Recovery of Radioactivity 72 Hours Following Dermal Administration of 3.1 mg/kg [14C]Dicyclohexylcarbodiimide to Male Fischer 344 Rats – Study B[a]

Dose Recovered in Excreta (%)

End of Collection Period (h)	Urine CPDE[b]	Feces CPDE	Volatile Organics[c] CPDE	CO_2[c] CPDE	Total CPDE
6	NC[d]	NC	0.8 ± 0.1	0.01 ± 0.01	0.8 ± 0.1
8	0.7 ± 0.3	NC	0.8 ± 0.1	0.01 ± 0.01	1.6 ± 0.3
24	1.8 ± 0.5	0.2 ± 0.1	1.1 ± 0.1	0.01 ± 0.01	3.2 ± 0.6
48	2.4 ± 0.7	0.4 ± 0.1	1.2 ± 0.1	0.01 ± 0.01	4.0 ± 0.9
72[e]	2.9 ± 0.9	0.5 ± 0.2	1.2 ± 0.1	0.02 ± 0.01	4.6 ± 1.1

Distribution in Tissues (72 hours)

Tissue	ng-eq per g tissue Mean	ng-eq per g tissue SD	TBR[f] Mean	TBR SD	% Dose in Total Tissue[g] Mean	% Dose in Total Tissue SD
Adipose	18.2	7.0	5.61	2.05	0.04	0.02
Bladder	10.7	2.8	3.47	1.80	0.00014	0.00003
Blood	3.34	0.78	Unity	–	0.006	0.001
Brain	9.58	2.22	2.95	0.69	0.002	0.001
Heart	33.5	4.6	10.5	3.2	0.003	0.001
Kidney	81.7	10.9	25.5	6.6	0.018	0.003
Liver	35.0	8.6	10.7	2.6	0.04	0.01
Lung	13.0	2.1	4.08	1.21	0.0013	0.0003
Muscle	5.60	1.03	1.75	0.51	0.09	0.02
Skin	22.1	19.6	7.31	6.65	0.12	0.11
Spleen	11.0	1.9	3.47	1.24	0.0006	0.0001
Testes	6.10	1.81	1.88	0.58	0.002	0.001

Disposition Summary – Overall Percent Dose Recovered (Absorbed + Unabsorbed Dose)

Percent Dose	Mean ± SD
Absorbed Dose	–
Excreta	–
Urine	2.9 ± 0.9
Feces	0.5 ± 0.2
Exhaled CO_2	0.02 ± 0.01
Volatile Organics	1.2 ± 0.1
Dose Site	19.1 ± 7.3
Selected Tissues[h]	0.07 ± 0.02
Residual Carcass	0.6 ± 0.4
Total % Dose Absorbed	24.4 ± 8.3
Unabsorbed Dose	–
Total % Dose Unabsorbed[i]	65.4 ± 6.8
Overall % Dose Recovered	**89.8 ± 3.2**

[a]All values expressed as mean ± standard deviation (SD) (N = 5). The target dose was 3 mg dicyclohexylcarbodiimide/kg body weight. The actual dose delivered was 3.1 ± 0.1 mg/kg (17.6 ± 1.2 μCi/animal). Animals were weighted prior to shaving ca. 24 hours prior to dosing. Because dicyclohexylcarbodiimide (DCC) readily sublimes at room temperature, dose sites were covered by nonocclusive appliances to protect the dose site and permit recovery of volatized [^{14}C]DCC. The appliance frame (self-adhesive foam pad) was covered by 50/50 polyester/cotton sheeting taped to the frame and covered by a metal appliance shield.

Recovery of Radioactivity 72 Hours Following Dermal Administration of 0.3 mg/kg [14C]Dicyclohexylcarbodiimide to Male Fischer 344 Rats – Study A[a] (continued)

[b]CPDE = Cumulative percent dose excreted.
[c]Volatile organics and CO_2 in exhaled breath.
[d]NC = not collected. No collection was scheduled for this time interval.
[e]Urine value includes cage rinse.
[f]TBR = Tissue/Blood ratio.
[g]Percent Dose was calculated using the following values for the mass of total tissue, expressed as percent of body weight: adipose, 7.0%; blood, 5.2%; muscle, 48%; and skin, 17%.
[h]Selected tissues are kidney, liver, lung, spleen, heart, testes, bladder, brain, and blood.
[i]Total radioactivity in the appliance and skin wash.