

ADME NTP Study S0252 Tri-p-cresyl phosphate

The contractor used the abbreviation of TPCP for the test article.

Sex/Species: male F344 rats.

Vehicle: intravenous, Emulphor EL-620:ethanol:water (1:3:6, v/v/v); oral, ethanol:Emulphor EL-620:water (4:3:3, v/v/v).

CASRN 78-32-0

Radiolabeled with carbon-14, position not specified; [¹⁴C]Tri-p-cresyl phosphate

Studies Performed:

- Single 2.0 mg/kg intravenous dose to rats with sacrifice at 0.5, 1, 2, 4, 6, 8, 12, 24, 48, or 72 hours postdose. (n = 3 per time point)
- Single 2.0 or 20.0 mg/kg intravenous dose to bile duct cannulated rats for bile collection with sacrifice at 6 hours postdose. (n = 3 per group)
- Single 0.5, 2.0, 10.0, 20.0, or 200.0 mg/kg oral gavage dose to rats with sacrifice 9 days postdose. (n = 3 or 5 for 0.5 mg/kg group)

Toxicokinetics:

Blood and tissue samples were analyzed for parent TPCP by HPLC. Pharmacokinetic parameters for percent dose in blood and tissue decay curves were modeled using the mono-exponential equation $C = C_0e^{-kt}$ for parent TPCP (except for liver) or biexponential ($C = Ae^{-\alpha t} + Be^{-\beta t}$) equation for total ¹⁴C (and parent TPCP in liver). Rate constants and half-lives were determined.

The potential absorptive phase for adipose, skin, spinal cord and small intestine could not be modeled properly with only two time points. The mean value of the 12-hour percent dose for total ¹⁴C in blood was eliminated as an outlier from the modeling calculations for the blood elimination curve.

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Table 1

Percent Dose Excreted after an Oral Dose of TPCP

Percent Dose ($\bar{x} \pm \text{SEM}$)			
Dose (mg/kg)	Day	Urine	Feces
0.5	1	65.77 \pm 2.28	10.12 \pm 1.10
	2	3.45 \pm 0.43	2.08 \pm 0.34
	3	2.36 \pm 0.76	0.56 \pm 0.06
	4	1.29 \pm 0.16	0.27 \pm 0.02
	5	0.60 \pm 0.05	0.11 \pm 0.02
	6	0.34 \pm 0.04	0.12 \pm 0.01
	7	0.47 \pm 0.08	0.09 \pm 0.02
2.0	1	59.02 \pm 1.36	25.30 \pm 1.01
	2	6.25 \pm 1.28	3.92 \pm 0.34
	3	1.58 \pm 0.30	0.46 \pm 0.07
	4	1.00 \pm 0.17	0.17 \pm 0.02
	5	0.63 \pm 0.18	0.09 \pm 0.02
	6	0.31 \pm 0.57	0.05 \pm 0.01
	7	0.33 \pm 0.02	0.05 \pm 0.00
10.0	1	37.79 \pm 1.81	47.62 \pm 1.25
	2	3.64 \pm 0.87	1.47 \pm 0.17
	3	0.69 \pm 0.03	0.33 \pm 0.05
	4	0.59 \pm 0.05	0.29 \pm 0.02
	5	0.36 \pm 0.10	0.19 \pm 0.02
	6	0.22 \pm 0.03	0.14 \pm 0.02
20.0	1	36.77 \pm 1.62	46.47 \pm 11.78
	2	6.03 \pm 0.41	6.57 \pm 0.27
	3	1.20 \pm 0.17	0.30 \pm 0.06
	4	0.70 \pm 0.12	0.09 \pm 0.01
	5	0.30 \pm 0.00	0.05 \pm 0.01
	6	0.23 \pm 0.03	0.04 \pm 0.01
	7	0.17 \pm 0.03	0.03 \pm 0.01
200.0	1	13.80 \pm 1.51	37.97 \pm 2.38
	2	4.10 \pm 0.55	29.33 \pm 3.87
	3	0.73 \pm 0.03	0.90 \pm 0.12
	4	0.30 \pm 0.06	0.12 \pm 0.04
	5	0.17 \pm 0.03	0.05 \pm 0.01
	6	0.10 \pm 0.00	0.03 \pm 0.01
	7	0.09 \pm 0.01	0.01 \pm 0.01

Table 2

Cumulative Percent Dose in Excreta after an Oral Dose of TPCP

Dose (mg/kg)	Day	Percent Dose (as Total ^{14}C)		
		Urine	Feces	Total
0.5	1	65.77	20.12	75.89
	2	69.22	12.20	81.42
	3	71.58	12.76	84.34
	4	72.87	13.03	85.90
	5	73.47	13.14	86.61
	6	73.81	13.26	87.07
	7	74.28	13.25	87.63
2.0	1	59.02	25.30	84.32
	2	65.27	29.22	94.49
	3	66.85	29.68	96.53
	4	67.85	29.85	97.79
	5	68.48	29.94	98.42
	6	68.79	29.99	98.78
	7	69.12	30.04	99.16
10.0	1	37.79	47.62	85.41
	2	41.43	49.09	90.52
	3	42.12	49.42	91.54
	4	42.71	49.71	92.42
	5	43.07	49.90	92.97
	6	43.29	50.04	93.33
20.0	1	36.77	46.47	83.24
	2	42.80	53.04	95.84
	3	44.00	53.34	97.34
	4	44.70	53.43	98.13
	5	45.00	53.48	98.48
	6	45.23	53.52	98.75
	7	45.40	53.55	98.95
200.00	1	13.80	37.97	51.77
	2	17.90	67.30	85.20
	3	18.63	68.20	86.83
	4	18.93	68.32	87.25
	5	19.10	68.37	87.47
	6	19.20	68.40	87.60
	7	19.29	68.41	87.70

Table 3

Percent Dose (as total ^{14}C) in Tissues and Excreta
 Nine Days after Each of Three Oral Dose Levels of TPCP

Tissue	Percent Dose ($\bar{x} \pm \text{SEM}$, n=3)		
	2.0 mg/kg	20.0 mg/kg	200.0 mg/kg
Brain	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00
Lung	0.01 \pm 0.00	0.00 \pm 0.00	0.01 \pm 0.00
Liver	1.33 \pm 0.13	0.64 \pm 0.02	0.48 \pm 0.24
Kidney	0.06 \pm 0.00	0.02 \pm 0.00	0.00 \pm 0.00
Spleen	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00
Small Intestine	0.01 \pm 0.00	0.01 \pm 0.00	0.00 \pm 0.00
Adipose Tissue	0.15 \pm 0.04	0.14 \pm 0.02	0.04 \pm 0.02
Testes	0.01 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00
Muscle	0.26 \pm 0.03	0.10 \pm 0.01	0.02 \pm 0.00
Skin	0.01 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00
Blood	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00
Plasma	0.00 \pm 0.00	0.00 \pm 0.00	0.00 \pm 0.00
Total Tissue	1.84	0.91	0.55
Urine	69.12	45.40	19.23
Feces	30.04	53.55	68.41
Total	101.00	99.86	88.25

Table 4

Cumulative Percent Dose (as Total ^{14}C) in Excreta after
Intravenous Administration of 2 mg/kg TPCP

Time (hr)	Urine	Feces*	Total
0.5	0.45 \pm 0.28	13.45 \pm 1.16	13.80 \pm 0.89
1	6.72 \pm 3.45	29.11 \pm 1.46	35.82 \pm 4.70
2	15.53 \pm 5.03	27.36 \pm 0.18	36.14 \pm 6.11
4	22.88 \pm 3.79	28.87 \pm 2.49	43.18 \pm 8.97
6	27.09 \pm 0.63	29.35 \pm 1.77	56.45 \pm 2.23
8	46.67 \pm 1.15	23.84 \pm 2.34	70.47 \pm 1.77
12	49.75 \pm 4.57	25.36 \pm 1.06	75.11 \pm 5.22
24	64.94 \pm 2.48	19.50 \pm 0.92	84.45 \pm 3.36
48	66.90 \pm 2.73	15.61 \pm 2.86	82.51 \pm 5.46
72	67.62 \pm 0.15	18.29 \pm 0.43	85.91 \pm 0.48

* Includes feces plus intestinal contents.

Table 5

Biliary Excretion of Dose after Intravenous Administration of 2.0 mg/kg TCP

Time (hr)	Percent Dose					Cumulative % Dose				
	1	2	3	x	SD	1	2	3	x	SD
0.5	4.16	4.46	6.11	4.91	1.05	4.16	4.46	6.11	4.91	1.05
1.0	8.51	9.59	8.90	9.00	0.55	12.67	14.06	15.01	13.91	1.18
1.5	4.98	4.85	6.01	5.28	0.64	17.65	18.91	21.02	19.19	1.70
2.0	2.99	2.97	3.27	3.08	0.17	20.64	21.88	24.29	22.27	1.86
2.5	2.02	2.08	2.19	2.10	0.09	22.66	23.96	26.48	24.37	1.94
3.0	1.47	1.48	1.88	1.61	0.23	24.08	25.44	28.36	25.96	2.19
3.5	1.14	1.05	1.17	1.12	0.06	25.22	26.49	29.53	27.08	2.21
4.0	0.85	0.75	0.88	0.83	0.07	26.07	27.24	30.41	27.91	2.25
4.5	0.70	0.48	0.66	0.61	0.12	26.77	27.71	31.06	28.51	2.26
5.0	0.60	0.71	0.58	0.63	0.07	27.08	28.43	31.64	29.05	2.34
5.5	0.47	0.61	0.49	0.52	0.08	27.55	29.04	32.14	29.58	2.34
6.0	0.46	0.49	0.43	0.46	0.03	28.01	29.53	32.57	30.04	2.32
6.5	0.39	0.39	0.28	0.35	0.06	28.40	29.92	32.84	30.39	2.26
7.0	0.34	0.35	0.24	0.31	0.06	28.74	30.27	33.09	30.70	2.21

Table 6

Biliary Excretion of Dose after Intravenous Administration of 20.0 mg/kg TPCP

Time (hr)	Percent Dose					Cumulative % Dose				
	1	2	3	x	SD	1	2	3	x	SD
0.5	10.44	8.07	10.43	9.65	1.36	10.44	8.07	10.43	9.65	1.36
1.0	16.57	14.75	6.58	12.63	5.32	27.01	22.82	17.02	22.28	5.02
1.5	10.67	3.93	8.74	7.78	3.47	37.68	26.75	25.75	30.06	6.62
2.0	7.23	4.01	8.30	6.51	2.23	44.91	30.76	34.06	36.58	7.40
2.5	4.84	11.35	7.20	7.80	3.30	49.75	42.11	41.26	44.37	4.68
3.0	3.73	5.10	4.86	4.56	0.73	53.48	47.20	46.12	48.93	3.97
3.5	2.36	2.15	2.93	2.48	0.40	55.85	49.35	49.05	51.42	3.84
4.0	1.85	2.16	1.89	2.00	0.17	57.70	51.51	50.94	53.38	3.75
4.5	1.32	0.55	1.61	1.16	0.55	59.02	52.06	52.55	54.54	3.88
5.0	0.89		1.24	1.06		59.91		53.79	56.85	
5.5	0.80		1.12	0.06		60.71		54.91	57.81	
6.0	0.83		0.93	0.88		61.55		55.84	58.70	

Table 7

Percent of Dose \pm SEM in Tissues after Intravenous Administration of 2.0 mg/kg TPCP

Tissue	0.5 hr	1 hr	2 hr	4 hr	6 hr	8 hr	12 hr	24 hr	48 hr	72 hr
Brain	0.426 \pm 0.068	0.152 \pm 0.013	0.040 \pm 0.003	0.018 \pm 0.004	0.015 \pm 0.003	0.011 \pm 0.002	0.011 \pm 0.004	0.005 \pm 0.001	0.005 \pm 0.0005	0.005 \pm 0.0004
Lung	0.467 \pm 0.045	0.291 \pm 0.025	0.170 \pm 0.017	0.119 \pm 0.020	0.103 \pm 0.007	0.086 \pm 0.005	0.057 \pm 0.005	0.051 \pm 0.002	0.038 \pm 0.0005	0.032 \pm 0.003
Liver	12.194 \pm 1.546	8.897 \pm 0.286	7.833 \pm 0.872	5.293 \pm 0.932	5.400 \pm 0.678	4.333 \pm 0.829	5.304 \pm 0.317	3.740 \pm 0.206	3.378 \pm 0.3921	2.963 \pm 0.267
Kidney	1.711 \pm 0.187	0.877 \pm 0.048	0.555 \pm 0.063	0.335 \pm 0.013	0.376 \pm 0.032	0.288 \pm 0.015	0.228 \pm 0.003	0.219 \pm 0.019	0.149 \pm 0.012	0.130 \pm 0.004
Spleen	0.106 \pm 0.013	0.050 \pm 0.001	0.028 \pm 0.001	0.019 \pm 0.002	0.016 \pm 0.002	0.014 \pm 0.003	0.012 \pm 0.002	0.012 \pm 0.001	0.007 \pm 0.001	0.007 \pm 0.0005
Small Intestine	8.193 \pm 2.054	12.574 \pm 4.622	6.048 \pm 2.705	0.726 \pm 0.066	0.897 \pm 0.086	0.718 \pm 0.061	0.574 \pm 0.014	0.497 \pm 0.107	0.103 \pm 0.018	0.079 \pm 0.001
Testes	0.473 \pm 0.027	0.455 \pm 0.028	0.340 \pm 0.007	0.172 \pm 0.016	0.137 \pm 0.007	0.094 \pm 0.012	0.079 \pm 0.003	0.056 \pm 0.010	0.035 \pm 0.001	0.030 \pm 0.003
Adipose Tissue	2.080 \pm 0.976	5.550 \pm 0.159	4.310 \pm 0.990	3.696 \pm 0.092	3.850 \pm 0.628	4.030 \pm 0.219	3.989 \pm 0.169	2.949 \pm 0.239	1.829 \pm 0.092	1.316 \pm 0.135
Muscle	9.551 \pm 4.594	8.094 \pm 0.922	3.737 \pm 0.081	2.364 \pm 0.521	1.857 \pm 0.405	1.295 \pm 0.067	0.952 \pm 0.075	1.065 \pm 0.068	0.618 \pm 0.085	0.752 \pm 0.123
Skin	5.991 \pm 2.990	8.770 \pm 1.335	5.906 \pm 0.818	4.945 \pm 1.487	3.948 \pm 0.309	3.896 \pm 0.428	2.716 \pm 0.272	1.995 \pm 0.262	0.455 \pm 0.060	0.303 \pm 0.061
Spinal Cord	0.061 \pm 0.008	0.074 \pm 0.006	0.023 \pm 0.006	0.013 \pm 0.003	0.004 \pm 0.0003	0.003 \pm 0.0007	0.003 \pm 0.0007	0.002 \pm 0.001	0.001 \pm 0.0003	0.001 \pm 0.0002

Table 7 (continued)

<u>Tissue</u>	<u>0.5 hr</u>	<u>1 hr</u>	<u>2 hr</u>	<u>4 hr</u>	<u>6 hr</u>	<u>8 hr</u>	<u>12 hr</u>	<u>24 hr</u>	<u>48 hr</u>	<u>72 hr</u>
Sciatic Nerve	0.017 <u>+0.005</u>	0.014 <u>+0.004</u>	0.013 <u>+0.004</u>	0.008 <u>+0.002</u>	0.011 <u>+0.004</u>	0.006 <u>+0.002</u>	0.006 <u>+0.001</u>	0.003 <u>+0.0007</u>	0.001 <u>+0.0003</u>	0.001 <u>+0.001</u>
Blood	4.078 <u>+1.990</u>	4.293 <u>+0.533</u>	2.072 <u>+0.318</u>	1.578 <u>+0.306</u>	1.130 <u>+0.085</u>	0.809 <u>+0.055</u>	0.505 <u>+0.010</u>	0.380 <u>+0.055</u>	0.173 <u>+0.002</u>	0.097 <u>+0.007</u>
Plasma	3.444 <u>+1.657</u>	3.407 <u>+0.247</u>	2.254 <u>+0.329</u>	1.169 <u>+0.286</u>	0.839 <u>+0.051</u>	0.580 <u>+0.046</u>	0.415 <u>+0.011</u>	0.301 <u>+0.038</u>	0.145 <u>+0.007</u>	0.089 <u>+0.003</u>

Table 8

Percent of Dose ($\bar{x} \pm \text{SEM}$) as Unchanged Parent (P), Metabolite (M), and Unextracted Fraction (U)
in Selected Tissues after Intravenous Administration of 2.0 mg/kg TPCP

<u>Time</u>		<u>30 min</u>	<u>1 hr</u>	<u>2 hr</u>	<u>4 hr</u>	<u>6 hr</u>	<u>8 hr</u>	<u>12 hr</u>	<u>24 hr</u>	<u>48 hr</u>	<u>72 hr</u>
<u>Tissue</u>											
Blood	(P)	0.04 <u>+0.03</u>	0.01 <u>+0.01</u>	0.02 <u>+0.01</u>	0.01 <u>+0.01</u>	0.01 <u>+0.01</u>	0.01 <u>+0.01</u>	0.02 <u>+0.01</u>	0.01 <u>+0.01</u>	0.00 <u>+0.00</u>	0.00 <u>+0.00</u>
	(M)	3.10 <u>+1.52</u>	2.61 <u>+0.09</u>	1.46 <u>+0.06</u>	0.90 <u>+0.71</u>	0.56 <u>+0.06</u>	0.47 <u>+0.04</u>	0.29 <u>+0.01</u>	0.18 <u>+0.01</u>	0.13 <u>+0.01</u>	0.06 <u>+0.00</u>
	(U)	0.94 <u>+0.45</u>	1.67 <u>+0.45</u>	0.58 <u>+0.27</u>	0.89 <u>+0.19</u>	0.56 <u>+0.02</u>	0.34 <u>+0.08</u>	0.20 <u>+0.02</u>	0.19 <u>+0.05</u>	0.04 <u>+0.01</u>	0.04 <u>+0.01</u>
Liver	(P)	1.07 <u>+0.08</u>	0.34 <u>+0.03</u>	0.16 <u>+0.04</u>	0.04 <u>+0.02</u>	0.03 <u>+0.01</u>	0.02 <u>+0.01</u>	0.02 <u>+0.00</u>	0.02 <u>+0.01</u>	0.01 <u>+0.01</u>	0.01 <u>+0.00</u>
	(M)	5.79 <u>+0.89</u>	4.92 <u>+0.33</u>	3.33 <u>+0.40</u>	1.63 <u>+0.43</u>	1.92 <u>+0.11</u>	1.76 <u>+0.18</u>	1.33 <u>+0.12</u>	0.91 <u>+0.11</u>	0.61 <u>+0.12</u>	0.40 <u>+0.05</u>
	(U)	5.33 <u>+1.12</u>	3.65 <u>+0.28</u>	4.34 <u>+0.79</u>	2.70 <u>+0.97</u>	3.46 <u>+0.60</u>	2.55 <u>+0.99</u>	3.95 <u>+0.23</u>	2.81 <u>+0.11</u>	3.09 <u>+0.28</u>	2.55 <u>+0.22</u>
Kidney	(P)	0.25 <u>+0.01</u>	0.11 <u>+0.02</u>	0.05 <u>+0.01</u>	0.07 <u>+0.01</u>	0.05 <u>+0.02</u>	0.02 <u>+0.01</u>	0.02 <u>+ 0.01</u>			
	(M)	0.74 <u>+0.08</u>	0.37 <u>+0.03</u>	0.22 <u>+0.03</u>	0.11 <u>+0.01</u>	0.12 <u>+0.01</u>	0.08 <u>+0.00</u>	0.05 <u>+0.00</u>			
	(U)	0.73 <u>+0.11</u>	0.12 <u>+0.01</u>	0.28 <u>+0.04</u>	0.15 <u>+0.02</u>	0.21 <u>+0.02</u>	0.18 <u>+0.02</u>	0.16 <u>+0.02</u>			

Table 8 (continued)

<u>Time</u>		30 min	1 hr	2 hr	4 hr	6 hr	8 hr	12 hr	24 hr	48 hr	72 hr
<u>Tissue</u>											
Muscle	(P)	4.57 <u>+2.29</u>	2.25 <u>+0.58</u>	0.96*	1.03 <u>+0.10</u>	1.00 <u>+0.14</u>	0.54 <u>+0.28</u>	0.39 <u>+0.12</u>			
	(M)	3.68 <u>+2.08</u>	2.69 <u>+0.63</u>	1.28*	0.91 <u>+0.11</u>	0.51 <u>+0.06</u>	0.37 <u>+0.10</u>	0.27 <u>+0.04</u>			
	(U)	0.84 <u>+0.59</u>	1.42 <u>+0.14</u>	1.85*	0.72 <u>+0.21</u>	0.36 <u>+0.23</u>	0.95 <u>+0.58</u>	0.29 <u>+0.12</u>			
Adipose	(P)	1.15 <u>+0.55</u>	3.68 <u>+0.17</u>	2.64*	2.47 <u>+0.40</u>	2.88 <u>+0.53</u>	3.19 <u>+0.12</u>	3.29 <u>+0.32</u>			
	(M)	0.63 <u>+0.30</u>	1.52 <u>+0.08</u>	1.30*	0.65 <u>+0.13</u>	0.53 <u>+0.08</u>	0.39 <u>+0.18</u>	0.37 <u>+0.03</u>			
	(U)	0.30 <u>+0.15</u>	0.34 <u>+0.24</u>	1.15*	0.58 <u>+0.23</u>	0.45 <u>+0.10</u>	0.13 <u>+0.11</u>	0.24 <u>+0.14</u>			
Skin	(P)	2.69 <u>+1.43</u>	3.88 <u>+0.24</u>	3.21*	2.30 <u>+0.49</u>	2.24 <u>+0.16</u>	1.95 <u>+0.17</u>	1.38 <u>+0.19</u>			
	(M)	1.57 <u>+0.77</u>	1.78 <u>+0.07</u>	1.34*	0.78 <u>+0.08</u>	0.61 <u>+0.03</u>	0.53 <u>+0.03</u>	0.47 <u>+0.05</u>			
	(U)	1.73 <u>+0.86</u>	3.11 <u>+1.63</u>	1.92*	1.87 <u>+1.13</u>	1.10 <u>+0.25</u>	1.42 <u>+0.29</u>	0.87 <u>+0.27</u>			

Table 8 (continued)

<u>Time</u>		30 min	1 hr	2 hr	4 hr	6 hr	8 hr	12 hr	24 hr	48 hr	72 hr
<u>Tissue</u>											
Spinal Cord**	(P)	0.047	0.010	0.009	0.003						
	(M)	0.023	0.006	0.004	0.003						
	(U)	0.009	0.002	0.006	0.002						

* Only one sample available for time point.

** Only two samples available for each time point.

Table 9
Pharmacokinetic Parameters for
Percent Dose of TPCP as Total ¹⁴C

Tissue	A	α	B	β	α	β	CORR.
	%	hr ⁻¹	%	hr ⁻¹	t _{1/2} hr	t _{1/2} hr	
Brain	0.938	1.777	0.014	0.016	0.390	42.00	0.957
Lung	0.625	1.066	0.0965	0.018	0.650	39.00	0.989
Liver	11.23	0.882	5.17	0.008	0.785	83.30	0.968
Kidney	2.11	1.136	0.331	0.014	0.61	48.00	0.993
Muscle	9.53	0.485	1.195	0.008	1.430	86.50	0.974
Skin	4.045	0.263	4.333	0.039	2.630	17.60	0.945
Adipose	5.94	0.124	4.55	0.018	5.57	39.10	0.986
Testes	0.479	0.459	0.096	0.018	1.57	38.80	0.934
Spinal Cord	0.117	0.788	0.004	0.022	0.88	33.00	0.942
Sciatic Nerve	0.007	0.107	0.009	0.035	6.50	20.00	0.877
Blood	3.94	0.352	0.714	0.028	1.97	24.50	0.996
Plasma	3.85	0.475	0.736	0.031	1.46	22.20	0.946

Table 10

Pharmacokinetic Parameters for Percent Dose
as Parent TPCP in Selected Tissues

	A	α	t1/2	B	β	t1/2	CORR.
Tissue	%	hr ⁻¹	hr	%	hr ⁻¹	hr	
Blood	0.022	1.386	0.05	0.022	0.087	8.0	0.848
Liver	1.11	0.866	0.800	0.030	0.018	39.0	0.944
Kidney	--	--	--	0.164	0.247	2.81	0.744
Muscle	--	--	--	2.56	0.173	4.01	0.766
Adipose*							
Skin	--	--	--	3.81	0.087	7.95	0.943
Spinal Cord	--	--	--	0.035	0.642	1.08	0.794

* Parameters could not be calculated for adipose.