

Distribution of Radioactivity 72 Hours Following Dermal Application of 2% [¹⁴C]Hydroquinone to Female Harlan Sprague Dawley Rats with Covered Dose Sites – Group 20

Percent of Dose Recovered in Excreta

Sample	Collection Interval (h)	20_01	20_02	20_03	20_04	Mean	SD
Urine	0 to 8	0.68	1.34	0.46	1.07	0.89	0.39
Urine	8 to 24	6.12	8.57	4.27	6.49	6.36	1.76
Urine	24 to 48	9.00	9.63	5.61	7.68	7.98	1.78
Urine	48 to 72 ^a	5.60	5.65	4.61	6.37	5.56	0.72
-	Subtotal	21.4	25.2	15.0	21.6	20.8	4.24
Cage Rinse	0 to 8	0.39	1.34	1.45	0.50	0.92	0.55
Cage Rinse	8 to 24	2.24	1.33	1.95	0.93	1.61	0.59
Cage Rinse	24 to 48	2.20	2.12	2.56	2.10	2.25	0.21
Cage Rinse	48 to 72	2.00	1.68	2.50	0.96	1.79	0.65
-	Subtotal	6.83	6.47	8.46	4.49	6.56	1.63
Urine + Cage Rinse	Subtotal	28.2	31.7	23.5	26.1	27.4	3.47
Feces	0 to 24	0.05	0.06	0.06	0.07	0.06	0.01
Feces	24 to 48	0.04	0.19	0.25	0.12	0.15	0.09
Feces	48 to 72	0.07	0.38	0.68	0.09	0.31	0.29
-	Subtotal	0.16	0.63	0.99	0.28	0.52	0.37
Total	-	28.4	32.3	24.5	26.4	27.9	3.36

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	BLOQ	-	BLOQ	-	0.0344	0.0192
Bladder	231	297	9.93	14.4	0.0007	0.0009
Muscle (hind leg)	BLOQ	-	BLOQ	-	0.0457	0.0233
Skin (abdominal)	66.1	16.8	2.35	0.399	0.135	0.0373
Blood	28.1	4.6	1	0	0.0224	0.0038
Plasma	66.7	12.3	2.37	0.18	0.0006	<0.0001
Spleen	24.5	4.6	0.875	0.124	0.0005	<0.0001
Liver	55.2	17.7	1.96	0.473	0.0198	0.0046
Kidney	177	21.2	6.34	0.502	0.0142	0.0012
Brain	15.7	3.6	0.56	0.094	0.0014	0.0003
Heart	15.8	1.9	0.566	0.047	0.0006	<0.0001
Lung	31.3	4.5	1.13	0.166	0.0019	0.0003
Stomach	34.4	11.5	1.20	0.248	0.002	0.0006
Cecum	236	129	8.52	4.50	0.0063	0.0048
Large Intestine	69.8	48.2	2.38	1.40	0.0046	0.003
Small Intestine	97.5	56	3.43	1.71	0.018	0.0094
Thyroid	105	30.1	3.85	1.34	<0.0001	<0.0001
Ovaries	39.4	9.1	1.41	0.247	0.0002	<0.0001
Pancreas	30.1	8.6	1.07	0.226	0.0014	0.0003
Uterus with Fallopian Tubes	59.9	10.1	2.14	0.222	0.0016	0.0004
Femur	17.4	4.2	0.613	0.067	0.0003	0.0001
Marrow	BLOQ	-	BLOQ	-	<0.0001	<0.0001
Total	-	-	-	-	0.312	0.096

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Disposition Summary – Percent of Dose Recovered

Sample	20_01	20_02	20_03	20_04	Mean	SD
Absorbed	-	-	-	-	-	-
Urine ^{a, c}	28.2	31.7	23.5	26.1	27.4	3.47
Feces	0.16	0.63	0.99	0.28	0.52	0.37
Tissues	0.249	0.455	0.284	0.261	0.312	0.0963
GI Tract Contents	0.06	0.14	0.11	0.04	0.09	0.05
Subtotal	28.7	32.9	24.9	26.7	28.3	3.5
Unabsorbed	-	-	-	-	-	-
Gauze	17.02	13.5	18.1	19.4	17.0	2.54
Appliance	9.22	10.4	7.47	11.6	9.67	1.76
Dose site skin rinse	23.5	26.1	27.2	27.1	26.0	1.72
Subtotal	49.7	50.0	52.8	58.1	52.6	3.88
Dose site	12.7	7.56	15.2	9.15	11.2	3.45
Total	91.1	90.5	92.9	93.9	92.1	1.6

^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.

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

SD = standard deviation.

TBR = Tissue to blood ratio.