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Appendix D

Data for the LLNA: DA Intralaboratory and Interlaboratory Validation Studies

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(Intralaboratory)D-21
D3 Individual Animal Data for the LLNA: DA (Interlaboratory)D-27

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Appendix D1

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Individual Animal Data for the LLNA: DA (Intralaboratory)

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Appendix D1 Individual Animal Data for the LLNA: DA Intralaboratory Validation Study¹

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵	
Vehicle Control	AOO	1-1	0	4927	1.12																							
Vehicle Control	AOO	1-2	0	3547	0.80																							
Vehicle Control	AOO	1-3	0	4758	1.08																							
Vehicle Control	AOO	Mean	0	4411	1.0																							
Positive Control - Eugenol	AOO	2-1	10	17020	3.86																							
Positive Control - Eugenol	AOO	2-2	10	14029	3.18																							
Positive Control - Eugenol	AOO	2-3	10	12117	2.75																							
Positive Control - Eugenol	AOO	Mean	10	14388	3.26																							
Citral	AOO	3-1	5	9191	2.08	4-1	10	9937	2.25	5-1	15	12297	2.79	6-1	25	18200	4.13											
Citral	AOO	3-2	5	12120	2.75	4-2	10	7447	1.69	5-2	15	11863	2.69	6-2	25	22609	5.13											
Citral	AOO	3-3	5	4808	1.09	4-3	10	10528	2.39	5-3	15	14283	3.24	6-3	25	17469	3.96											
Citral	AOO	Mean	5	8706	1.97	Mean	10	9304	2.11	Mean	15	12814	2.91	Mean	25	19426	4.40									15.63	5.96	
Cinnamic aldehyde	AOO	7-1	1.0	6780	1.54	8-1	2.5	13624	3.09	9-1	5.0	21945	4.98	10-1	15	20037	4.54											
Cinnamic aldehyde	AOO	7-2	1.0	13271	3.01	8-2	2.5	8924	2.02	9-2	5.0	17313	3.93	10-2	15	18085	4.10											
Cinnamic aldehyde	AOO	7-3	1.0	7545	1.71	8-3	2.5	12681	2.88	9-3	5.0	19218	4.36	10-3	15	24421	5.54											
Cinnamic aldehyde	AOO	Mean	1.0	9199	2.09	Mean	2.5	11743	2.66	Mean	5.0	19492	4.42	Mean	15	20848	4.73									2.98	0.92	
Vehicle Control	AOO	1-1	0	3759	0.97																							
Vehicle Control	AOO	1-2	0	3995	1.03																							
Vehicle Control	AOO	1-3	0	3461	0.89																							
Vehicle Control	AOO	1-4	0	4269	1.10																							
Vehicle Control	AOO	Mean	0	3871	1.00																							

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵		
Positive Control - Eugenol	AOO	3-1	10	16624	4.30																								
Positive Control - Eugenol	AOO	3-2	10	23785	6.15																								
Positive Control - Eugenol	AOO	3-3	10	15667	4.05																								
Positive Control - Eugenol	AOO	3-4	10	18066	4.67																								
Positive Control - Eugenol	AOO	Mean	10	18535	4.79																								
Eugenol	AOO	2-1	5	12594	3.25	3-1	10	16624	4.30	4-1	25	26107	6.75																
Eugenol	AOO	2-2	5	15216	3.93	3-2	10	23785	6.15	4-2	25	26713	6.90																
Eugenol	AOO	2-3	5	9790	2.53	3-3	10	15667	4.05	4-3	25	29297	7.57																
Eugenol	NT	NT	NT	NT	NT	3-4	10	18066	4.67	NT	NT	NT	NT																
Eugenol	AOO	Mean	5	12533	3.24	Mean	10	18535	4.79	Mean	25	27372	7.07													4.50	2.88		
Propylparaben	AOO	5-1	5	5058	1.31	6-1	10	5539	1.43	7-1	25	6385	1.65																
Propylparaben	AOO	5-2	5	4773	1.233	6-2	10	3919	1.012	7-2	25	5813	1.50																
Propylparaben	AOO	5-3	5	3034	0.784	6-3	10	3713	0.959	7-3	25	2679	0.69																
Propylparaben	AOO	Mean	5	4288	1.11	Mean	10	4390	1.13	Mean	25	4959	1.28													NA	NA		
HCA	AOO	8-1	5	7375	1.91	9-1	10	9217	2.38	10-1	25	30420	7.86																
HCA	AOO	8-2	5	3858	1.00	9-2	10	12654	3.27	10-2	25	27682	7.15																
HCA	AOO	8-3	5	3782	1.00	9-3	10	8072	2.09	10-3	25	17014	4.40																
HCA	AOO	Mean	5	5005	1.29	Mean	10	9981	2.58	Mean	25	25038	6.47													11.62	7.75		
Methyl salicylate	AOO	11-1	5	3250	0.84	12-1	10	4499	1.16	13-1	25	4542	1.17																
Methyl salicylate	AOO	11-2	5	3310	0.86	12-2	10	4637	1.20	13-2	25	5445	1.41																
Methyl salicylate	AOO	11-3	5	1760	0.46	12-3	10	2035	0.53	13-3	25	3996	1.03																
Methyl salicylate	AOO	Mean	5	2773	0.72	Mean	10	3723	0.96	Mean	25	4661	1.20													NA	NA		

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵	
Vehicle Control 1	AOO	1-1	0	3529	1.17																							
Vehicle Control 1	AOO	1-2	0	3106	1.03																							
Vehicle Control 1	AOO	1-3	0	2949	0.98																							
Vehicle Control 1	AOO	1-4	0	2473	0.82																							
Vehicle Control 1	AOO	Mean	0	3014	1.00																							
Positive Control 1 - Eugenol	AOO	2-1	10	20105	6.67																							
Positive Control 1 - Eugenol	AOO	2-2	10	14663	4.87																							
Positive Control 1 - Eugenol	AOO	2-3	10	14233	4.72																							
Positive Control 1 - Eugenol	AOO	2-4	10	13137	4.36																							
Positive Control 1 - Eugenol	AOO	Mean	10	15535	5.15																							
Vehicle Control 2	DMSO	3-1	0	4770	0.72																							
Vehicle Control 2	DMSO	3-2	0	6914	1.04																							
Vehicle Control 2	DMSO	3-3	0	8487	1.27																							
Vehicle Control 2	DMSO	3-4	0	6527	0.98																							
Vehicle Control 2	DMSO	Mean	0	6674	1.00																							
Positive Control 2 - Eugenol	DMSO	4-1	10	10887	1.63																							
Positive Control 2 - Eugenol	DMSO	4-2	10	16454	2.47																							
Positive Control 2 - Eugenol	DMSO	4-3	10	9982	1.50																							
Positive Control 2 - Eugenol	DMSO	4-4	10	12245	1.84																							
Positive Control 2 - Eugenol	DMSO	Mean	10	12392	1.86	Failed PC																						
Abietic acid	AOO	5-1	5	4143	1.38	6-1	10	13190	4.3	7-1	25	20693	6.87															
Abietic acid	AOO	5-2	5	9059	3.01	6-2	10	8354	2.772	7-2	25	17109	5.68															
Abietic acid	AOO	5-3	5	7056	2.34	6-3	10	10561	3.50	7-3	25	18770	6.23															

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵	
Abietic acid	AOO	Mean	5	6752	2.24	Mean	10	10701	3.55	Mean	25	18857	6.26														7.90	4.40
Cobalt II chloride	DMSO	8-1	1.0	17709	2.65	9-1	2.5	17680	2.65	10-1	5.0	28248	4.23															
Cobalt II chloride	DMSO	8-2	1.0	12673	1.90	9-2	2.5	17863	2.68	10-2	5.0	27268	4.09															
Cobalt II chloride	DMSO	8-3	1.0	12428	1.86	9-3	2.5	18809	2.82	10-3	5.0	17378	2.60															
Cobalt II chloride	DMSO	Mean	1.0	14270	2.14	Mean	2.5	18117	2.71	Mean	5.0	24298	3.64														3.27	0.88
Nickel (II) sulfate hexahydrate	DMSO	11-1	1.0	7672	1.15	12-1	2.5	10829	1.62	13-1	5.0	15969	2.39															
Nickel (II) sulfate hexahydrate	DMSO	11-2	1.0	11041	1.65	12-2	2.5	10925	1.64	13-2	5.0	9433	1.41															
Nickel (II) sulfate hexahydrate	DMSO	11-3	1.0	8581	1.29	12-3	2.5	21735	3.26	13-3	5.0	11636	1.74															
Nickel (II) sulfate hexahydrate	DMSO	Mean	1.0	9098	1.36	Mean	2.5	14496	2.17	Mean	5.0	12346	1.85														NA	2.18
Vehicle Control 1	AOO	1-1	0	2660	1.03																							
Vehicle Control 1	AOO	1-2	0	2856	1.11																							
Vehicle Control 1	AOO	1-3	0	1828	0.71																							
Vehicle Control 1	AOO	1-4	0	2975	1.15																							
Vehicle Control 1	AOO	Mean	0	2580	1.00																							
Positive Control 1 - Eugenol	AOO	2-1	10	19298	7.48																							
Positive Control 1 - Eugenol	AOO	2-2	10	17360	6.73																							
Positive Control 1 - Eugenol	AOO	2-3	10	14953	5.80																							
Positive Control 1 - Eugenol	AOO	2-4	10	11827	4.59																							
Positive Control 1 - Eugenol	AOO	Mean	10	15859	6.15																							
Vehicle Control 2	DMF	3-1	0	4424	1.29																							
Vehicle Control 2	DMF	3-2	0	3087	0.90																							
Vehicle Control 2	DMF	3-3	0	2348	0.69																							
Vehicle Control 2	DMF	3-4	0	3854	1.12																							

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵
Vehicle Control 2	DMF	Mean	0	3428	1.00																						
Positive Control 2 - Eugenol	DMF	4-1	10	5738	1.67																						
Positive Control 2 - Eugenol	DMF	4-2	10	5644	1.65																						
Positive Control 2 - Eugenol	DMF	4-3	10	3688	1.08																						
Positive Control 2 - Eugenol	DMF	4-4	10	8185	2.39																						
Positive Control 2 - Eugenol	DMF	Mean	10	5813	1.70	Failed PC																					
Benzocaine	AOO	5-1	5	10495	4.07	6-1	10	10314	4.00	7-1	25	10512	4.08														
Benzocaine	AOO	5-2	5	3052	1.18	6-2	10	10880	4.22	7-2	25	14366	5.57														
Benzocaine	AOO	5-3	5	6751	2.62	6-3	10	8378	3.25	7-3	25	12564	4.87														
Benzocaine	AOO	Mean	5	6766	2.62	Mean	10	9857	3.82	Mean	25	12480	4.84													6.57	3.49
Imidazolidinyl urea	DMF	8-1	10	7333	2.14	9-1	25	9854	2.88	10-1	50	14760	4.31														
Imidazolidinyl urea	DMF	8-2	10	6777	1.98	9-2	25	13907	4.06	10-2	50	15299	4.46														
Imidazolidinyl urea	DMF	8-3	10	10143	2.96	9-3	25	11783	3.44	10-3	50	17971	5.24														
Imidazolidinyl urea	DMF	Mean	10	8084	2.36	Mean	25	11848	3.46	Mean	50	16010	4.67													18.77	7.42
2-Mercaptbenzothiazole	DMF	11-1	10	7829	2.28	12-1	25	6978	2.04	13-1	50	3976	1.16														
2-Mercaptbenzothiazole	DMF	11-2	10	7102	2.07	12-2	25	2425	0.71	13-2	50	4375	1.28														
2-Mercaptbenzothiazole	DMF	11-3	10	5647	1.65	12-3	25	4401	1.28	13-3	50	2675	0.78														
2-Mercaptbenzothiazole	DMF	Mean	10	6859	2.00	Mean	25	4601	1.34	Mean	50	3675	1.07													NA	9.99
Vehicle Control	AOO	1-1	0	1453	0.28																						
Vehicle Control	AOO	1-2	0	11748	2.27																						
Vehicle Control	AOO	1-3	0	4663	0.90																						
Vehicle Control	AOO	1-4	0	2810	0.54																						
Vehicle Control	AOO	Mean	0	5168	1.00																						

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵	
Positive Control - Eugenol	AOO	2-1	10	13351	2.58																							
Positive Control - Eugenol	AOO	2-2	10	27023	5.229																							
Positive Control - Eugenol	AOO	2-3	10	12875	2.49																							
Positive Control - Eugenol	AOO	2-4	10	15921	3.08																							
Positive Control - Eugenol	AOO	Mean	10	17292	3.35																							
2-4-Dinitrochlorobenzene	AOO	10-1	0.025	11884	2.30	11-1	0.05	10848	2.10	12-1	0.10	13205	2.56	13-1	0.25	34300	6.64	14-1	0.5	33092	6.40	15-1	1.0	40795	7.89			
2-4-Dinitrochlorobenzene	AOO	10-2	0.025	11146	2.16	11-2	0.05	7394	1.43	12-2	0.10	8679	1.68	13-2	0.25	26924	5.21	14-2	0.5	46685	9.03	15-2	1.0	36807	7.12			
2-4-Dinitrochlorobenzene	AOO	10-3	0.025	5799	1.12	11-3	0.05	8468	1.64	12-3	0.10	6740	1.30	13-3	0.25	15631	3.03	14-3	0.5	30241	5.85	15-3	1.0	32445	6.29			
2-4-Dinitrochlorobenzene	AOO	Mean	0.025	9610	1.86	Mean	0.05	8903	1.72	Mean	0.10	9541	1.85	Mean	0.25	25618	4.96	Mean	0.5	36673	7.10	Mean	1.0	36682	7.10	0.16	0.11	
Vehicle Control	AOO	1-1	0	1460	0.41																							
Vehicle Control	AOO	1-2	0	5137	1.46																							
Vehicle Control	AOO	1-3	0	3988	1.13																							
Vehicle Control	AOO	Mean	0	3528	1.00																							
Positive Control - Eugenol	AOO	2-1	10	22813	6.47																							
Positive Control - Eugenol	AOO	2-2	10	21142	5.99																							
Positive Control - Eugenol	AOO	2-3	10	30985	8.78																							
Positive Control - Eugenol	AOO	Mean	10	24980	7.08																							
Isoeugenol	AOO	3-1	2.5	15638	4.43	4-1	5.0	15773	4.47	5-1	10	24776	7.02	6-1	25	40328	11.43	7-1	50	43389	12.30							
Isoeugenol	AOO	3-2	2.5	9113	2.58	4-2	5.0	19726	5.59	5-2	10	23236	6.59	6-2	25	50432	14.30	7-2	50	28424	8.06							
Isoeugenol	AOO	3-3	2.5	8197	2.32	4-3	5.0	10920	3.10	5-3	10	23595	6.69	6-3	25	40035	11.35	7-3	50	40263	11.41							
Isoeugenol	AOO	Mean	2.5	10982	3.11	Mean	5.0	15473	4.39	Mean	10	23869	6.77	Mean	25	43598	12.36	Mean	50	37359	10.59					2.35	1.36	
Vehicle Control	AOO	1-1	0	836	0.55																							
Vehicle Control	AOO	1-2	0	1815	1.20																							

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵	
Vehicle Control	AOO	1-3	0	1752	1.16																							
Vehicle Control	AOO	1-4	0	1631	1.08																							
Vehicle Control	AOO	Mean	0	1508	1.00																							
Positive Control - Eugenol	AOO	2-1	10	13707	9.09																							
Positive Control - Eugenol	AOO	2-2	10	6746	4.47																							
Positive Control - Eugenol	AOO	2-3	10	10475	6.95																							
Positive Control - Eugenol	AOO	2-4	10	6855	4.54																							
Positive Control - Eugenol	AOO	Mean	10	9446	6.26																							
Benzalkonium chloride	AOO	12-1	0.5	3027	2.01	13-1	1.0	9672	6.41	14-1	2.5	10292	6.82															
Benzalkonium chloride	AOO	12-2	0.5	5780	3.83	13-2	1.0	7809	5.18	14-2	2.5	11879	7.88															
Benzalkonium chloride	AOO	12-3	0.5	4183	2.77	13-3	1.0	10868	7.21	14-3	2.5	8070	5.35															
Benzalkonium chloride	AOO	Mean	0.5	4330	2.87	Mean	1.0	9449	6.26	Mean	2.5	10080	6.68													0.52	0.42	
Vehicle Control	DMF	1-1	0	2926	1.10																							
Vehicle Control	DMF	1-2	0	1674	0.63																							
Vehicle Control	DMF	1-3	0	3984	1.49																							
Vehicle Control	DMF	1-4	0	2091	0.78																							
Vehicle Control	DMF	Mean	0	2668	1.00																							
Positive Control - Cinnamic aldehyde	DMF	2-1	5	17595	6.59																							
Positive Control - Cinnamic aldehyde	DMF	2-2	5	12322	4.62																							
Positive Control - Cinnamic aldehyde	DMF	2-3	5	10331	3.87																							
Positive Control - Cinnamic aldehyde	DMF	2-4	5	12297	4.61																							

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵
Positive Control - Cinnamic aldehyde	DMF	Mean	5	13136	4.92																						
Sodium lauryl sulfate	DMF	3-1	1.0	3870	1.45	4-1	2.5	7965	2.99	5-1	5.0	2945	1.10	6-1	10	10337	3.87										
Sodium lauryl sulfate	DMF	3-2	1.0	2899	1.09	4-2	2.5	4802	1.80	5-2	5.0	7161	2.68	6-2	10	6881	2.58										
Sodium lauryl sulfate	DMF	3-3	1.0	3777	1.42	4-3	2.5	6838	2.56	5-3	5.0	7913	2.97	6-3	10	9932	3.72										
Sodium lauryl sulfate	DMF	Mean	1.0	3515	1.32	Mean	2.5	6535	2.45	Mean	5.0	6006	2.25	Mean	10	9050	3.39									6.88	1.91
Vehicle Control	AOO	1-1	0	2045	0.97																						
Vehicle Control	AOO	1-2	0	1990	0.94																						
Vehicle Control	AOO	1-3	0	2212	1.05																						
Vehicle Control	AOO	1-4	0	2212	1.05																						
Vehicle Control	AOO	Mean	0	2115	1.00																						
Positive Control - HCA	AOO	2-1	15	14020	6.63																						
Positive Control - HCA	AOO	2-2	15	9078	4.29																						
Positive Control - HCA	AOO	2-3	15	8912	4.21																						
Positive Control - HCA	AOO	Mean	15	10670	5.05																						
Isopropanol	AOO	6-1	10	1364	0.65	7-1	25	3820	1.81	8-1	50	2249	1.06														
Isopropanol	AOO	6-2	10	2872	1.36	7-2	25	1746	0.83	8-2	50	700	0.33														
Isopropanol	AOO	6-3	10	2417	1.14	7-3	25	1298	0.61	8-3	50	2454	1.16														
Isopropanol	AOO	Mean	10	2218	1.05	Mean	25	2288	1.08	Mean	50	1801	0.85													NA	NA
Vehicle Control	AOO	1-1	0	2386	0.76																						
Vehicle Control	AOO	1-2	0	2967	0.95																						
Vehicle Control	AOO	1-3	0	4347	1.39																						
Vehicle Control	AOO	1-4	0	2816	0.90																						
Vehicle Control	AOO	Mean	0	3129	1.00																						
Positive Control - HCA	AOO	2-1	15	9352	2.99																						

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵
Positive Control - HCA	AOO	2-2	15	16201	5.18																						
Positive Control - HCA	AOO	2-3	15	10538	3.37																						
Positive Control - HCA	AOO	2-4	15	9135	2.92																						
Positive Control - HCA	AOO	Mean	15	11306	3.61																						
Hexane	AOO	12-1	25	3755	1.20	13-1	50	3070	0.98	14-1	100	9027	2.89														
Hexane	AOO	12-2	25	3240	1.04	13-2	50	2491	0.80	14-2	100	6802	2.17														
Hexane	AOO	12-3	25	3136	1.00	13-3	50	2658	0.85	14-3	100	5850	1.87														
Hexane	AOO	Mean	25	3377	1.08	Mean	50	2740	0.88	Mean	100	7226	2.31													NA	89.19
Vehicle Control	AOO	1-1	0	2370	0.84																						
Vehicle Control	AOO	1-2	0	3124	1.11																						
Vehicle Control	AOO	1-3	0	2314	0.82																						
Vehicle Control	AOO	1-4	0	3464	1.23																						
Vehicle Control	AOO	Mean	0	2818	1.00																						
Positive Control - HCA	AOO	2-1	15	7739	2.75																						
Positive Control - HCA	AOO	2-2	15	10867	3.86																						
Positive Control - HCA	AOO	2-3	15	5290	1.88																						
Positive Control - HCA	AOO	2-4	15	8570	3.04																						
Positive Control - HCA	AOO	Mean	15	8116	2.88	Failed PC when SI ≥ 3.0																					
Toluene-2,4-diisocyanate	AOO	12-1	0.05	9445	3.35	13-1	0.10	12732	4.52	14-1	0.25	25104	8.91														
Toluene-2,4-diisocyanate	AOO	12-2	0.05	11471	4.07	13-2	0.10	17962	6.38	14-2	0.25	27791	9.86														
Toluene-2,4-diisocyanate	AOO	12-3	0.05	5999	2.13	13-3	0.10	16204	5.75	14-3	0.25	26785	9.51														
Toluene-2,4-diisocyanate	AOO	Mean	0.05	8972	3.18	Mean	0.10	15632	5.55	Mean	0.25	26560	9.43													0.05	0.04

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵	
Vehicle Control	AOO	1-1	0	1727	0.80																							
Vehicle Control	AOO	1-2	0	2122	0.99																							
Vehicle Control	AOO	1-3	0	2111	0.98																							
Vehicle Control	AOO	1-4	0	2645	1.23																							
Vehicle Control	AOO	Mean	0	2151	1.00																							
Positive Control - HCA	AOO	2-1	15	14931	6.94																							
Positive Control - HCA	AOO	2-2	15	15575	7.24																							
Positive Control - HCA	AOO	2-3	15	13043	6.06																							
Positive Control - HCA	AOO	2-4	15	11199	5.21																							
Positive Control - HCA	AOO	Mean	15	13687	6.36																							
1-Bromobutane	AOO	3-1	5	2701	1.26	4-1	10	1810	0.84	5-1	25	3483	1.62															
1-Bromobutane	AOO	3-2	5	2491	1.16	4-2	10	2130	0.99	5-2	25	2916	1.36															
1-Bromobutane	AOO	3-3	5	4272	1.99	4-3	10	878	0.41	5-3	25	4220	1.96															
1-Bromobutane	AOO	Mean	5	3154	1.47	Mean	10	1606	0.75	Mean	25	3539	1.65														NA	NA
Chlorobenzene	AOO	6-1	5	1875	0.87	7-1	10	2505	1.16	8-1	25	2848	1.32															
Chlorobenzene	AOO	6-2	5	2180	1.01	7-2	10	1840	0.86	8-2	25	5302	2.47															
Chlorobenzene	AOO	6-3	5	1088	0.51	7-3	10	2682	1.25	8-3	25	7615	3.54															
Chlorobenzene	AOO	Mean	5	1714	0.80	Mean	10	2342	1.09	Mean	25	5255	2.44														NA	20.09
Diethyl-phthalate	AOO	9-1	25	1543	0.72	10-1	50	1781	0.83	11-1	100	1808	0.84															
Diethyl-phthalate	AOO	9-2	25	2561	1.19	10-2	50	1371	0.64	11-2	100	1288	0.60															
Diethyl-phthalate	AOO	9-3	25	2906	1.35	10-3	50	2477	1.15	11-3	100	2139	0.99															
Diethyl-phthalate	AOO	Mean	25	2336	1.09	Mean	50	1876	0.87	Mean	100	1745	0.81														NA	NA
Hydroxycitronellal	AOO	12-1	10	5201	2.42	13-1	25	9519	4.43	14-1	50	14400	6.70															
Hydroxycitronellal	AOO	12-2	10	4094	1.90	13-2	25	13562	6.31	14-2	50	8741	4.06															
Hydroxycitronellal	AOO	12-3	10	5293	2.46	13-3	25	10656	4.95	14-3	50	13563	6.31															

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵		
Hydroxycitronellal	AOO	Mean	10	4862	2.26	Mean	25	11246	5.23	Mean	50	12234	5.69														13.74	9.23	
Vehicle Control	ACE	9-1	0	2232	1.39																								
Vehicle Control	ACE	9-2	0	1509	0.94																								
Vehicle Control	ACE	9-3	0	1287	0.80																								
Vehicle Control	ACE	9-4	0	1419	0.88																								
Vehicle Control	ACE	Mean	0	1611	1.00																								
Positive Control - HCA	ACE	10-1	15	13901	8.63																								
Positive Control - HCA	ACE	10-2	15	16265	10.09																								
Positive Control - HCA	ACE	10-3	15	15531	9.64																								
Positive Control - HCA	ACE	10-4	15	15749	9.77																								
Positive Control - HCA	ACE	Mean	15	15361	9.53																								
Glutaraldehyde	ACE	11-1	0.05	1821	1.13	12-1	0.10	5389	3.34	13-1	0.25	16484	10.23																
Glutaraldehyde	ACE	11-2	0.05	2181	1.35	12-2	0.10	2496	1.55	13-2	0.25	6814	4.23																
Glutaraldehyde	ACE	11-3	0.05	1931	1.12	12-3	0.10	6344	3.94	13-3	0.25	7889	4.90																
Glutaraldehyde	ACE	Mean	0.05	1978	1.23	Mean	0.10	4743	2.94	Mean	0.25	10396	6.45														0.10	0.07	
Vehicle Control	AOO	1-1	0	3101	0.92																								
Vehicle Control	AOO	1-2	0	3253	0.97																								
Vehicle Control	AOO	1-3	0	2687	0.80																								
Vehicle Control	AOO	1-4	0	4407	1.31																								
Vehicle Control	AOO	Mean	0	3362	1.00																								
Positive Control - HCA	AOO	2-1	15	22800	6.78																								
Positive Control - HCA	AOO	2-2	15	16696	4.97																								
Positive Control - HCA	AOO	2-3	15	17973	5.35																								
Positive Control -	AOO	2-4	15	18757	5.58																								

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵	
HCA																												
Positive Control - HCA	AOO	Mean	15	19056	5.67																							
Trimellitic anhydride	AOO	7-1	0.10	5681	1.69	8-1	0.25	13902	4.14	9-1	0.50	14361	4.27															
Trimellitic anhydride	AOO	7-2	0.10	7841	2.33	8-2	0.25	11270	3.35	9-2	0.50	18976	5.64															
Trimellitic anhydride	AOO	7-3	0.10	11293	3.36	8-3	0.25	10963	3.26	9-3	0.50	16673	4.96															
Trimellitic anhydride	AOO	Mean	0.10	8272	2.46	Mean	0.25	12045	3.58	Mean	0.50	16670	4.96													0.17	0.07	
Phthalic anhydride	AOO	10-1	0.10	11304	3.36	11-1	0.25	8332	2.48	12-1	0.50	22051	6.56	13-1	1.0	19987	5.95											
Phthalic anhydride	AOO	10-2	0.10	13066	3.89	11-2	0.25	15717	4.68	12-2	0.50	12828	3.82	13-2	1.0	32118	9.55											
Phthalic anhydride	AOO	10-3	0.10	12448	3.70	11-3	0.25	9833	2.93	12-3	0.50	24315	7.23	13-3	1.0	17006	5.09											
Phthalic anhydride	AOO	Mean	0.10	12272	3.65	Mean	0.25	11294	3.36	Mean	0.50	19731	5.87	Mean	1.0	23037	6.85									0.08	0.04	
Vehicle Control 1	DMSO	1-1	0	13832	1.36																							
Vehicle Control 1	DMSO	1-2	0	9930	0.97																							
Vehicle Control 1	DMSO	1-3	0	9958	0.98																							
Vehicle Control 1	DMSO	1-4	0	7097	0.70																							
Vehicle Control 1	DMSO	Mean	0	10204	1.00																							
Positive Control 1 - HCA	DMSO	2-1	15	17741	1.74																							
Positive Control 1 - HCA	DMSO	2-2	15	18810	1.84																							
Positive Control 1 - HCA	DMSO	2-3	15	18045	1.77																							
Positive Control 1 - HCA	DMSO	2-4	15	12293	1.21																							
Positive Control 1 - HCA	DMSO	Mean	15	16722	1.64	Failed PC																						
Lactic acid	DMSO	3-1	5	6741	0.66	4-1	10	11054	1.08	5-1	25	7025	0.69	6-1	50	8623	0.85											
Lactic acid	DMSO	3-2	5	12789	1.25	4-2	10	11929	1.17	5-2	25	13796	1.35	6-2	50	10101	0.99											
Lactic acid	DMSO	3-3	5	12217	1.12	4-3	10	9542	0.94	5-3	25	8677	0.85	6-3	50	11594	1.14											
Lactic acid	DMSO	Mean	5	10582	1.04	Mean	10	10841	1.06	Mean	25	9832	0.96	Mean	50	10106	0.99									NA	NA	

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC ₃ ⁴	Calc. EC ₂ ⁵				
Vehicle Control 2	AOO	7-1	0	5263	1.07																										
Vehicle Control 2	AOO	7-2	0	4970	1.01																										
Vehicle Control 2	AOO	7-3	0	5431	1.11																										
Vehicle Control 2	AOO	7-4	0	3965	0.81																										
Vehicle Control 2	AOO	Mean	0	4907	1.00																										
Positive Control 2 - HCA	AOO	8-1	15	25796	5.26																										
Positive Control 2 - HCA	AOO	8-2	15	24279	4.95																										
Positive Control 2 - HCA	AOO	8-3	15	13979	2.85																										
Positive Control 2 - HCA	AOO	8-4	15	23991	4.89																										
Positive Control 2 - HCA	AOO	Mean	15	22011	4.49																										
Resorcinol	AOO	9-1	5	12461	2.54	10-1	10	25798	5.26	11-1	25	20760	4.23																		
Resorcinol	AOO	9-2	5	11743	2.39	10-2	10	16771	3.42	11-2	25	21215	4.32																		
Resorcinol	AOO	9-3	5	12095	2.47	10-3	10	21121	4.30	11-3	25	9659	1.97																		
Resorcinol	AOO	Mean	5	12099	2.47	Mean	10	21230	4.33	Mean	25	17211	3.51														6.44	4.20			
Vehicle Control	ACE	1-1	0	3937	1.45																										
Vehicle Control	ACE	1-2	0	2374	0.88																										
Vehicle Control	ACE	1-3	0	2360	0.87																										
Vehicle Control	ACE	1-4	0	2173	0.80																										
Vehicle Control	ACE	Mean	0	2711	1.00																										
Positive Control - HCA	ACE	2-1	15	21117	7.79																										
Positive Control - HCA	ACE	2-2	15	19843	7.32																										
Positive Control - HCA	ACE	2-3	15	12203	4.50																										
Positive Control - HCA	ACE	2-4	15	13734	5.07																										

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵
Positive Control - HCA	ACE	Mean	15	16724	6.17																						
Formaldehyde	ACE	3-1	0.10	5222	1.93	4-1	0.25	6167	2.28	5-1	0.50	2317	0.86	6-1	1.0	7846	2.90	7-1	2.5	17242	6.36						
Formaldehyde	ACE	3-2	0.10	3045	1.12	4-2	0.25	2933	1.08	5-2	0.50	4479	1.65	6-2	1.0	10628	3.92	7-2	2.5	14355	5.30						
Formaldehyde	ACE	3-3	0.10	2923	1.08	4-3	0.25	5093	1.88	5-3	0.50	5263	1.94	6-3	1.0	3894	1.44	7-3	2.5	9904	3.65						
Formaldehyde	ACE	Mean	0.10	3730	1.38	Mean	0.25	4731	1.75	Mean	0.50	4019	1.48	Mean	1.0	7456	2.75	Mean	2.5	13833	5.10					1.16	0.44
Vehicle Control	DMSO	1-1	0	82453	1.27																						
Vehicle Control	DMSO	1-2	0	78192	1.21																						
Vehicle Control	DMSO	1-3	0	42838	0.66																						
Vehicle Control	DMSO	1-4	0	56114	0.87																						
Vehicle Control	DMSO	Mean	0	64899	1.00																						
Positive Control	NT	NT	NT	NT	NT																						
Positive Control	NT	NT	NT	NT	NT																						
Positive Control	NT	NT	NT	NT	NT																						
Positive Control	NT	NT	NT	NT	NT																						
Positive Control	NT	Mean	NT	NT	NT	No PC																					
Potassium dichromate	DMSO	4-1	0.1	193231	2.98	5-1	0.3	209189	3.22	6-1	1.0	286418	4.41														
Potassium dichromate	DMSO	4-2	0.1	140171	2.16	5-2	0.3	274466	4.23	6-2	1.0	304081	4.69														
Potassium dichromate	DMSO	4-3	0.1	186039	2.87	5-3	0.3	421230	6.49	6-3	1.0	440493	6.79														
Potassium dichromate	DMSO	4-4	0.1	152378	2.35	5-4	0.3	253302	3.90	6-4	1.0	394755	6.08														
Potassium dichromate	DMSO	Mean	0.1	167954	2.59	Mean	0.3	289546	4.46	Mean	1.0	356437	5.49													0.14	0.07
Vehicle Control	AOO	1-1	0	4172	1.44																						
Vehicle Control	AOO	1-2	0	3078	1.06																						
Vehicle Control	AOO	1-3	0	2136	0.74																						
Vehicle Control	AOO	1-4	0	2192	0.76																						
Vehicle Control	AOO	Mean	0	2894	1.00																						
Positive Control - HCA	AOO	2-1	15	10569	3.65																						

Substance ²	Veh.	An. #	1 Conc. (%)	1 Mean ATP ³	1 SI	An. #	2 Conc. (%)	2 Mean ATP ³	2 SI	An. #	3 Conc. (%)	3 Mean ATP ³	3 SI	An. #	4 Conc. (%)	4 Mean ATP ³	4 SI	An. #	5 Conc. (%)	5 Mean ATP ³	5 SI	An. #	6 Conc. (%)	6 Mean ATP ³	6 SI	Calc. EC3 ⁴	Calc. EC2 ⁵
Positive Control - HCA	AOO	2-2	15	11027	3.81																						
Positive Control - HCA	AOO	2-3	15	12928	4.47																						
Positive Control - HCA	AOO	2-4	15	12520	4.33																						
Positive Control - HCA	AOO	Mean	15	11761	4.06																						
p-Phenylenediamine	AOO	3-1	0.10	8259	2.85	4-1	0.25	12197	4.21	5-1	0.50	16392	5.66	6-1	1.0	10644	3.68										
p-Phenylenediamine	AOO	3-2	0.10	11194	3.87	4-2	0.25	15785	5.45	5-2	0.50	9781	3.38	6-2	1.0	10669	3.69										
p-Phenylenediamine	AOO	3-3	0.10	11454	3.96	4-3	0.25	16610	5.74	5-3	0.50	10173	3.52	6-3	1.0	5942	2.05										
p-Phenylenediamine	AOO	Mean	0.10	10302	3.56	Mean	0.25	14864	5.14	Mean	0.50	12115	4.19	Mean	1.0	9085	3.14									0.07	0.04

Abbreviations: ACE = acetone; An. # = animal number; AOO = acetone: olive oil (4:1); ATP = adenosine triphosphate; Calc. = calculated; conc. = Concentration; DMF = N,N-dimethylformamide; DMSO = dimethyl sulfoxide; HCA = hexyl cinnamic aldehyde; NA = not applicable; No. = number; NT = not tested; PC = positive control; SI = stimulation Index; Veh = vehicle.

¹Original laboratory records with individual animal data for the 31 substances tested in the LLNA: DA intralaboratory validation study (Idehara et al. 2008) provided by Kenji Idehara, Ph.D., Daicel Chemical Industries, Ltd.

²The 31 substances in the intralaboratory validation study were evaluated during one of 18 LLNA: DA tests that were conducted between July 2003 through September 2007 and are listed in order based on the date that they were tested.

³Two ATP measurements were taken for each animal and the mean ATP is indicated.

⁴EC3 value was calculated based on interpolation or extrapolation formulas discussed in Gerberick et al. 2004.

⁵EC2 value was calculated based on modified interpolation or extrapolation formulas for EC3 discussed in Gerberick et al. 2004.

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Appendix D2

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Summary Data for 14 Additional Substances Tested in the

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LLNA: DA (Intralaboratory)

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116 **Appendix D2** **Summary of the Results for 14 Additional Substances Tested in the LLNA: DA (Intralaboratory)**

Substance Name	Vehicle	Concentration (%)	SI ¹	Calculated EC3 ² (%)	Calculated EC2 ³ (%)
5-Chloro-2-methyl-4-isothiazolin-3-one (CMI)	DMF	0.005	1.2	0.03	0.01
		0.010	1.9		
		0.025	2.7		
		0.050	4.0		
		0.100	7.5		
p-Benzoquinone	AOO	0.005	2.6	0.06	0.003
		0.010	2.6		
		0.025	2.5		
		0.050	2.7		
		0.100	3.8		
Propyl gallate	AOO	0.5	2.8	1.09	0.28
		1.0	2.9		
		2.5	4.9		
Phenyl benzoate	AOO	1.0	2.2	2.26	0.80
		2.5	3.2		
		5.0	4.2		
		10.0	3.7		
Diethyl maleate	AOO	0.5	1.9	3.71	1.18

Substance Name	Vehicle	Concentration (%)	SI ¹	Calculated EC3 ² (%)	Calculated EC2 ³ (%)
		1.0	1.9		
		2.5	2.7		
		5.0	3.3		
		10.0	3.8		
Ethyl acrylate	AOO	10	2.5	13.94	7.54
		25	4.3		
		50	3.4		
Cinnamic alcohol	AOO	10	2.4	21.34	6.54
		25	3.2		
		50	5.7		
		90	4.4		
Ethylene glycol dimethacrylate	MEK	10	1.2	34.03	22.27
		25	2.2		
		50	4.4		
Butyl glycidyl ether	AOO	10	1.2	31.68	19.92
		25	2.4		
		50	4.6		
Nickel (II) chloride	DMSO	2.5	0.9	NA	NA

Substance Name	Vehicle	Concentration (%)	SI ¹	Calculated EC3 ² (%)	Calculated EC2 ³ (%)
		5.0	1.1		
		10.0	1.3		
Salicylic acid	AOO	5	1.5	NA	25.00
		10	1.6		
		25	2.0		
Sulfanilamide	DMF	10	0.8	NA	NA
		25	0.9		
		50	0.6		
Methyl methacrylate	AOO	25	1.0	NA	NA
		50	1.2		
		75	1.3		
		100	1.8		
Dimethyl isophthalate ⁴	AOO	5	0.9	NA	NA
		10	0.9		
		25	0.8		

117 Abbreviations: AOO = acetone: olive oil (4:1); DMF = *N,N*-dimethylformamide; DMSO = dimethyl sulfoxide; EC3 = estimated concentration needed to produce
 118 a stimulation index of three; MEK = methyl ethyl ketone; NA = not applicable; RLU = relative luminescence units; SI = stimulation index.

119 ¹SI determined from mean ATP content (RLU).

120 ²EC3 value was calculated based on interpolation or extrapolation formulas discussed in Gerberick et al. 2004.

121 ³EC2 value was calculated based on modified interpolation or extrapolation formulas for EC3 discussed in Gerberick et al. 2004

122 ⁴This substance was also tested in the first phase of the interlaboratory validation study (Omori et al. 2008).

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Appendix D3

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Individual Animal Data for the LLNA: DA (Interlaboratory)

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Appendix D3 Individual Animal Data for the LLNA: DA Two-Phase Interlaboratory Validation Study

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Vehicle - Positive Control	1		1	0	27373	1.09									
Vehicle - Positive Control	1		2	0	23473	0.93									
Vehicle - Positive Control	1		3	0	30778	1.22									
Vehicle - Positive Control	1		4	0	19231	0.76									
Vehicle - Positive Control	1		MEAN	0	25214	1.00									
Positive Control	1		1	NA	163662	6.49									
Positive Control	1		2	NA	118724	4.71									
Positive Control	1		3	NA	120098	4.76									
Positive Control	1		4	NA	172911	6.86									
Positive Control	1		MEAN	NA	143849	5.71									
Vehicle - Substance	1	AOO	1	0	30365	1.24									
Vehicle - Substance	1	AOO	2	0	26124	1.06									
Vehicle - Substance	1	AOO	3	0	25218	1.03									
Vehicle - Substance	1	AOO	4	0	16624	0.68									
Vehicle - Substance	1	AOO	MEAN	0	24583	1.00									
Hexyl cinnamic aldehyde	1	AOO	1	5	39462	1.61	10	94155	3.83	25	174255	7.09			
Hexyl cinnamic aldehyde	1	AOO	2	5	29952	1.22	10	60720	2.47	25	140034	5.70			
Hexyl cinnamic aldehyde	1	AOO	3	5	37759	1.54	10	70595	2.87	25	103168	4.20			
Hexyl cinnamic aldehyde	1	AOO	4	5	25613	1.04	10	70068	2.85	25	151064	6.15			
Hexyl cinnamic aldehyde	1	AOO	MEAN	5	33196	1.35	10	73884	3.01	25	142130	5.78	9.98	8.47	6.96
Isopropanol	1	AOO	1	10	49049	2.00	25	28917	1.18	50	32979	1.34			
Isopropanol	1	AOO	2	10	46692	1.90	25	28183	1.15	50	28219	1.15			
Isopropanol	1	AOO	3	10	22501	0.92	25	28099	1.14	50	28788	1.17			
Isopropanol	1	AOO	4	10	32783	1.33	25	23206	0.94	50	24907	1.01			
Isopropanol	1	AOO	MEAN	10	37756	1.54	25	27101	1.10	50	28723	1.17	NA	NA	NA
Vehicle - Positive Control	1		1	0	27603	1.19									
Vehicle - Positive Control	1		2	0	29165	1.26									
Vehicle - Positive Control	1		3	0	13867	0.60									
Vehicle - Positive Control	1		4	0	21857	0.95									
Vehicle - Positive Control	1		MEAN	0	23123	1.00									
Positive Control	1		1	NA	187061	8.09									
Positive Control	1		2	NA	192723	8.33									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Positive Control	1		3	NA	152209	6.58									
Positive Control	1		4	NA	120141	5.20									
Positive Control	1		MEAN	NA	163033	7.05									
Vehicle - Substance	1	ACE	1	0	23522	1.31									
Vehicle - Substance	1	ACE	2	0	17328	0.97									
Vehicle - Substance	1	ACE	3	0	19286	1.07									
Vehicle - Substance	1	ACE	4	0	11653	0.65									
Vehicle - Substance	1	ACE	MEAN	0	17947	1.00									
Glutaraldehyde	1	ACE	1	0.05	39029	2.17	0.15	86407	4.81	0.50	117767	6.56			
Glutaraldehyde	1	ACE	2	0.05	21473	1.20	0.15	69645	3.88	0.50	91139	5.08			
Glutaraldehyde	1	ACE	3	0.05	17442	0.97	0.15	44897	2.50	0.50	85284	4.75			
Glutaraldehyde	1	ACE	4	0.05	24434	1.36	0.15	90044	5.02	0.50	64878	3.62			
Glutaraldehyde	1	ACE	MEAN	0.05	25594	1.43	0.15	72748	4.05	0.50	89767	5.00	0.11	0.09	0.07
Formaldehyde	1	ACE	1	0.5	54229	3.02	1.5	65799	3.67	5.0	92516	5.16			
Formaldehyde	1	ACE	2	0.5	65863	3.67	1.5	35118	1.96	5.0	131184	7.31			
Formaldehyde	1	ACE	3	0.5	49268	2.75	1.5	48274	2.69	5.0	52728	2.94			
Formaldehyde	1	ACE	4	0.5	39499	2.20	1.5	56430	3.14	5.0	71309	3.97			
Formaldehyde	1	ACE	MEAN	0.5	52214	2.91	1.5	51405	2.86	5.0	86934	4.84	1.75	0.39	0.26
Vehicle - Positive Control	1		1	0	25568	1.13									
Vehicle - Positive Control	1		2	0	30989	1.37									
Vehicle - Positive Control	1		3	0	15244	0.68									
Vehicle - Positive Control	1		4	0	18525	0.82									
Vehicle - Positive Control	1		MEAN	0	22582	1.00									
Positive Control	1		1	NA	160326	7.10									
Positive Control	1		2	NA	97979	4.34									
Positive Control	1		3	NA	126572	5.61									
Positive Control	1		4	NA	151977	6.73									
Positive Control	1		MEAN	NA	134213	5.94									
Vehicle - Substance	1	AOO	1	0	36866	1.36									
Vehicle - Substance	1	AOO	2	0	33905	1.25									
Vehicle - Substance	1	AOO	3	0	15218	0.56									
Vehicle - Substance	1	AOO	4	0	22764	0.84									
Vehicle - Substance	1	AOO	MEAN	0	27188	1.00									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
2,4-Dinitrochlorobenzene	1	AOO	1	0.03	108431	3.99	0.10	185139	6.81	0.30	334363	12.30			
2,4-Dinitrochlorobenzene	1	AOO	2	0.03	83821	3.08	0.10	159188	5.86	0.30	258002	9.49			
2,4-Dinitrochlorobenzene	1	AOO	3	0.03	68037	2.50	0.10	133437	4.91	0.30	366438	13.48			
2,4-Dinitrochlorobenzene	1	AOO	4	0.03	48931	1.80	0.10	110880	4.08	0.30	343140	12.62			
2,4-Dinitrochlorobenzene	1	AOO	MEAN	0.03	77305	2.84	0.10	147161	5.41	0.30	325485	11.97	0.03	0.03	0.02
Dimethyl isophthalate	1	AOO	1	5	41322	1.52	10	46499	1.71	25	39741	1.46			
Dimethyl isophthalate	1	AOO	2	5	32753	1.20	10	27887	1.03	25	21245	0.78			
Dimethyl isophthalate	1	AOO	3	5	24319	0.89	10	29565	1.09	25	38401	1.41			
Dimethyl isophthalate	1	AOO	4	5	47742	1.76	10	20851	0.77	25	20734	0.76			
Dimethyl isophthalate	1	AOO	MEAN	5	36534	1.34	10	31200	1.15	25	30030	1.10	NA	NA	NA
3-Aminophenol	1	AOO	1	1	48998	1.80	3	65491	2.41	10	93723	3.45			
3-Aminophenol	1	AOO	2	1	50122	1.84	3	55831	2.05	10	57142	2.10			
3-Aminophenol	1	AOO	3	1	47237	1.74	3	55478	2.04	10	82054	3.02			
3-Aminophenol	1	AOO	4	1	44007	1.62	3	75285	2.77	10	74792	2.75			
3-Aminophenol	1	AOO	MEAN	1	47591	1.75	3	63021	2.32	10	76927	2.83	NA	5.49	1.88
Vehicle - Positive Control	2		1	0	29854	0.94									
Vehicle - Positive Control	2		2	0	36425	1.15									
Vehicle - Positive Control	2		3	0	42387	1.34									
Vehicle - Positive Control	2		4	0	18060	0.57									
Vehicle - Positive Control	2		MEAN	0	31681	1.00									
Positive Control	2		1	NA	194745	6.15									
Positive Control	2		2	NA	196510	6.20									
Positive Control	2		3	NA	202311	6.39									
Positive Control	2		4	NA	171703	5.42									
Positive Control	2		MEAN	P	191317	6.04									
Vehicle - Substance	2	AOO	1	0	26727	0.65									
Vehicle - Substance	2	AOO	2	0	62370	1.51									
Vehicle - Substance	2	AOO	3	0	48632	1.18									
Vehicle - Substance	2	AOO	4	0	27029	0.66									
Vehicle - Substance	2	AOO	MEAN	0	41189	1.00									
Hexyl cinnamic aldehyde	2	AOO	1	5	49355	1.20	10	129128	3.13	25	259210	6.29			
Hexyl cinnamic aldehyde	2	AOO	2	5	57775	1.40	10	98419	2.39	25	185538	4.50			

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Hexyl cinnamic aldehyde	2	AOO	3	5	62556	1.52	10	96062	2.33	25	176096	4.28			
Hexyl cinnamic aldehyde	2	AOO	4	5	55479	1.35	10	113209	2.75	25	173235	4.21			
Hexyl cinnamic aldehyde	2	AOO	MEAN	5	56291	1.37	10	109204	2.65	25	198520	4.82	12.41	9.41	7.46
Isopropanol	2	AOO	1	10	48933	1.19	25	40741	0.99	50	31132	0.76			
Isopropanol	2	AOO	2	10	26716	0.65	25	33529	0.81	50	44432	1.08			
Isopropanol	2	AOO	3	10	38147	0.93	25	36625	0.89	50	30372	0.74			
Isopropanol	2	AOO	4	10	35351	0.86	25	29201	0.71	50	27101	0.66			
Isopropanol	2	AOO	MEAN	10	37286	0.91	25	35024	0.85	50	33259	0.81	NA	NA	NA
Vehicle - Positive Control	2		1	0	16450	0.51									
Vehicle - Positive Control	2		2	0	56211	1.74									
Vehicle - Positive Control	2		3	0	29690	0.92									
Vehicle - Positive Control	2		4	0	26911	0.83									
Vehicle - Positive Control	2		MEAN	0	32315	1.00									
Positive Control	2		1	NA	100365	3.11									
Positive Control	2		2	NA	144864	4.48									
Positive Control	2		3	NA	121515	3.76									
Positive Control	2		4	NA	131149	4.06									
Positive Control	2		MEAN	NA	124473	3.85									
Vehicle - Substance	2	AOO	1	0	26982	1.03									
Vehicle - Substance	2	AOO	2	0	26503	1.01									
Vehicle - Substance	2	AOO	3	0	23078	0.88									
Vehicle - Substance	2	AOO	4	0	28074	1.07									
Vehicle - Substance	2	AOO	MEAN	0	26159	1.00									
2,4-Dinitrochlorobenzene	2	AOO	1	0.03	46482	1.78	0.10	54947	2.10	0.30	154655	5.91			
2,4-Dinitrochlorobenzene	2	AOO	2	0.03	45109	1.72	0.10	79087	3.02	0.30	244903	9.36			
2,4-Dinitrochlorobenzene	2	AOO	3	0.03	64419	2.46	0.10	103400	3.95	0.30	231793	8.86			
2,4-Dinitrochlorobenzene	2	AOO	4	0.03	87361	3.34	0.10	44369	1.70	0.30	334511	12.79			
2,4-Dinitrochlorobenzene	2	AOO	MEAN	0.03	60843	2.33	0.10	70451	2.69	0.30	241465	9.23	0.11	0.06	0.02
Abietic acid	2	AOO	1	5	53429	2.04	10	76437	2.92	25	109226	4.18			
Abietic acid	2	AOO	2	5	44953	1.72	10	106616	4.08	25	165358	6.32			
Abietic acid	2	AOO	3	5	55417	2.12	10	106351	4.07	25	78960	3.02			
Abietic acid	2	AOO	4	5	66359	2.54	10	77421	2.96	25	131863	5.04			

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Abietic acid	2	AOO	MEAN	5	55039	2.10	10	91706	3.51	25	121351	4.64	8.20	6.41	4.76
Vehicle - Positive Control	2		1	0	15977	0.59									
Vehicle - Positive Control	2		2	0	29941	1.11									
Vehicle - Positive Control	2		3	0	25288	0.94									
Vehicle - Positive Control	2		4	0	36217	1.35									
Vehicle - Positive Control	2		MEAN	0	26856	1.00									
Positive Control	2		1	NA	105933	3.94									
Positive Control	2		2	NA	170707	6.36									
Positive Control	2		3	NA	134656	5.01									
Positive Control	2		4	NA	173488	6.46									
Positive Control	2		MEAN	NA	146196	5.44									
Vehicle - Substance	2	ACE	1	0	56525	1.49									
Vehicle - Substance	2	ACE	2	0	38645	1.02									
Vehicle - Substance	2	ACE	3	0	28667	0.75									
Vehicle - Substance	2	ACE	4	0	28339	0.74									
Vehicle - Substance	2	ACE	MEAN	0	38044	1.00									
Glutaraldehyde	2	ACE	1	0.05	34115	0.90	0.15	50405	1.32	0.50	172747	4.54			
Glutaraldehyde	2	ACE	2	0.05	37388	0.98	0.15	36212	0.95	0.50	104608	2.75			
Glutaraldehyde	2	ACE	3	0.05	17955	0.47	0.15	54707	1.44	0.50	105731	2.78			
Glutaraldehyde	2	ACE	4	0.05	22926	0.60	0.15	54598	1.44	0.50	133355	3.51			
Glutaraldehyde	2	ACE	MEAN	0.05	28096	0.74	0.15	48980	1.29	0.50	129110	3.39	0.44	0.35	0.27
Formaldehyde	2	ACE	1	0.5	71257	1.87	1.5	120557	3.17	5.0	148089	3.89			
Formaldehyde	2	ACE	2	0.5	61368	1.61	1.5	110027	2.89	5.0	111959	2.94			
Formaldehyde	2	ACE	3	0.5	74954	1.97	1.5	139716	3.67	5.0	97241	2.56			
Formaldehyde	2	ACE	4	0.5	50290	1.32	1.5	90274	2.37	5.0	126577	3.33			
Formaldehyde	2	ACE	MEAN	0.5	64467	1.69	1.5	115143	3.03	5.0	120966	3.18	1.48	1.11	0.73
Vehicle - Positive Control	3		1	0	14012	0.68									
Vehicle - Positive Control	3		2	0	25742	1.25									
Vehicle - Positive Control	3		3	0	18482	0.90									
Vehicle - Positive Control	3		4	0	24206	1.17									
Vehicle - Positive Control	3		MEAN	0	20610	1.00									
Positive Control	3		1	NA	147051	7.13									
Positive Control	3		2	NA	129657	6.29									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Positive Control	3		3	NA	119376	5.79									
Positive Control	3		4	NA	132756	6.44									
Positive Control	3		MEAN	NA	132210	6.41									
Vehicle - Substance	3	AOO	1	0	22801	0.95									
Vehicle - Substance	3	AOO	2	0	28208	1.17									
Vehicle - Substance	3	AOO	3	0	19180	0.80									
Vehicle - Substance	3	AOO	4	0	26000	1.08									
Vehicle - Substance	3	AOO	MEAN	0	24047	1.00									
Methyl salicylate	3	AOO	1	5	22109	0.92	10	35176	1.46	25	53142	2.21			
Methyl salicylate	3	AOO	2	5	22812	0.95	10	22115	0.92	25	31027	1.29			
Methyl salicylate	3	AOO	3	5	21410	0.89	10	21251	0.88	25	31120	1.29			
Methyl salicylate	3	AOO	4	5	36725	1.53	10	26904	1.12	25	34146	1.42			
Methyl salicylate	3	AOO	MEAN	5	25764	1.07	10	26361	1.10	25	37359	1.55	NA	NA	NA
3-Aminophenol	3	AOO	1	1	40069	1.67	3	51109	2.13	10	39746	1.65			
3-Aminophenol	3	AOO	2	1	31036	1.29	3	34706	1.44	10	38143	1.59			
3-Aminophenol	3	AOO	3	1	28933	1.20	3	53201	2.21	10	35330	1.47			
3-Aminophenol	3	AOO	4	1	35464	1.47	3	30394	1.26	10	53816	2.24			
3-Aminophenol	3	AOO	MEAN	1	33875	1.41	3	42352	1.76	10	41759	1.74	NA	NA	NA
Vehicle - Positive Control	3		1	0	32037	1.14									
Vehicle - Positive Control	3		2	0	27673	0.98									
Vehicle - Positive Control	3		3	0	25512	0.91									
Vehicle - Positive Control	3		4	0	27174	0.97									
Vehicle - Positive Control	3		MEAN	0	28099	1.00									
Positive Control	3		1	NA	133836	4.76									
Positive Control	3		2	NA	122152	4.35									
Positive Control	3		3	NA	164019	5.84									
Positive Control	3		4	NA	133810	4.76									
Positive Control	3		MEAN	NA	138454	4.93									
Vehicle - Substance	3	AOO	1	0	52047	1.46									
Vehicle - Substance	3	AOO	2	0	31377	0.88									
Vehicle - Substance	3	AOO	3	0	36296	1.02									
Vehicle - Substance	3	AOO	4	0	22887	0.64									
Vehicle - Substance	3	AOO	MEAN	0	35652	1.00									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Hexyl cinnamic aldehyde	3	AOO	1	5	38213	1.07	10	69749	1.96	25	124915	3.50			
Hexyl cinnamic aldehyde	3	AOO	2	5	35942	1.01	10	85956	2.41	25	168780	4.73			
Hexyl cinnamic aldehyde	3	AOO	3	5	68561	1.92	10	97018	2.72	25	188378	5.28			
Hexyl cinnamic aldehyde	3	AOO	4	5	50818	1.43	10	75438	2.12	25	151145	4.24			
Hexyl cinnamic aldehyde	3	AOO	MEAN	5	48383	1.36	10	82040	2.30	25	158304	4.44	14.90	11.39	8.40
Isopropanol	3	AOO	1	10	32440	0.91	25	30325	0.85	50	29038	0.81			
Isopropanol	3	AOO	2	10	45395	1.27	25	27645	0.78	50	28736	0.81			
Isopropanol	3	AOO	3	10	38482	1.08	25	23613	0.66	50	37489	1.05			
Isopropanol	3	AOO	4	10	28304	0.79	25	12277	0.34	50	28026	0.79			
Isopropanol	3	AOO	MEAN	10	36155	1.01	25	23465	0.66	50	30822	0.86	NA	NA	NA
Vehicle - Positive Control	3		1	0	19428	0.70									
Vehicle - Positive Control	3		2	0	34843	1.26									
Vehicle - Positive Control	3		3	0	30475	1.11									
Vehicle - Positive Control	3		4	0	25568	0.93									
Vehicle - Positive Control	3		MEAN	0	27578	1.00									
Positive Control	3		1	NA	152890	5.54									
Positive Control	3		2	NA	150397	5.45									
Positive Control	3		3	NA	179030	6.49									
Positive Control	3		4	NA	164124	5.95									
Positive Control	3		MEAN	NA	161610	5.86									
Vehicle - Substance	3	AOO	1	0	27832	0.78									
Vehicle - Substance	3	AOO	2	0	43858	1.23									
Vehicle - Substance	3	AOO	3	0	39077	1.10									
Vehicle - Substance	3	AOO	4	0	31673	0.89									
Vehicle - Substance	3	AOO	MEAN	0	35610	1.00									
2,4-Dinitrochlorobenzene	3	AOO	1	0.03	78157	2.19	0.10	121518	3.41	0.30	333041	9.35			
2,4-Dinitrochlorobenzene	3	AOO	2	0.03	124013	3.48	0.10	178885	5.02	0.30	332166	9.33			
2,4-Dinitrochlorobenzene	3	AOO	3	0.03	79811	2.24	0.10	152199	4.27	0.30	364546	10.24			
2,4-Dinitrochlorobenzene	3	AOO	4	0.03	40213	1.13	0.10	149717	4.20	0.30	388959	10.92			
2,4-Dinitrochlorobenzene	3	AOO	MEAN	0.03	80548	2.26	0.10	150579	4.23	0.30	354678	9.96	0.06	0.04	0.03
Dimethyl isophthalate	3	AOO	1	5	31045	0.87	10	42990	1.21	25	21801	0.61			
Dimethyl isophthalate	3	AOO	2	5	35735	1.00	10	26663	0.75	25	20892	0.59			

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Dimethyl isophthalate	3	AOO	3	5	28933	0.81	10	27736	0.78	25	29220	0.82			
Dimethyl isophthalate	3	AOO	4	5	47129	1.32	10	40039	1.12	25	23687	0.67			
Dimethyl isophthalate	3	AOO	MEAN	5	35710	1.00	10	34357	0.96	25	23900	0.67	NA	NA	NA
Vehicle - Positive Control	4		1	0	48083	1.06									
Vehicle - Positive Control	4		2	0	39428	0.87									
Vehicle - Positive Control	4		3	0	55411	1.22									
Vehicle - Positive Control	4		4	0	38284	0.85									
Vehicle - Positive Control	4		MEAN	0	45301	1.00									
Positive Control	4		1	NA	211896	4.68									
Positive Control	4		2	NA	262733	5.80									
Positive Control	4		3	NA	242739	5.36									
Positive Control	4		4	NA	275773	6.09									
Positive Control	4		MEAN	NA	248285	5.48									
Vehicle - Substance	4	DMSO	1	0	132462	1.32									
Vehicle - Substance	4	DMSO	2	0	79967	0.80									
Vehicle - Substance	4	DMSO	3	0	82192	0.82									
Vehicle - Substance	4	DMSO	4	0	106964	1.07									
Vehicle - Substance	4	DMSO	MEAN	0	100396	1.00									
Cobalt chloride	4	DMSO	1	0.3	175468	1.75	1.0	272071	2.71	NA	NA	NA			
Cobalt chloride	4	DMSO	2	0.3	192922	1.92	1.0	206730	2.06	NA	NA	NA			
Cobalt chloride	4	DMSO	3	0.3	230415	2.30	1.0	333152	3.32	NA	NA	NA			
Cobalt chloride	4	DMSO	4	0.3	216774	2.16	1.0	256734	2.56	NA	NA	NA			
Cobalt chloride	4	DMSO	MEAN	0.3	203895	2.03	1.0	267172	2.66	NA	NA	NA	NA	0.82	0.28
Nickel (II) sulfate hexahydrate	4	DMSO	1	1	136287	1.36	3	152054	1.51	10	129555	1.29			
Nickel (II) sulfate hexahydrate	4	DMSO	2	1	84335	0.84	3	166405	1.66	10	89825	0.89			
Nickel (II) sulfate hexahydrate	4	DMSO	3	1	125617	1.25	3	188337	1.88	10	85180	0.85			
Nickel (II) sulfate hexahydrate	4	DMSO	4	1	118828	1.18	3	105499	1.05	10	109822	1.09			
Nickel (II) sulfate hexahydrate	4	DMSO	MEAN	1	116266	1.16	3	153074	1.52	10	103595	1.03	NA	NA	NA

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Vehicle - Positive Control	4		1	0	42028	0.90									
Vehicle - Positive Control	4		2	0	49964	1.07									
Vehicle - Positive Control	4		3	0	44351	0.95									
Vehicle - Positive Control	4		4	0	50162	1.08									
Vehicle - Positive Control	4		MEAN	0	46626	1.00									
Positive Control	4		1	NA	266538	5.72									
Positive Control	4		2	NA	297022	6.37									
Positive Control	4		3	NA	208438	4.47									
Positive Control	4		4	NA	238300	5.11									
Positive Control	4		MEAN	NA	252574	5.42									
Vehicle - Substance	4	AOO	1	0	38814	0.90									
Vehicle - Substance	4	AOO	2	0	40081	0.93									
Vehicle - Substance	4	AOO	3	0	36876	0.86									
Vehicle - Substance	4	AOO	4	0	56256	1.31									
Vehicle - Substance	4	AOO	MEAN	0	43007	1.00									
Hexyl cinnamic aldehyde	4	AOO	1	5	66346	1.54	10	92375	2.15	25	183245	4.26			
Hexyl cinnamic aldehyde	4	AOO	2	5	63590	1.48	10	128592	2.99	25	237260	5.52			
Hexyl cinnamic aldehyde	4	AOO	3	5	71486	1.66	10	121376	2.82	25	208440	4.85			
Hexyl cinnamic aldehyde	4	AOO	4	5	55427	1.29	10	213148	4.96	25	249803	5.81			
Hexyl cinnamic aldehyde	4	AOO	MEAN	5	64212	1.49	10	138873	3.23	25	219687	5.11	9.34	7.90	6.46
Isopropanol	4	AOO	1	10	62566	1.45	25	29136	0.68	50	33511	0.78			
Isopropanol	4	AOO	2	10	86226	2.00	25	45518	1.06	50	41282	0.96			
Isopropanol	4	AOO	3	10	63529	1.48	25	42708	0.99	50	36712	0.85			
Isopropanol	4	AOO	4	10	56908	1.32	25	38074	0.89	50	26023	0.61			
Isopropanol	4	AOO	MEAN	10	67307	1.57	25	38859	0.90	50	34382	0.80	NA	NA	NA
Vehicle - Positive Control	4		1	0	61301	1.49									
Vehicle - Positive Control	4		2	0	42018	1.02									
Vehicle - Positive Control	4		3	0	31933	0.78									
Vehicle - Positive Control	4		4	0	29486	0.72									
Vehicle - Positive Control	4		MEAN	0	41184	1.00									
Positive Control	4		1	NA	188993	4.59									
Positive Control	4		2	NA	168896	4.10									
Positive Control	4		3	NA	258012	6.26									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Positive Control	4		4	NA	307187	7.46									
Positive Control	4		MEAN	NA	230772	5.60									
Vehicle - Substance	4	AOO	1	0	55245	1.29									
Vehicle - Substance	4	AOO	2	0	32859	0.77									
Vehicle - Substance	4	AOO	3	0	37143	0.87									
Vehicle - Substance	4	AOO	4	0	46219	1.08									
Vehicle - Substance	4	AOO	MEAN	0	42866	1.00									
Isoeugenol	4	AOO	1	1	117220	2.73	3	167018	3.90	10	278270	6.49			
Isoeugenol	4	AOO	2	1	159050	3.71	3	172577	4.03	10	266047	6.21			
Isoeugenol	4	AOO	3	1	114887	2.68	3	190296	4.44	10	212878	4.97			
Isoeugenol	4	AOO	4	1	112197	2.62	3	171216	3.99	10	291279	6.80			
Isoeugenol	4	AOO	MEAN	1	125838	2.94	3	175277	4.09	10	262118	6.11	1.11	0.66	0.41
2,4-Dinitrochlorobenzene	4	AOO	1	0.03	99433	2.32	0.10	239929	5.60	0.30	351048	8.19			
2,4-Dinitrochlorobenzene	4	AOO	2	0.03	124385	2.90	0.10	248752	5.80	0.30	304028	7.09			
2,4-Dinitrochlorobenzene	4	AOO	3	0.03	156964	3.66	0.10	226511	5.28	0.30	426667	9.95			
2,4-Dinitrochlorobenzene	4	AOO	4	0.03	131177	3.06	0.10	125633	2.93	0.30	381330	8.90			
2,4-Dinitrochlorobenzene	4	AOO	MEAN	0.03	127990	2.99	0.10	210206	4.90	0.30	365768	8.53	0.03	0.02	0.02
Vehicle - Positive Control	5		1	0	7783	0.65									
Vehicle - Positive Control	5		2	0	7273	0.61									
Vehicle - Positive Control	5		3	0	22835	1.92									
Vehicle - Positive Control	5		4	0	9704	0.82									
Vehicle - Positive Control	5		MEAN	0	11899	1.00									
Positive Control	5		1	NA	60519	5.09									
Positive Control	5		2	NA	57983	4.87									
Positive Control	5		3	NA	48159	4.05									
Positive Control	5		4	NA	72951	6.13									
Positive Control	5		MEAN	NA	59903	5.03									
Vehicle - Substance	5	AOO	1	0	31442	1.49									
Vehicle - Substance	5	AOO	2	0	12103	0.57									
Vehicle - Substance	5	AOO	3	0	20941	0.99									
Vehicle - Substance	5	AOO	4	0	20115	0.95									
Vehicle - Substance	5	AOO	MEAN	0	21150	1.00									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
2,4-Dinitrochlorobenzene	5	AOO	1	0.03	19491	0.92	0.10	40351	1.91	0.30	199476	9.43			
2,4-Dinitrochlorobenzene	5	AOO	2	0.03	14102	0.67	0.10	76157	3.60	0.30	109134	5.16			
2,4-Dinitrochlorobenzene	5	AOO	3	0.03	17254	0.82	0.10	39813	1.88	0.30	155961	7.37			
2,4-Dinitrochlorobenzene	5	AOO	4	0.03	21584	1.02	0.10	26445	1.25	0.30	200326	9.47			
2,4-Dinitrochlorobenzene	5	AOO	MEAN	0.03	18107	0.86	0.10	45691	2.16	0.30	166224	7.86	0.13	0.11	0.09
Isoeugenol	5	AOO	1	1	20321	0.96	3	12620	0.60	10	123238	5.83			
Isoeugenol	5	AOO	2	1	19512	0.92	3	28001	1.32	10	110582	5.23			
Isoeugenol	5	AOO	3	1	33957	1.61	3	20937	0.99	10	118049	5.58			
Isoeugenol	5	AOO	4	1	17792	0.84	3	32921	1.56	10	116524	5.51			
Isoeugenol	5	AOO	MEAN	1	22896	1.08	3	23619	1.12	10	117098	5.54	5.98	5.19	4.40
Vehicle - Positive Control	5		1	0	22681	1.23									
Vehicle - Positive Control	5		2	0	15429	0.84									
Vehicle - Positive Control	5		3	0	20405	1.11									
Vehicle - Positive Control	5		4	0	15143	0.82									
Vehicle - Positive Control	5		MEAN	0	18414	1.00									
Positive Control	5		1	NA	97304	5.28									
Positive Control	5		2	NA	83132	4.51									
Positive Control	5		3	NA	67441	3.66									
Positive Control	5		4	NA	117794	6.40									
Positive Control	5		MEAN	NA	91418	4.96									
Vehicle - Substance	5	AOO	1	0	16435	0.86									
Vehicle - Substance	5	AOO	2	0	22909	1.20									
Vehicle - Substance	5	AOO	3	0	25965	1.36									
Vehicle - Substance	5	AOO	4	0	11275	0.59									
Vehicle - Substance	5	AOO	MEAN	0	19146	1.00									
Hexyl cinnamic aldehyde	5	AOO	1	5	17037	0.89	10	32966	1.72	25	73109	3.82			
Hexyl cinnamic aldehyde	5	AOO	2	5	30640	1.60	10	38027	1.99	25	83266	4.35			
Hexyl cinnamic aldehyde	5	AOO	3	5	26481	1.38	10	17968	0.94	25	77637	4.05			
Hexyl cinnamic aldehyde	5	AOO	4	5	19509	1.02	10	52769	2.76	25	70103	3.66			
Hexyl cinnamic aldehyde	5	AOO	MEAN	5	23417	1.22	10	35432	1.85	25	76029	3.97	18.13	14.59	11.06
Isopropanol	5	AOO	1	10	9967	0.52	25	15066	0.79	50	18749	0.98			
Isopropanol	5	AOO	2	10	5679	0.30	25	15418	0.81	50	13502	0.71			

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Isopropanol	5	AOO	3	10	12157	0.63	25	12221	0.64	50	10223	0.53			
Isopropanol	5	AOO	4	10	12621	0.66	25	15418	0.81	50	11851	0.62			
Isopropanol	5	AOO	MEAN	10	10106	0.53	25	14531	0.76	50	13581	0.71	NA	NA	NA
Vehicle - Positive Control	5		1	0	15918	1.04									
Vehicle - Positive Control	5		2	0	13724	0.90									
Vehicle - Positive Control	5		3	0	10819	0.71									
Vehicle - Positive Control	5		4	0	20489	1.34									
Vehicle - Positive Control	5		MEAN	0	15237	1.00									
Positive Control	5		1	NA	67799	4.45									
Positive Control	5		2	NA	56834	3.73									
Positive Control	5		3	NA	60000	3.94									
Positive Control	5		4	NA	84607	5.55									
Positive Control	5		MEAN	NA	67310	4.42									
Vehicle - Substance	5	ACE	1	0	8265	0.50									
Vehicle - Substance	5	ACE	2	0	23012	1.40									
Vehicle - Substance	5	ACE	3	0	14503	0.88									
Vehicle - Substance	5	ACE	4	0	19975	1.22									
Vehicle - Substance	5	ACE	MEAN	0	16439	1.00									
Glutaraldehyde	5	ACE	1	0.05	23621	1.44	0.15	38622	2.35	0.50	34431	2.09			
Glutaraldehyde	5	ACE	2	0.05	11837	0.72	0.15	64431	3.92	0.50	42955	2.61			
Glutaraldehyde	5	ACE	3	0.05	14251	0.87	0.15	24666	1.50	0.50	42380	2.58			
Glutaraldehyde	5	ACE	4	0.05	18389	1.12	0.15	33558	2.04	0.50	49184	2.99			
Glutaraldehyde	5	ACE	MEAN	0.05	17024	1.04	0.15	40319	2.45	0.50	42237	2.57	NA	0.29	0.12
Formaldehyde	5	ACE	1	0.5	24898	1.51	1.5	36696	2.23	5.0	44219	2.69			
Formaldehyde	5	ACE	2	0.5	18454	1.12	1.5	29172	1.77	5.0	47739	2.90			
Formaldehyde	5	ACE	3	0.5	21972	1.34	1.5	43949	2.67	5.0	33377	2.03			
Formaldehyde	5	ACE	4	0.5	12719	0.77	1.5	14018	0.85	5.0	51542	3.14			
Formaldehyde	5	ACE	MEAN	0.5	19510	1.19	1.5	30959	1.88	5.0	44219	2.69	NA	4.18	2.02
Vehicle - Positive Control	6		1	0	16022	1.79									
Vehicle - Positive Control	6		2	0	9436	1.05									
Vehicle - Positive Control	6		3	0	3788	0.42									
Vehicle - Positive Control	6		4	0	6561	0.73									
Vehicle - Positive Control	6		MEAN	0	8952	1.00									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Positive Control	6		1	NA	80444	8.99									
Positive Control	6		2	NA	92491	10.33									
Positive Control	6		3	NA	73767	8.24									
Positive Control	6		4	NA	101082	11.29									
Positive Control	6		MEAN	NA	86946	9.71									
Vehicle - Substance	6	DMSO	1	0	7575	1.81									
Vehicle - Substance	6	DMSO	2	0	4135	0.99									
Vehicle - Substance	6	DMSO	3	0	2759	0.66									
Vehicle - Substance	6	DMSO	4	0	2267	0.54									
Vehicle - Substance	6	DMSO	MEAN	0	4184	1.00									
Nickel (II) sulfate hexahydrate	6	DMSO	1	1	30363	7.26	3	32830	7.85	10	46902	11.21			
Nickel (II) sulfate hexahydrate	6	DMSO	2	1	12902	3.08	3	28614	6.84	10	64448	15.40			
Nickel (II) sulfate hexahydrate	6	DMSO	3	1	22353	5.34	3	31319	7.49	10	56156	13.42			
Nickel (II) sulfate hexahydrate	6	DMSO	4	1	22343	5.34	3	19101	4.57	10	29707	7.10			
Nickel (II) sulfate hexahydrate	6	DMSO	MEAN	1	21990	5.26	3	27966	6.68	10	49303	11.78	0.47	0.35	0.24
Cobalt chloride	6	DMSO	1	0.3	88782	21.22	1.0	59079	14.12	3.0	108860	26.02			
Cobalt chloride	6	DMSO	2	0.3	40452	9.67	1.0	24246	5.80	3.0	62637	14.97			
Cobalt chloride	6	DMSO	3	0.3	22788	5.45	1.0	69511	16.61	3.0	106164	25.38			
Cobalt chloride	6	DMSO	4	0.3	23988	5.73	1.0	25023	5.98	3.0	66252	15.84			
Cobalt chloride	6	DMSO	MEAN	0.3	44002	10.52	1.0	44465	10.63	3.0	85978	20.55	0.06	0.05	0.03
Vehicle - Positive Control	6		1	0	7997	0.75									
Vehicle - Positive Control	6		2	0	10763	1.01									
Vehicle - Positive Control	6		3	0	13602	1.27									
Vehicle - Positive Control	6		4	0	10360	0.97									
Vehicle - Positive Control	6		MEAN	0	10680	1.00									
Positive Control	6		1	NA	52468	4.91									
Positive Control	6		2	NA	66048	6.18									
Positive Control	6		3	NA	81979	7.68									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Positive Control	6		4	NA	76135	7.13									
Positive Control	6		MEAN	NA	69157	6.48									
Vehicle - Substance	6	AOO	1	0	8621	0.62									
Vehicle - Substance	6	AOO	2	0	14670	1.05									
Vehicle - Substance	6	AOO	3	0	18086	1.30									
Vehicle - Substance	6	AOO	4	0	14263	1.03									
Vehicle - Substance	6	AOO	MEAN	0	13910	1.00									
Abietic acid	6	AOO	1	5	38117	2.74	10	57039	4.10	25	98752	7.10			
Abietic acid	6	AOO	2	5	18850	1.36	10	73842	5.31	25	129426	9.30			
Abietic acid	6	AOO	3	5	25525	1.83	10	56561	4.07	25	139343	10.02			
Abietic acid	6	AOO	4	5	18617	1.34	10	43018	3.09	25	75268	5.41			
Abietic acid	6	AOO	MEAN	5	25277	1.82	10	57615	4.14	25	110697	7.96	7.54	6.47	5.39
2,4-Dinitrochlorobenzene	6	AOO	1	0.03	29344	2.11	0.10	32064	2.31	0.30	170451	12.25			
2,4-Dinitrochlorobenzene	6	AOO	2	0.03	53129	3.82	0.10	78273	5.63	0.30	258700	18.60			
2,4-Dinitrochlorobenzene	6	AOO	3	0.03	39348	2.83	0.10	66285	4.77	0.30	241703	17.38			
2,4-Dinitrochlorobenzene	6	AOO	4	0.03	31167	2.24	0.10	60587	4.36	0.30	171691	12.34			
2,4-Dinitrochlorobenzene	6	AOO	MEAN	0.03	38247	2.75	0.10	59302	4.26	0.30	210636	15.14	0.04	0.03	0.02
Vehicle - Positive Control	6		1	0	18240	1.56									
Vehicle - Positive Control	6		2	0	4174	0.36									
Vehicle - Positive Control	6		3	0	11817	1.01									
Vehicle - Positive Control	6		4	0	12605	1.08									
Vehicle - Positive Control	6		MEAN	0	11709	1.00									
Positive Control	6		1	NA	105716	9.03									
Positive Control	6		2	NA	92508	7.90									
Positive Control	6		3	NA	86410	7.38									
Positive Control	6		4	NA	107936	9.22									
Positive Control	6		MEAN	NA	98142	8.38									
Vehicle - Substance	6	AOO	1	0	13188	0.81									
Vehicle - Substance	6	AOO	2	0	16677	1.02									
Vehicle - Substance	6	AOO	3	0	13789	0.84									
Vehicle - Substance	6	AOO	4	0	21847	1.33									
Vehicle - Substance	6	AOO	MEAN	0	16375	1.00									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Hexyl cinnamic aldehyde	6	AOO	1	5	34939	2.13	10	50225	3.07	25	61340	3.75			
Hexyl cinnamic aldehyde	6	AOO	2	5	34548	2.11	10	38763	2.37	25	71280	4.35			
Hexyl cinnamic aldehyde	6	AOO	3	5	18582	1.13	10	26933	1.64	25	110980	6.78			
Hexyl cinnamic aldehyde	6	AOO	4	5	21408	1.31	10	37387	2.28	25	116668	7.12			
Hexyl cinnamic aldehyde	6	AOO	MEAN	5	27369	1.67	10	38327	2.34	25	90067	5.50	13.13	10.76	7.46
Isopropanol	6	AOO	1	10	71570	4.37	25	14610	0.89	50	16623	1.02			
Isopropanol	6	AOO	2	10	20763	1.27	25	19836	1.21	50	19168	1.17			
Isopropanol	6	AOO	3	10	19846	1.21	25	17188	1.05	50	28176	1.72			
Isopropanol	6	AOO	4	10	16753	1.02	25	7416	0.45	50	21474	1.31			
Isopropanol	6	AOO	MEAN	10	32233	1.97	25	14762	0.90	50	21360	1.30	NA	NA	NA
Vehicle - Positive Control	7		1	0	10954	0.47									
Vehicle - Positive Control	7		2	0	14547	0.62									
Vehicle - Positive Control	7		3	0	33870	1.44									
Vehicle - Positive Control	7		4	0	34460	1.47									
Vehicle - Positive Control	7		MEAN	0	23458	1.00									
Positive Control	7		1	NA	93512	3.99									
Positive Control	7		2	NA	104433	4.45									
Positive Control	7		3	NA	114003	4.86									
Positive Control	7		4	NA	180482	7.69									
Positive Control	7		MEAN	NA	123107	5.25									
Vehicle - Substance	7	AOO	1	0	15339	0.71									
Vehicle - Substance	7	AOO	2	0	11627	0.54									
Vehicle - Substance	7	AOO	3	0	17793	0.83									
Vehicle - Substance	7	AOO	4	0	41425	1.92									
Vehicle - Substance	7	AOO	MEAN	0	21546	1.00									
Methyl salicylate	7	AOO	1	5	26796	1.24	10	30066	1.40	25	14218	0.66			
Methyl salicylate	7	AOO	2	5	23023	1.07	10	45494	2.11	25	31612	1.47			
Methyl salicylate	7	AOO	3	5	12934	0.60	10	41639	1.93	25	31551	1.46			
Methyl salicylate	7	AOO	4	5	31083	1.44	10	35433	1.64	25	42145	1.96			
Methyl salicylate	7	AOO	MEAN	5	23459	1.09	10	38158	1.77	25	29881	1.39	NA	NA	NA
Abietic acid	7	AOO	1	5	28706	1.33	10	50807	2.36	25	45895	2.13			
Abietic acid	7	AOO	2	5	46411	2.15	10	92597	4.30	25	102739	4.77			
Abietic acid	7	AOO	3	5	46541	2.16	10	105497	4.90	25	87409	4.06			

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Abietic acid	7	AOO	4	5	39654	1.84	10	94381	4.38	25	91230	4.23			
Abietic acid	7	AOO	MEAN	5	40328	1.87	10	85821	3.98	25	81818	3.80	7.68	11.53	6.33
Vehicle - Positive Control	7		1	0	17271	0.75									
Vehicle - Positive Control	7		2	0	23663	1.03									
Vehicle - Positive Control	7		3	0	24070	1.04									
Vehicle - Positive Control	7		4	0	27154	1.18									
Vehicle - Positive Control	7		MEAN	0	23039	1.00									
Positive Control	7		1	NA	127080	5.52									
Positive Control	7		2	NA	150247	6.52									
Positive Control	7		3	NA	122132	5.30									
Positive Control	7		4	NA	128311	5.57									
Positive Control	7		MEAN	NA	131942	5.73									
Vehicle - Substance	7	AOO	1	0	36823	1.23									
Vehicle - Substance	7	AOO	2	0	31245	1.04									
Vehicle - Substance	7	AOO	3	0	21937	0.73									
Vehicle - Substance	7	AOO	4	0	29694	0.99									
Vehicle - Substance	7	AOO	MEAN	0	29925	1.00									
Hexyl cinnamic aldehyde	7	AOO	1	5	42392	1.42	10	106569	3.56	25	170985	5.71			
Hexyl cinnamic aldehyde	7	AOO	2	5	33988	1.14	10	151880	5.08	25	193134	6.45			
Hexyl cinnamic aldehyde	7	AOO	3	5	66350	2.22	10	161431	5.39	25	198620	6.64			
Hexyl cinnamic aldehyde	7	AOO	4	5	41865	1.40	10	87141	2.91	25	286402	9.57			
Hexyl cinnamic aldehyde	7	AOO	MEAN	5	46148	1.54	10	126755	4.24	25	212285	7.09	7.71	6.78	5.85
Isopropanol	7	AOO	1	10	30442	1.02	25	15392	0.51	50	26039	0.87			
Isopropanol	7	AOO	2	10	32600	1.09	25	39028	1.30	50	25885	0.87			
Isopropanol	7	AOO	3	10	41239	1.38	25	22387	0.75	50	27685	0.93			
Isopropanol	7	AOO	4	10	69502	2.32	25	32333	1.08	50	19497	0.65			
Isopropanol	7	AOO	MEAN	10	43446	1.45	25	27285	0.91	50	24776	0.83	NA	NA	NA
Vehicle - Positive Control	7		1	0	20353	0.71									
Vehicle - Positive Control	7		2	0	31709	1.10									
Vehicle - Positive Control	7		3	0	34254	1.19									
Vehicle - Positive Control	7		4	0	29038	1.01									
Vehicle - Positive Control	7		MEAN	0	28838	1.00									
Positive Control	7		1	NA	170163	5.90									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Positive Control	7		2	NA	142824	4.95									
Positive Control	7		3	NA	167113	5.79									
Positive Control	7		4	NA	135621	4.70									
Positive Control	7		MEAN	NA	153930	5.34									
Vehicle - Substance	7	AOO	1	0	25299	1.13									
Vehicle - Substance	7	AOO	2	0	25685	1.14									
Vehicle - Substance	7	AOO	3	0	19870	0.88									
Vehicle - Substance	7	AOO	4	0	19010	0.85									
Vehicle - Substance	7	AOO	MEAN	0	22466	1.00									
Dimethyl isophthalate	7	AOO	1	5	30872	1.37	10	28765	1.28	25	24457	1.09			
Dimethyl isophthalate	7	AOO	2	5	23829	1.06	10	27567	1.23	25	25583	1.14			
Dimethyl isophthalate	7	AOO	3	5	26046	1.16	10	22517	1.00	25	18065	0.80			
Dimethyl isophthalate	7	AOO	4	5	32477	1.45	10	23373	1.04	25	26228	1.17			
Dimethyl isophthalate	7	AOO	MEAN	5	28306	1.26	10	25555	1.14	25	23583	1.05	NA	NA	NA
2,4-Dinitrochlorobenzene	7	AOO	1	0.03	54379	2.42	0.10	142045	6.32	0.30	282805	12.59			
2,4-Dinitrochlorobenzene	7	AOO	2	0.03	95575	4.25	0.10	139187	6.20	0.30	336813	14.99			
2,4-Dinitrochlorobenzene	7	AOO	3	0.03	95094	4.23	0.10	108882	4.85	0.30	258764	11.52			
2,4-Dinitrochlorobenzene	7	AOO	4	0.03	99284	4.42	0.10	93969	4.18	0.30	305713	13.61			
2,4-Dinitrochlorobenzene	7	AOO	MEAN	0.03	86083	3.83	0.10	121021	5.39	0.30	296024	13.18	0.02	0.01	0.01
Vehicle - Positive Control	8		1	0	18303	0.95									
Vehicle - Positive Control	8		2	0	25980	1.34									
Vehicle - Positive Control	8		3	0	17493	0.90									
Vehicle - Positive Control	8		4	0	15606	0.81									
Vehicle - Positive Control	8		MEAN	0	19345	1.00									
Positive Control	8		1	NA	98761	5.11									
Positive Control	8		2	NA	72937	3.77									
Positive Control	8		3	NA	86236	4.46									
Positive Control	8		4	NA	76278	3.94									
Positive Control	8		MEAN	NA	83553	4.32									
Vehicle - Substance	8	AOO	1	0	9463	0.78									
Vehicle - Substance	8	AOO	2	0	13874	1.14									
Vehicle - Substance	8	AOO	3	0	17229	1.41									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Vehicle - Substance	8	AOO	4	0	8262	0.68									
Vehicle - Substance	8	AOO	MEAN	0	12207	1.00									
Isopropanol	8	AOO	1	10	12562	1.03	25	17249	1.41	50	14510	1.19			
Isopropanol	8	AOO	2	10	17330	1.42	25	9264	0.76	50	14113	1.16			
Isopropanol	8	AOO	3	10	11886	0.97	25	11845	0.97	50	12238	1.00			
Isopropanol	8	AOO	4	10	17410	1.43	25	11193	0.92	50	13342	1.09			
Isopropanol	8	AOO	MEAN	10	14797	1.21	25	12387	1.01	50	13551	1.11	NA	NA	NA
Hexyl cinnamic aldehyde	8	AOO	1	5	16997	1.39	10	40975	3.36	25	155208	12.71			
Hexyl cinnamic aldehyde	8	AOO	2	5	15777	1.29	10	56754	4.65	25	133055	10.90			
Hexyl cinnamic aldehyde	8	AOO	3	5	22473	1.84	10	58346	4.78	25	75582	6.19			
Hexyl cinnamic aldehyde	8	AOO	4	5	11217	0.92	10	47242	3.87	25	135369	11.09			
Hexyl cinnamic aldehyde	8	AOO	MEAN	5	16616	1.36	10	50829	4.16	25	124803	10.22	7.92	7.03	6.14
Vehicle - Positive Control	8		1	0	11818	0.62									
Vehicle - Positive Control	8		2	0	22893	1.19									
Vehicle - Positive Control	8		3	0	21441	1.12									
Vehicle - Positive Control	8		4	0	20608	1.07									
Vehicle - Positive Control	8		MEAN	0	19190	1.00									
Positive Control	8		1	NA	117067	6.10									
Positive Control	8		2	NA	100222	5.22									
Positive Control	8		3	NA	91462	4.77									
Positive Control	8		4	NA	80907	4.22									
Positive Control	8		MEAN	NA	97414	5.08									
Vehicle - Substance	8	DMSO	1	0	15322	0.77									
Vehicle - Substance	8	DMSO	2	0	24630	1.24									
Vehicle - Substance	8	DMSO	3	0	16802	0.85									
Vehicle - Substance	8	DMSO	4	0	22460	1.13									
Vehicle - Substance	8	DMSO	MEAN	0	19803	1.00									
Nickel (II) sulfate hexahydrate	8	DMSO	1	1	64139	3.24	3	64301	3.25	10	40447	2.04			
Nickel (II) sulfate hexahydrate	8	DMSO	2	1	59705	3.01	3	70343	3.55	10	45033	2.27			
Nickel (II) sulfate hexahydrate	8	DMSO	3	1	61654	3.11	3	55459	2.80	10	62589	3.16			

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Nickel (II) sulfate hexahydrate	8	DMSO	4	1	90810	4.59	3	53420	2.70	10	54206	2.74			
Nickel (II) sulfate hexahydrate	8	DMSO	MEAN	1	69077	3.49	3	60881	3.07	10	50568	2.55	IDR	IDR	IDR
Cobalt chloride	8	DMSO	1	0.3	68800	3.47	1.0	123857	6.25	3.0	175242	8.85			
Cobalt chloride	8	DMSO	2	0.3	98124	4.95	1.0	178916	9.03	3.0	143477	7.25			
Cobalt chloride	8	DMSO	3	0.3	95925	4.84	1.0	96477	4.87	3.0	155827	7.87			
Cobalt chloride	8	DMSO	4	0.3	87399	4.41	1.0	124765	6.30	3.0	164687	8.32			
Cobalt chloride	8	DMSO	MEAN	0.3	87562	4.42	1.0	131004	6.62	3.0	159808	8.07	0.14	0.10	0.08
Vehicle - Positive Control	8		1	0	17139	1.02									
Vehicle - Positive Control	8		2	0	23311	1.39									
Vehicle - Positive Control	8		3	0	14001	0.84									
Vehicle - Positive Control	8		4	0	12548	0.75									
Vehicle - Positive Control	8		MEAN	0	16749	1.00									
Positive Control	8		1	NA	133873	7.99									
Positive Control	8		2	NA	147108	8.78									
Positive Control	8		3	NA	114171	6.82									
Positive Control	8		4	NA	97568	5.83									
Positive Control	8		MEAN	NA	123180	7.35									
Vehicle - Substance	8	AOO	1	0	18744	0.91									
Vehicle - Substance	8	AOO	2	0	20074	0.98									
Vehicle - Substance	8	AOO	3	0	15187	0.74									
Vehicle - Substance	8	AOO	4	0	28298	1.38									
Vehicle - Substance	8	AOO	MEAN	0	20576	1.00									
2,4-Dinitrochlorobenzene	8	AOO	1	0.03	40777	1.98	0.10	41930	2.04	0.30	228871	11.12			
2,4-Dinitrochlorobenzene	8	AOO	2	0.03	45024	2.19	0.10	50135	2.44	0.30	393845	19.14			
2,4-Dinitrochlorobenzene	8	AOO	3	0.03	30526	1.48	0.10	107465	5.22	0.30	273309	13.28			
2,4-Dinitrochlorobenzene	8	AOO	4	0.03	82593	4.01	0.10	50754	2.47	0.30	140789	6.84			
2,4-Dinitrochlorobenzene	8	AOO	MEAN	0.03	49730	2.42	0.10	62571	3.04	0.30	259203	12.60	0.10	0.04	0.01
3-Aminophenol	8	AOO	1	1	25653	1.25	3	51618	2.51	10	57296	2.78			
3-Aminophenol	8	AOO	2	1	27127	1.32	3	47941	2.33	10	52938	2.57			
3-Aminophenol	8	AOO	3	1	28861	1.40	3	36281	1.76	10	38134	1.85			

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
3-Aminophenol	8	AOO	4	1	19026	0.92	3	27846	1.35	10	47782	2.32			
3-Aminophenol	8	AOO	MEAN	1	25167	1.22	3	40921	1.99	10	49037	2.38	NA	NA	3.18
Vehicle - Positive Control	9		1	0	25729	0.98									
Vehicle - Positive Control	9		2	0	31786	1.22									
Vehicle - Positive Control	9		3	0	24343	0.93									
Vehicle - Positive Control	9		4	0	22785	0.87									
Vehicle - Positive Control	9		MEAN	0	26161	1.00									
Positive Control	9		1	NA	155962	5.96									
Positive Control	9		2	NA	112682	4.31									
Positive Control	9		3	NA	124334	4.75									
Positive Control	9		4	NA	122066	4.67									
Positive Control	9		MEAN	NA	128761	4.92									
Vehicle - Substance	9	AOO	1	0	21600	0.73									
Vehicle - Substance	9	AOO	2	0	38136	1.29									
Vehicle - Substance	9	AOO	3	0	34690	1.17									
Vehicle - Substance	9	AOO	4	0	23981	0.81									
Vehicle - Substance	9	AOO	MEAN	0	29602	1.00									
Hexyl cinnamic aldehyde	9	AOO	1	5	35263	1.19	10	32104	1.08	25	109826	3.71			
Hexyl cinnamic aldehyde	9	AOO	2	5	34558	1.17	10	68901	2.33	25	114755	3.88			
Hexyl cinnamic aldehyde	9	AOO	3	5	20309	0.69	10	61583	2.08	25	101116	3.42			
Hexyl cinnamic aldehyde	9	AOO	4	5	12277	0.41	10	99972	3.38	25	133469	4.51			
Hexyl cinnamic aldehyde	9	AOO	MEAN	5	25602	0.86	10	65640	2.22	25	114791	3.88	17.07	12.55	9.19
Isopropanol	9	AOO	1	10	16071	0.54	25	18605	0.63	50	11350	0.38			
Isopropanol	9	AOO	2	10	29909	1.01	25	12916	0.44	50	14836	0.50			
Isopropanol	9	AOO	3	10	16721	0.56	25	26806	0.91	50	13840	0.47			
Isopropanol	9	AOO	4	10	12462	0.42	25	24183	0.82	50	20129	0.68			
Isopropanol	9	AOO	MEAN	10	18791	0.63	25	20627	0.70	50	15039	0.51	NA	NA	NA
Vehicle - Positive Control	9		1	0	21626	0.82									
Vehicle - Positive Control	9		2	0	28191	1.06									
Vehicle - Positive Control	9		3	0	36208	1.37									
Vehicle - Positive Control	9		4	0	19953	0.75									
Vehicle - Positive Control	9		MEAN	0	26494	1.00									
Positive Control	9		1	NA	152153	5.74									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Positive Control	9		2	NA	173639	6.55									
Positive Control	9		3	NA	117177	4.42									
Positive Control	9		4	NA	165097	6.23									
Positive Control	9		MEAN	NA	152016	5.74									
Vehicle - Substance	9	AOO	1	0	37188	1.39									
Vehicle - Substance	9	AOO	2	0	20177	0.75									
Vehicle - Substance	9	AOO	3	0	17473	0.65									
Vehicle - Substance	9	AOO	4	0	32530	1.21									
Vehicle - Substance	9	AOO	MEAN	0	26842	1.00									
Isoeugenol	9	AOO	1	1	43063	1.60	3	82412	3.07	10	241256	8.99			
Isoeugenol	9	AOO	2	1	92318	3.44	3	114677	4.27	10	169293	6.31			
Isoeugenol	9	AOO	3	1	73315	2.73	3	83819	3.12	10	153506	5.72			
Isoeugenol	9	AOO	4	1	68329	2.55	3	65486	2.44	10	197513	7.36			
Isoeugenol	9	AOO	MEAN	1	69256	2.58	3	86598	3.23	10	190392	7.09	2.30	0.87	0.38
2,4-Dinitrochlorobenzene	9	AOO	1	0.03	80731	3.01	0.10	81426	3.03	0.30	294486	10.97			
2,4-Dinitrochlorobenzene	9	AOO	2	0.03	46072	1.72	0.10	105837	3.94	0.30	287848	10.72			
2,4-Dinitrochlorobenzene	9	AOO	3	0.03	82472	3.07	0.10	164718	6.14	0.30	287739	10.72			
2,4-Dinitrochlorobenzene	9	AOO	4	0.03	91886	3.42	0.10	97148	3.62	0.30	298846	11.13			
2,4-Dinitrochlorobenzene	9	AOO	MEAN	0.03	75290	2.80	0.10	112282	4.18	0.30	292230	10.89	0.04	0.02	0.02
Vehicle - Positive Control	10		1	0	20162	0.95									
Vehicle - Positive Control	10		2	0	15285	0.72									
Vehicle - Positive Control	10		3	0	30517	1.43									
Vehicle - Positive Control	10		4	0	19166	0.90									
Vehicle - Positive Control	10		MEAN	0	21282	1.00									
Positive Control	10		1	NA	116157	5.46									
Positive Control	10		2	NA	142905	6.71									
Positive Control	10		3	NA	135316	6.36									
Positive Control	10		4	NA	117862	5.54									
Positive Control	10		MEAN	NA	128060	6.02									
Vehicle - Substance	10	AOO	1	0	45394	0.85									
Vehicle - Substance	10	AOO	2	0	67917	1.27									
Vehicle - Substance	10	AOO	3	0	36479	0.68									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵	
Vehicle - Substance	10	AOO	4	0	63610	1.19										
Vehicle - Substance	10	AOO	MEAN	0	53350	1.00										
2,4-Dinitrochlorobenzene	10	AOO	1	0.03	52123	0.98	0.10	113324	2.12	0.30	202245	3.79				
2,4-Dinitrochlorobenzene	10	AOO	2	0.03	66363	1.24	0.10	80089	1.50	0.30	264292	4.95				
2,4-Dinitrochlorobenzene	10	AOO	3	0.03	36583	0.69	0.10	127648	2.39	0.30	298490	5.59				
2,4-Dinitrochlorobenzene	10	AOO	4	0.03	92933	1.74	0.10	127592	2.39	0.30	239662	4.49				
2,4-Dinitrochlorobenzene	10	AOO	MEAN	0.03	62000	1.16	0.10	112163	2.10	0.30	251172	4.71	0.17	0.13	0.09	
Methyl salicylate	10	AOO	1	5	36446	0.68	10	47420	0.89	25	53941	1.01				
Methyl salicylate	10	AOO	2	5	34905	0.65	10	47616	0.89	25	54989	1.03				
Methyl salicylate	10	AOO	3	5	37286	0.70	10	40117	0.75	25	43082	0.81				
Methyl salicylate	10	AOO	4	5	26017	0.49	10	31641	0.59	25	25692	0.48				
Methyl salicylate	10	AOO	MEAN	5	33663	0.63	10	41698	0.78	25	44426	0.83	NA	NA	NA	
Vehicle - Positive Control	10		1	0	20445	0.88										
Vehicle - Positive Control	10		2	0	15079	0.65										
Vehicle - Positive Control	10		3	0	26464	1.13										
Vehicle - Positive Control	10		4	0	31358	1.34										
Vehicle - Positive Control	10		MEAN	0	23336	1.00										
Positive Control	10		1	NA	89914	3.85										
Positive Control	10		2	NA	107768	4.62										
Positive Control	10		3	NA	93418	4.00										
Positive Control	10		4	NA	102331	4.39										
Positive Control	10		MEAN	NA	98357	4.21										
Vehicle - Substance	10	AOO	1	0	28181	0.97										
Vehicle - Substance	10	AOO	2	0	33325	1.15										
Vehicle - Substance	10	AOO	3	0	27821	0.96										
Vehicle - Substance	10	AOO	4	0	26981	0.93										
Vehicle - Substance	10	AOO	MEAN	0	29077	1.00										
Hexyl cinnamic aldehyde	10	AOO	1	5	35684	1.23	10	86735	2.98	25	78538	2.70				
Hexyl cinnamic aldehyde	10	AOO	2	5	30080	1.03	10	88833	3.06	25	107305	3.69				
Hexyl cinnamic aldehyde	10	AOO	3	5	62393	2.15	10	75607	2.60	25	129081	4.44				
Hexyl cinnamic aldehyde	10	AOO	4	5	34584	1.19	10	66109	2.27	25	93013	3.20				
Hexyl cinnamic aldehyde	10	AOO	MEAN	5	40685	1.40	10	79321	2.73	25	101984	3.51	15.24	9.14	7.26	

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Isopropanol	10	AOO	1	10	19691	0.68	25	30241	1.04	50	42188	1.45			
Isopropanol	10	AOO	2	10	28293	0.97	25	24774	0.85	50	37228	1.28			
Isopropanol	10	AOO	3	10	29845	1.03	25	29230	1.01	50	35247	1.21			
Isopropanol	10	AOO	4	10	28091	0.97	25	38461	1.32	50	30201	1.04			
Isopropanol	10	AOO	MEAN	10	26480	0.91	25	30676	1.06	50	36216	1.25	NA	NA	NA
Vehicle - Positive Control	11		1	0	13452	0.45									
Vehicle - Positive Control	11		2	0	32469	1.09									
Vehicle - Positive Control	11		3	0	37235	1.25									
Vehicle - Positive Control	11		4	0	35940	1.21									
Vehicle - Positive Control	11		MEAN	0	29774	1.00									
Positive Control	11		1	NA	113708	3.82									
Positive Control	11		2	NA	108755	3.65									
Positive Control	11		3	NA	57560	1.93									
Positive Control	11		4	NA	97736	3.28									
Positive Control	11		MEAN	NA	94440	3.17									
Vehicle - Substance	11	AOO	1	0	16175	0.76									
Vehicle - Substance	11	AOO	2	0	31955	1.50									
Vehicle - Substance	11	AOO	3	0	24257	1.14									
Vehicle - Substance	11	AOO	4	0	12926	0.61									
Vehicle - Substance	11	AOO	MEAN	0	21328	1.00									
Hexyl cinnamic aldehyde	11	AOO	1	5	24541	1.15	10	73959	3.47	25	56324	2.64			
Hexyl cinnamic aldehyde	11	AOO	2	5	31920	1.50	10	73920	3.47	25	81323	3.81			
Hexyl cinnamic aldehyde	11	AOO	3	5	42454	1.99	10	74762	3.51	25	117271	5.50			
Hexyl cinnamic aldehyde	11	AOO	4	5	30308	1.42	10	60117	2.82	25	126476	5.93			
Hexyl cinnamic aldehyde	11	AOO	MEAN	5	32306	1.51	10	70689	3.31	25	95348	4.47	9.13	7.74	6.35
Vehicle - Positive Control	11		1	0	6855	0.32									
Vehicle - Positive Control	11		2	0	23315	1.10									
Vehicle - Positive Control	11		3	0	27767	1.30									
Vehicle - Positive Control	11		4	0	27187	1.28									
Vehicle - Positive Control	11		MEAN	0	21281	1.00									
Positive Control	11		1	NA	118741	5.58									
Positive Control	11		2	NA	114600	5.39									
Positive Control	11		3	NA	86525	4.07									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵	
Positive Control	11		4	NA	115969	5.45										
Positive Control	11		MEAN	NA	108959	5.12										
Vehicle - Substance	11	DMSO	1	0	67859	1.04										
Vehicle - Substance	11	DMSO	2	0	76567	1.18										
Vehicle - Substance	11	DMSO	3	0	60349	0.93										
Vehicle - Substance	11	DMSO	4	0	55465	0.85										
Vehicle - Substance	11	DMSO	MEAN	0	65060	1.00										
Potassium dichromate	11	DMSO	1	0.1	134992	2.07	0.3	194686	2.99	1.0	283541	4.36				
Potassium dichromate	11	DMSO	2	0.1	133187	2.05	0.3	104933	1.61	1.0	340279	5.23				
Potassium dichromate	11	DMSO	3	0.1	130433	2.00	0.3	166086	2.55	1.0	318543	4.90				
Potassium dichromate	11	DMSO	4	0.1	97134	1.49	0.3	117627	1.81	1.0	301673	4.64				
Potassium dichromate	11	DMSO	MEAN	0.1	123936	1.90	0.3	145833	2.24	1.0	311009	4.78	0.51	0.37	0.16	
Lactic acid	11	DMSO	1	5	34889	0.54	10	57810	0.89	25	73850	1.14				
Lactic acid	11	DMSO	2	5	70275	1.08	10	60103	0.92	25	38479	0.59				
Lactic acid	11	DMSO	3	5	81876	1.26	10	42148	0.65	25	54647	0.84				
Lactic acid	11	DMSO	4	5	55263	0.85	10	36073	0.55	25	41547	0.64				
Lactic acid	11	DMSO	MEAN	5	60576	0.93	10	49033	0.75	25	52131	0.80	NA	NA	NA	
Vehicle - Positive Control	11		1	0	25338	0.96										
Vehicle - Positive Control	11		2	0	29261	1.11										
Vehicle - Positive Control	11		3	0	21131	0.80										
Vehicle - Positive Control	11		4	0	29732	1.13										
Vehicle - Positive Control	11		MEAN	0	26365	1.00										
Positive Control	11		1	NA	136936	5.19										
Positive Control	11		2	NA	81100	3.08										
Positive Control	11		3	NA	114598	4.35										
Positive Control	11		4	NA	79191	3.00										
Positive Control	11		MEAN	NA	102956	3.90										
Vehicle - Substance	11	DMSO	1	0	86043	1.05										
Vehicle - Substance	11	DMSO	2	0	65589	0.80										
Vehicle - Substance	11	DMSO	3	0	117592	1.43										
Vehicle - Substance	11	DMSO	4	0	59151	0.72										
Vehicle - Substance	11	DMSO	MEAN	0	82093	1.00										
Cobalt chloride	11	DMSO	1	1	113621	1.38	3	123437	1.50	5	167985	2.05				

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Cobalt chloride	11	DMSO	2	1	130468	1.59	3	115859	1.41	5	167593	2.04			
Cobalt chloride	11	DMSO	3	1	97082	1.18	3	189281	2.31	5	174922	2.13			
Cobalt chloride	11	DMSO	4	1	147603	1.80	3	139101	1.69	5	150902	1.84			
Cobalt chloride	11	DMSO	MEAN	1	122193	1.49	3	141919	1.73	5	165350	2.01	NA	NA	4.93
Nickel (II) sulfate hexahydrate	11	DMSO	1	1	65339	0.80	3	89247	1.09	10	80662	0.98			
Nickel (II) sulfate hexahydrate	11	DMSO	2	1	51981	0.63	3	49391	0.60	10	49864	0.61			
Nickel (II) sulfate hexahydrate	11	DMSO	3	1	46829	0.57	3	83879	1.02	10	41820	0.51			
Nickel (II) sulfate hexahydrate	11	DMSO	4	1	50461	0.61	3	37620	0.46	10	69460	0.85			
Nickel (II) sulfate hexahydrate	11	DMSO	MEAN	1	53652	0.65	3	65034	0.79	10	60451	0.74	NA	NA	NA
Vehicle - Positive Control	12		1	0	31062	1.15									
Vehicle - Positive Control	12		2	0	34769	1.28									
Vehicle - Positive Control	12		3	0	19233	0.71									
Vehicle - Positive Control	12		4	0	23272	0.86									
Vehicle - Positive Control	12		MEAN	0	27084	1.00									
Positive Control	12		1	NA	32499	1.20									
Positive Control	12		2	NA	149284	5.51									
Positive Control	12		3	NA	138062	5.10									
Positive Control	12		4	NA	155617	5.75									
Positive Control	12		MEAN	NA	118865	4.39									
Vehicle - Substance	12	AOO	1	0	34707	1.27									
Vehicle - Substance	12	AOO	2	0	19823	0.72									
Vehicle - Substance	12	AOO	3	0	21963	0.80									
Vehicle - Substance	12	AOO	4	0	33252	1.21									
Vehicle - Substance	12	AOO	MEAN	0	27436	1.00									
Hexyl cinnamic aldehyde	12	AOO	1	5	45866	1.67	10	96208	3.51	25	146684	5.35			
Hexyl cinnamic aldehyde	12	AOO	2	5	32444	1.18	10	70432	2.57	25	176112	6.42			
Hexyl cinnamic aldehyde	12	AOO	3	5	52964	1.93	10	121167	4.42	25	135063	4.92			
Hexyl cinnamic aldehyde	12	AOO	4	5	49440	1.80	10	90169	3.29	25	168604	6.15			

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Hexyl cinnamic aldehyde	12	AOO	MEAN	5	45178	1.65	10	94494	3.44	25	156615	5.71	8.76	7.37	5.98
Vehicle - Positive Control	12		1	0	26207	0.79									
Vehicle - Positive Control	12		2	0	39177	1.18									
Vehicle - Positive Control	12		3	0	37398	1.13									
Vehicle - Positive Control	12		4	0	30062	0.91									
Vehicle - Positive Control	12		MEAN	0	33211	1.00									
Positive Control	12		1	NA	151987	4.58									
Positive Control	12		2	NA	169589	5.11									
Positive Control	12		3	NA	209928	6.32									
Positive Control	12		4	NA	134469	4.05									
Positive Control	12		MEAN	NA	166493	5.01									
Vehicle - Substance	12	DMSO	1	0	78629	0.95									
Vehicle - Substance	12	DMSO	2	0	88765	1.07									
Vehicle - Substance	12	DMSO	3	0	76637	0.92									
Vehicle - Substance	12	DMSO	4	0	88155	1.06									
Vehicle - Substance	12	DMSO	MEAN	0	83046	1.00									
Nickel (II) sulfate hexahydrate	12	DMSO	1	1	98797	1.19	3	84327	1.02	10	105221	1.27			
Nickel (II) sulfate hexahydrate	12	DMSO	2	1	80665	0.97	3	86877	1.05	10	71971	0.87			
Nickel (II) sulfate hexahydrate	12	DMSO	3	1	86949	1.05	3	137747	1.66	10	55567	0.67			
Nickel (II) sulfate hexahydrate	12	DMSO	4	1	65175	0.78	3	104430	1.26	10	89624	1.08			
Nickel (II) sulfate hexahydrate	12	DMSO	MEAN	1	82896	1.00	3	103345	1.24	10	80596	0.97	NA	NA	NA
Potassium dichromate	12	DMSO	1	0.1	170554	2.05	0.3	198199	2.39	1.0	301077	3.63			
Potassium dichromate	12	DMSO	2	0.1	113710	1.37	0.3	205018	2.47	1.0	323900	3.90			
Potassium dichromate	12	DMSO	3	0.1	166200	2.00	0.3	273194	3.29	1.0	378405	4.56			
Potassium dichromate	12	DMSO	4	0.1	179394	2.16	0.3	191835	2.31	1.0	351057	4.23			
Potassium dichromate	12	DMSO	MEAN	0.1	157464	1.90	0.3	217061	2.61	1.0	338610	4.08	0.49	0.27	0.13
Vehicle - Positive Control	13		1	0	21808	0.80									
Vehicle - Positive Control	13		2	0	23919	0.87									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Vehicle - Positive Control	13		3	0	24606	0.90									
Vehicle - Positive Control	13		4	0	39312	1.43									
Vehicle - Positive Control	13		MEAN	0	27411	1.00									
Positive Control	13		1	NA	138513	5.05									
Positive Control	13		2	NA	94225	3.44									
Positive Control	13		3	NA	118316	4.32									
Positive Control	13		4	NA	161413	5.89									
Positive Control	13		MEAN	NA	128117	4.67									
Vehicle - Substance	13	AOO	1	0	33895	1.37									
Vehicle - Substance	13	AOO	2	0	20013	0.81									
Vehicle - Substance	13	AOO	3	0	20945	0.85									
Vehicle - Substance	13	AOO	4	0	24103	0.97									
Vehicle - Substance	13	AOO	MEAN	0	24739	1.00									
Hexyl cinnamic aldehyde	13	AOO	1	5	28705	1.16	10	106862	4.32	25	164960	6.67			
Hexyl cinnamic aldehyde	13	AOO	2	5	19630	0.79	10	92835	3.75	25	116945	4.73			
Hexyl cinnamic aldehyde	13	AOO	3	5	45958	1.86	10	83026	3.36	25	118296	4.78			
Hexyl cinnamic aldehyde	13	AOO	4	5	45943	1.86	10	159832	6.46	25	135132	5.46			
Hexyl cinnamic aldehyde	13	AOO	MEAN	5	35059	1.42	10	110638	4.47	25	133833	5.41	7.59	6.77	5.95
Vehicle - Positive Control	13		1	0	16810	0.75									
Vehicle - Positive Control	13		2	0	25921	1.15									
Vehicle - Positive Control	13		3	0	21544	0.96									
Vehicle - Positive Control	13		4	0	25627	1.14									
Vehicle - Positive Control	13		MEAN	0	22475	1.00									
Positive Control	13		1	NA	156378	6.96									
Positive Control	13		2	NA	133906	5.96									
Positive Control	13		3	NA	140685	6.26									
Positive Control	13		4	NA	152161	6.77									
Positive Control	13		MEAN	NA	145782	6.49									
Vehicle - Substance	13	DMSO	1	0	93878	1.15									
Vehicle - Substance	13	DMSO	2	0	70631	0.87									
Vehicle - Substance	13	DMSO	3	0	91822	1.13									
Vehicle - Substance	13	DMSO	4	0	68974	0.85									
Vehicle - Substance	13	DMSO	MEAN	0	81326	1.00									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Cobalt chloride	13	DMSO	1	1	120105	1.48	3	199869	2.46	5	192357	2.37			
Cobalt chloride	13	DMSO	2	1	148835	1.83	3	195046	2.40	5	215391	2.65			
Cobalt chloride	13	DMSO	3	1	93820	1.15	3	207281	2.55	5	224902	2.77			
Cobalt chloride	13	DMSO	4	1	172802	2.12	3	195145	2.40	5	192928	2.37			
Cobalt chloride	13	DMSO	MEAN	1	133890	1.65	3	199335	2.45	5	206394	2.54	NA	4.13	1.88
Lactic acid	13	DMSO	1	5	71011	0.87	10	58052	0.71	25	61451	0.76			
Lactic acid	13	DMSO	2	5	58742	0.72	10	44480	0.55	25	47962	0.59			
Lactic acid	13	DMSO	3	5	95883	1.18	10	56725	0.70	25	79235	0.97			
Lactic acid	13	DMSO	4	5	96922	1.19	10	62219	0.77	25	51848	0.64			
Lactic acid	13	DMSO	MEAN	5	80639	0.99	10	55369	0.68	25	60124	0.74	NA	NA	NA
Vehicle - Positive Control	14		1	0	25953	0.86									
Vehicle - Positive Control	14		2	0	42071	1.39									
Vehicle - Positive Control	14		3	0	22870	0.76									
Vehicle - Positive Control	14		4	0	30199	1.00									
Vehicle - Positive Control	14		MEAN	0	30273	1.00									
Positive Control	14		1	NA	198381	6.55									
Positive Control	14		2	NA	164826	5.44									
Positive Control	14		3	NA	205542	6.79									
Positive Control	14		4	NA	198361	6.55									
Positive Control	14		MEAN	NA	191777	6.33									
Vehicle - Substance	14	AOO	1	0	21623	0.89									
Vehicle - Substance	14	AOO	2	0	27737	1.14									
Vehicle - Substance	14	AOO	3	0	33618	1.38									
Vehicle - Substance	14	AOO	4	0	14415	0.59									
Vehicle - Substance	14	AOO	MEAN	0	24348	1.00									
Hexyl cinnamic aldehyde	14	AOO	1	5	45466	1.87	10	100580	4.13	25	164791	6.77			
Hexyl cinnamic aldehyde	14	AOO	2	5	40112	1.65	10	134453	5.52	25	155059	6.37			
Hexyl cinnamic aldehyde	14	AOO	3	5	72779	2.99	10	18994	0.78	25	249145	10.23			
Hexyl cinnamic aldehyde	14	AOO	4	5	43275	1.78	10	101713	4.18	25	171572	7.05			
Hexyl cinnamic aldehyde	14	AOO	MEAN	5	50408	2.07	10	88935	3.65	25	185142	7.60	7.94	6.36	4.85
Vehicle - Positive Control	14		1	0	18024	0.74									
Vehicle - Positive Control	14		2	0	24615	1.02									
Vehicle - Positive Control	14		3	0	28493	1.18									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Vehicle - Positive Control	14		4	0	25735	1.06									
Vehicle - Positive Control	14		MEAN	0	24216	1.00									
Positive Control	14		1	NA	116341	4.80									
Positive Control	14		2	NA	213773	8.83									
Positive Control	14		3	NA	182037	7.52									
Positive Control	14		4	NA	192821	7.96									
Positive Control	14		MEAN	NA	176243	7.28									
Vehicle - Substance	14	DMSO	1	0	33858	0.81									
Vehicle - Substance	14	DMSO	2	0	31373	0.75									
Vehicle - Substance	14	DMSO	3	0	60046	1.44									
Vehicle - Substance	14	DMSO	4	0	41804	1.00									
Vehicle - Substance	14	DMSO	MEAN	0	41770	1.00									
Cobalt chloride	14	DMSO	1	1	104955	2.51	3	193202	4.63	5	239096	5.72			
Cobalt chloride	14	DMSO	2	1	83477	2.00	3	147696	3.54	5	128719	3.08			
Cobalt chloride	14	DMSO	3	1	85107	2.04	3	165128	3.95	5	160037	3.83			
Cobalt chloride	14	DMSO	4	1	114867	2.75	3	179062	4.29	5	182970	4.38			
Cobalt chloride	14	DMSO	MEAN	1	97101	2.32	3	171272	4.10	5	177705	4.25	1.76	1.20	0.82
Nickel (II) sulfate hexahydrate	14	DMSO	1	1	104492	2.50	3	72152	1.73	10	71690	1.72			
Nickel (II) sulfate hexahydrate	14	DMSO	2	1	58854	1.41	3	48034	1.15	10	NA	NA			
Nickel (II) sulfate hexahydrate	14	DMSO	3	1	94853	2.27	3	68084	1.63	10	97605	2.34			
Nickel (II) sulfate hexahydrate	14	DMSO	4	1	53019	1.27	3	72530	1.74	10	97675	2.34			
Nickel (II) sulfate hexahydrate	14	DMSO	MEAN	1	77804	1.86	3	65200	1.56	10	88990	2.13	NA	NA	8.40
Vehicle - Positive Control	15		1	0	39487	1.12									
Vehicle - Positive Control	15		2	0	45663	1.30									
Vehicle - Positive Control	15		3	0	28492	0.81									
Vehicle - Positive Control	15		4	0	26819	0.76									
Vehicle - Positive Control	15		MEAN	0	35115	1.00									
Positive Control	15		1	NA	157090	4.47									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵	
Positive Control	15		2	NA	164583	4.69										
Positive Control	15		3	NA	77120	2.20										
Positive Control	15		4	NA	157960	4.50										
Positive Control	15		MEAN	NA	139188	3.96										
Vehicle - Substance	15	AOO	1	0	26758	0.86										
Vehicle - Substance	15	AOO	2	0	46603	1.49										
Vehicle - Substance	15	AOO	3	0	23061	0.74										
Vehicle - Substance	15	AOO	4	0	28334	0.91										
Vehicle - Substance	15	AOO	MEAN	0	31189	1.00										
Hexyl cinnamic aldehyde	15	AOO	1	5	38890	1.25	10	71984	2.31	25	124344	3.99				
Hexyl cinnamic aldehyde	15	AOO	2	5	55784	1.79	10	66130	2.12	25	85306	2.74				
Hexyl cinnamic aldehyde	15	AOO	3	5	43619	1.40	10	84295	2.70	25	142287	4.56				
Hexyl cinnamic aldehyde	15	AOO	4	5	49120	1.57	10	91478	2.93	25	136649	4.38				
Hexyl cinnamic aldehyde	15	AOO	MEAN	5	46853	1.50	10	78471	2.52	25	122146	3.92	15.18	9.92	7.45	
Vehicle - Positive Control	15		1	0	43807	1.36										
Vehicle - Positive Control	15		2	0	26515	0.82										
Vehicle - Positive Control	15		3	0	29210	0.90										
Vehicle - Positive Control	15		4	0	29709	0.92										
Vehicle - Positive Control	15		MEAN	0	32310	1.00										
Positive Control	15		1	NA	118146	3.66										
Positive Control	15		2	NA	172004	5.32										
Positive Control	15		3	NA	135989	4.21										
Positive Control	15		4	NA	163682	5.07										
Positive Control	15		MEAN	NA	147455	4.56										
Vehicle - Substance	15	DMSO	1	0	35762	0.72										
Vehicle - Substance	15	DMSO	2	0	32858	0.67										
Vehicle - Substance	15	DMSO	3	0	49385	1.00										
Vehicle - Substance	15	DMSO	4	0	79406	1.61										
Vehicle - Substance	15	DMSO	MEAN	0	49353	1.00										
Lactic acid	15	DMSO	1	5	35838	0.73	10	40908	0.83	25	31906	0.65				
Lactic acid	15	DMSO	2	5	46572	0.94	10	44335	0.90	25	37990	0.77				
Lactic acid	15	DMSO	3	5	43793	0.89	10	70146	1.42	25	33696	0.68				
Lactic acid	15	DMSO	4	5	56717	1.15	10	36323	0.74	25	37444	0.76				

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Lactic acid	15	DMSO	MEAN	5	45730	0.93	10	47928	0.97	25	35259	0.71	NA	NA	NA
Potassium dichromate	15	DMSO	1	0.1	121714	2.47	0.3	215997	4.38	1.0	360162	7.30			
Potassium dichromate	15	DMSO	2	0.1	177882	3.60	0.3	210129	4.26	1.0	191584	3.88			
Potassium dichromate	15	DMSO	3	0.1	132281	2.68	0.3	226134	4.58	1.0	340917	6.91			
Potassium dichromate	15	DMSO	4	0.1	93102	1.89	0.3	115017	2.33	1.0	293061	5.94			
Potassium dichromate	15	DMSO	MEAN	0.1	131244	2.66	0.3	191819	3.89	1.0	296431	6.01	0.16	0.09	0.06
Vehicle - Positive Control	16		1	0	40980	1.14									
Vehicle - Positive Control	16		2	0	29750	0.83									
Vehicle - Positive Control	16		3	0	37809	1.05									
Vehicle - Positive Control	16		4	0	35687	0.99									
Vehicle - Positive Control	16		MEAN	0	36056	1.00									
Positive Control	16		1	NA	166596	4.62									
Positive Control	16		2	NA	324494	9.00									
Positive Control	16		3	NA	309550	8.59									
Positive Control	16		4	NA	255550	7.09									
Positive Control	17		MEAN	NA	264047	7.32									
Vehicle - Substance	16	AOO	1	0	28428	1.00									
Vehicle - Substance	16	AOO	2	0	25378	0.89									
Vehicle - Substance	16	AOO	3	0	40570	1.43									
Vehicle - Substance	16	AOO	4	0	19307	0.68									
Vehicle - Substance	16	AOO	MEAN	0	28421	1.00									
Hexyl cinnamic aldehyde	16	AOO	1	5	68037	2.39	10	134273	4.72	25	255545	8.99			
Hexyl cinnamic aldehyde	16	AOO	2	5	75307	2.65	10	132074	4.65	25	274377	9.65			
Hexyl cinnamic aldehyde	16	AOO	3	5	70208	2.47	10	192936	6.79	25	235997	8.30			
Hexyl cinnamic aldehyde	16	AOO	4	5	47285	1.66	10	127598	4.49	25	190963	6.72			
Hexyl cinnamic aldehyde	16	AOO	MEAN	5	65209	2.29	10	146720	5.16	25	239220	8.42	6.23	5.36	4.66
Vehicle - Positive Control	16		1	0	45989	1.19									
Vehicle - Positive Control	16		2	0	31080	0.80									
Vehicle - Positive Control	16		3	0	40234	1.04									
Vehicle - Positive Control	16		4	0	37535	0.97									
Vehicle - Positive Control	16		MEAN	0	38709	1.00									
Positive Control	16		1	NA	266865	6.89									
Positive Control	16		2	NA	266443	6.88									

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵	
Positive Control	16		3	NA	291111	7.52										
Positive Control	16		4	NA	264989	6.85										
Positive Control	16		MEAN	NA	272352	7.04										
Vehicle - Substance	16	DMSO	1	0	78052	1.02										
Vehicle - Substance	16	DMSO	2	0	111835	1.47										
Vehicle - Substance	16	DMSO	3	0	43088	0.57										
Vehicle - Substance	16	DMSO	4	0	71636	0.94										
Vehicle - Substance	16	DMSO	MEAN	0	76153	1.00										
Nickel (II) sulfate hexahydrate	16	DMSO	1	1	104880	1.38	3	109460	1.44	10	78555	1.03				
Nickel (II) sulfate hexahydrate	16	DMSO	2	1	80888	1.06	3	116987	1.54	10	115405	1.52				
Nickel (II) sulfate hexahydrate	16	DMSO	3	1	92663	1.22	3	110261	1.45	10	88420	1.16				
Nickel (II) sulfate hexahydrate	16	DMSO	4	1	81686	1.07	3	139021	1.83	10	71548	0.94				
Nickel (II) sulfate hexahydrate	16	DMSO	MEAN	1	90029	1.18	3	118932	1.56	10	88482	1.16	NA	NA	NA	
Lactic acid	16	DMSO	1	5	56025	0.74	10	44029	0.58	25	72313	0.95				
Lactic acid	16	DMSO	2	5	72079	0.95	10	67039	0.88	25	47618	0.63				
Lactic acid	16	DMSO	3	5	58768	0.77	10	63161	0.83	25	75699	0.99				
Lactic acid	16	DMSO	4	5	90115	1.18	10	68256	0.90	25	80804	1.06				
Lactic acid	16	DMSO	MEAN	5	69247	0.91	10	60621	0.80	25	69108	0.91	NA	NA	NA	
Vehicle - Positive Control	17		1	0	16598	1.00										
Vehicle - Positive Control	17		2	0	21167	1.28										
Vehicle - Positive Control	17		3	0	20244	1.22										
Vehicle - Positive Control	17		4	0	8376	0.50										
Vehicle - Positive Control	17		MEAN	0	16596	1.00										
Positive Control	17		1	NA	130759	7.88										
Positive Control	17		2	NA	159307	9.60										
Positive Control	17		3	NA	101692	6.13										
Positive Control	17		4	NA	105306	6.35										
Positive Control	17		MEAN	NA	124266	7.49										

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Vehicle - Substance	17	AOO	1	0	22001	0.92									
Vehicle - Substance	17	AOO	2	0	17205	0.72									
Vehicle - Substance	17	AOO	3	0	38937	1.63									
Vehicle - Substance	17	AOO	4	0	17407	0.73									
Vehicle - Substance	17	AOO	MEAN	0	23888	1.00									
Hexyl cinnamic aldehyde	17	AOO	1	5	37307	1.56	10	96209	4.03	25	123470	5.17			
Hexyl cinnamic aldehyde	17	AOO	2	5	23097	0.97	10	106660	4.47	25	144993	6.07			
Hexyl cinnamic aldehyde	17	AOO	3	5	33287	1.39	10	109225	4.57	25	191859	8.03			
Hexyl cinnamic aldehyde	17	AOO	4	5	32984	1.38	10	129230	5.41	25	156101	6.53			
Hexyl cinnamic aldehyde	17	AOO	MEAN	5	31668	1.33	10	110331	4.62	25	154106	6.45	7.54	6.78	6.02
Vehicle - Positive Control	17		1	0	11526	0.63									
Vehicle - Positive Control	17		2	0	12942	0.71									
Vehicle - Positive Control	17		3	0	16830	0.92									
Vehicle - Positive Control	17		4	0	31658	1.74									
Vehicle - Positive Control	17		MEAN	0	18239	1.00									
Positive Control	17		1	NA	152686	8.37									
Positive Control	17		2	NA	167020	9.16									
Positive Control	17		3	NA	133016	7.29									
Positive Control	17		4	NA	160607	8.81									
Positive Control	17		MEAN	NA	153332	8.41									
Vehicle - Substance	17	DMSO	1	0	47192	0.93									
Vehicle - Substance	17	DMSO	2	0	45146	0.89									
Vehicle - Substance	17	DMSO	3	0	57466	1.13									
Vehicle - Substance	17	DMSO	4	0	53459	1.05									
Vehicle - Substance	17	DMSO	MEAN	0	50815	1.00									
Cobalt chloride	17	DMSO	1	1	134969	2.66	3	206718	4.07	5	297901	5.86			
Cobalt chloride	17	DMSO	2	1	249468	4.91	3	243849	4.80	5	231316	4.55			
Cobalt chloride	17	DMSO	3	1	104002	2.05	3	212124	4.17	5	192465	3.79			
Cobalt chloride	17	DMSO	4	1	106668	2.10	3	201772	3.97	5	306231	6.03			
Cobalt chloride	17	DMSO	MEAN	1	148776	2.93	3	216116	4.25	5	256978	5.06	1.11	0.70	0.46
Potassium dichromate	17	DMSO	1	0.1	212537	4.18	0.3	281536	5.54	1.0	349431	6.88			
Potassium dichromate	17	DMSO	2	0.1	192220	3.78	0.3	284296	5.59	1.0	269795	5.31			
Potassium dichromate	17	DMSO	3	0.1	110195	2.17	0.3	229749	4.52	1.0	278313	5.48			

Substance	Lab No. ¹	Vehicle	Animal No.	1 Conc. (%)	1 Mean ATP ²	1 SI	2 Conc. (%)	2 Mean ATP ²	2 SI	3 Conc. (%)	3 Mean ATP ²	3 SI	Calc. EC3 ³	Calc. EC2.5 ⁴	Calc. EC2 ⁵
Potassium dichromate	17	DMSO	4	0.1	146041	2.87	0.3	232971	4.58	1.0	397799	7.83			
Potassium dichromate	17	DMSO	MEAN	0.1	165248	3.25	0.3	257138	5.06	1.0	323834	6.37	0.09	0.06	0.05

Abbreviations: ACE = acetone; AOO = acetone: olive oil (4:1); ATP = adenosine triphosphate; Calc. = calculated; Conc. = concentration; DMSO = dimethyl sulfoxide; IDR = insufficient dose response; NA = not applicable; No. = number; NT = not tested; SI = stimulation Index.

¹Laboratories 1 – 10 participated in the first phase, and laboratories 11 – 17 participated in the second phase of the two-phased interlaboratory validation study.

²Two ATP measurements were taken for each animal and the mean ATP is indicated.

³EC3 value was calculated based on interpolation or extrapolation formulas discussed in Gerberick et al. 2004.

⁴EC2.5 value was calculated based on modified interpolation or extrapolation formulas for EC3 discussed in Gerberick et al. 2004.

⁵EC2 value was calculated based on modified interpolation or extrapolation formulas for EC3 discussed in Gerberick et al. 2004.