

Distribution of Radioactivity 72 Hours Following Dermal Application of 20% [¹⁴C]Hydroquinone to Male Harlan Sprague Dawley Rats with Covered Dose Sites – Group 17

Percent of Dose Recovered in Excreta

Sample	Collection Interval (h)	17_01	17_02	17_03	17_04	Mean	SD
Urine	0 to 8	0.10	0.10	0.17	0.15	0.13	0.04
Urine	8 to 24	0.63	0.37	0.56	0.38	0.49	0.13
Urine	24 to 48	0.70	0.45	0.57	0.42	0.53	0.13
Urine	48 to 72 ^a	0.63	0.41	0.35	0.42	0.45	0.12
-	Subtotal	2.06	1.33	1.65	1.37	1.60	0.33
Cage Rinse	8 to 24	0.07	0.03	0.08	0.10	0.07	0.03
Cage Rinse	24 to 48	0.17	0.09	0.06	0.15	0.12	0.05
Cage Rinse	48 to 72	0.25	0.11	0.09	0.12	0.14	0.07
-	Subtotal	0.16	0.13	0.11	0.13	0.13	0.02
Urine + Cage Rinse	Subtotal	2.22	1.46	1.76	1.50	1.73	0.35
Feces	0 to 24	0.02	BLOQ (<0.005)	BLOQ (<0.005)	BLOQ (<0.005)	0.02	-
Feces	24 to 48	BLOQ (0.01)	BLOQ (0.01)	BLOQ (<0.005)	BLOQ (<0.005)	BLOQ	-
Feces	48 to 72	BLOQ (0.01)	0.03	0.06	BLOQ (<0.005)	0.04	0.03
-	Subtotal	0.02	0.03	0.06	NA	0.03	0.03
Total	-	2.72	1.72	2.05	1.87	2.09	0.44

Distribution in Tissues (72 h)

Tissue ^b	ng-eq/g Mean	ng-eq/g SD	TBR Mean	TBR SD	Percent Recovery Mean	Percent Recovery SD
Adipose Perirenal	BLOD	-	NC	-	BLOD	-
Bladder	804	360	NC	-	0.0002	0.0002
Muscle (hind leg)	BLOD	-	NC	-	BLOD	-
Skin (abdominal)	BLOD	-	NC	-	BLOQ	-
Blood	BLOD	-	BLOD	-	BLOQ	-
Plasma	29	19	NC	-	<0.0001	<0.0001
Spleen	BLOD	-	NC	-	BLOQ	-
Liver	BLOD	-	NC	-	BLOQ	-
Kidney	140	14.1	NC	-	0.0011	0.0001
Brain	BLOD	-	NC	-	BLOQ	-
Heart	BLOD	-	NC	-	BLOQ	-
Lung	BLOD	-	NC	-	BLOQ	-
Stomach	BLOD	-	NC	-	BLOD	-
Cecum	BLOD	-	NC	-	BLOD	-
Large Intestine	BLOD	-	NC	-	BLOD	-
Small Intestine	BLOD	-	NC	-	BLOD	-
Thyroid	BLOD	-	NC	-	BLOQ	-
Marrow	BLOD	-	NC	-	BLOQ	-
Testes	BLOD	-	NC	-	BLOQ	-
Pancreas	BLOD	-	NC	-	BLOQ	-
Femur	BLOD	-	NC	-	BLOQ	-
Total	-	-	-	-	0.0244	0.006

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Disposition Summary – Percent of Dose Recovered

Sample	17_01	17_02	17_03	17_04	Mean	SD
Absorbed	-	-	-	-	-	-
Urine ^{a, c}	2.22	1.46	1.76	1.5	1.73	0.35
Feces	0.02	0.03	0.06	BLOQ	0.03	0.03
Tissues	0.0239	0.021	0.0191	0.0336	0.0244	0.006
GI Tract Contents	<0.005	<0.005	<0.005	<0.005	<0.005	-
Subtotal	2.26	1.51	1.84	1.53	1.79	0.35
Unabsorbed	-	-	-	-	-	-
Gauze	8.4	10.7	8.16	2.98	7.56	3.26
Appliance	46.1	0.68	0.86	0.92	12.1	22.7
Dose site skin rinse	30.3	71.9	77.1	81.3	65.2	23.5
Subtotal	84.8	83.3	86.1	85.2	84.9	1.2
Dose site	3.07	2.63	2.75	2.66	2.78	0.2
Total	90.1	87.4	90.7	89.4	89.4	1.4

^a Includes urine present in bladder at time of sacrifice.

^b Tissue weights for dispersed tissues were calculated based on body weight as follows: adipose 7.0%, muscle 40.4%, skin 19%, and blood 7.4%.

^c Includes cage rinse.

NA = Not applicable.

NC = Not captured

BLOQ = Below the limit of quantitation. Aliquot DPM were less than 3 times background DPM. Background DPM typically <20 DPM.

BLOD = Below the limit of detection. Aliquot DPM were less than background DPM.

SD = standard deviation.

TBR = Tissue to blood ratio.

20% dermal dose approximately equivalent to 100 mg/kg.