.75						
Average Animal Difference:							0.86			
4	NHK	0.12	Cyto	3.02	0.105	9.20	0.02	> .9999	0.2%	
			Default	3.04	0.125	9.21				
		0.25	Cyto	3.03	0.129	9.42	0.00	0.9375	0.0%	
			Default	3.02	0.136	9.42				
		0.5	Cyto	3.14	0.080	9.76	0.03	0.2188	0.3%	
			Default	3.13	0.082	9.79				
		1.25	Cyto	3.66	0.069	10.56	0.00	0.6875	0.0%	
			Default	3.66	0.071	10.57				
	2	Cyto	4.11	0.076	11.07	-0.02	0.4688	-0.1%		
		Default	4.10	0.073	11.05					
	Average Animal Difference:							0.01		
	3T3	0.12	Cyto	3.03	0.549	9.83	-0.63	0.3125	-6.8%	
			Default	3.03	0.114	9.20				
		0.25	Cyto	3.02	0.435	9.90	-0.49	0.4688	-5.2%	
			Default	3.03	0.129	9.41				
		0.5	Cyto	3.14	0.287	10.11	-0.32	0.8125	-3.3%	
			Default	3.13	0.084	9.79				
		1.25	Cyto	3.62	0.143	10.68	-0.13	0.3125	-1.2%	
			Default	3.64	0.073	10.55				
	2	Cyto	4.05	0.078	11.06	0.00	0.6875	0.0%		
	Default	4.10	0.093	11.06						
Average Animal Difference:							-0.31			

Summary of Animals Used by GHS Toxicity Category and Cell Type

Category	Cell Type	Sigma	Method	No. Animals Dead	Std. Error (dosed)	No. Animals Dosed	Difference	P-value*	% Savings	
5	NHK	0.12	Cyto	0.46	0.690	10.55	1.35	0.1016	11.3%	
			Default	0.47	0.042	11.90				
		0.25	Cyto	1.17	0.572	10.53	1.06	0.4131	9.2%	
			Default	1.18	0.092	11.59				
		0.5	Cyto	1.85	0.403	10.45	0.73	0.0674	6.6%	
			Default	1.85	0.088	11.19				
		1.25	Cyto	2.90	0.196	10.41	0.36	0.0264	3.4%	
			Default	2.89	0.038	10.77				
	2	Cyto	3.41	0.089	10.68	0.16	0.2061	1.5%		
		Default	3.37	0.019	10.84					
	Average Animal Difference:							0.73		
	3T3	0.12	Cyto	0.46	0.817	9.34	2.56	0.0195	21.5%	
			Default	0.46	0.044	11.90				
		0.25	Cyto	1.18	0.661	9.59	2.00	0.0488	17.2%	
			Default	1.18	0.095	11.59				
		0.5	Cyto	1.84	0.470	9.79	1.39	0.0244	12.4%	
			Default	1.86	0.079	11.18				
		1.25	Cyto	2.89	0.228	10.10	0.65	0.0674	6.0%	
			Default	2.90	0.041	10.75				
	2	Cyto	3.47	0.100	10.55	0.28	0.0127	2.6%		
	Default	3.36	0.014	10.83						
Average Animal Difference:							1.38			
6	NHK	0.12	Cyto	0.00	0.927	8.88	3.12	0.0234	26.0%	
			Default	0.00	0.000	12.00				
		0.25	Cyto	0.05	0.929	8.90	3.10	0.0244	25.9%	
			Default	0.04	0.000	12.00				
		0.5	Cyto	0.56	0.878	9.00	2.92	0.0244	24.5%	
			Default	0.57	0.019	11.92				
		1.25	Cyto	2.01	0.571	9.52	1.80	0.0244	15.9%	
			Default	2.17	0.048	11.32				
	2	Cyto	2.75	0.366	9.91	1.12	0.0244	10.2%		
		Default	2.86	0.023	11.04					
	Average Animal Difference:							2.41		
	3T3	0.12	Cyto	0.00	0.990	8.50	3.50	0.0195	29.2%	
			Default	0.00	0.000	12.00				
		0.25	Cyto	0.05	0.994	8.50	3.50	0.0195	29.1%	
			Default	0.05	0.001	12.00				
		0.5	Cyto	0.58	0.938	8.62	3.28	0.0195	27.5%	
			Default	0.61	0.026	11.90				
		1.25	Cyto	2.00	0.616	9.30	1.99	0.0273	17.7%	
			Default	2.19	0.048	11.29				
	2	Cyto	2.77	0.393	9.80	1.19	0.0371	10.9%		
	Default	2.90	0.026	10.99						
Average Animal Difference:							2.69			

Notes:

*P-Value is from one-side Wilcoxon Signed Ranked test for difference in animal use between the default and cytotoxicity methods. **Boldfaced** values are significant values at p < 0.05.

Numbers are numbers of animals unless otherwise specified

Sigma - reciprocal of slope

Cyto= using NRU-determined starting dose

Default - using default starting dose of 175 mg/kg