

Distribution of Radioactivity 72 Hours Following Dermal Application of 10% [¹⁴C]Hydroquinone to Male Harlan Sprague Dawley Rats with Covered Dose Sites – Group 18

Percent of Dose Recovered in Excreta

Sample	Collection Interval	18_01	18_02	18_03	18_04	Mean	SD
Urine	0 to 8	0.75	0.05	0.14	0.38	0.33	0.31
Urine	8 to 24	1.22	0.93	0.72	1.49	1.09	0.34
Urine	24 to 48	1.31	1.17	1.15	1.83	1.37	0.32
Urine	48 to 72 ^a	1.14	1.37	0.96	1.62	1.27	0.29
-	Subtotal	4.42	3.52	2.97	5.32	4.06	1.03
Cage Rinse	8 to 24	0.16	0.23	0.2	0.09	0.17	0.06
Cage Rinse	24 to 48	0.43	0.31	0.31	0.17	0.31	0.11
Cage Rinse	48 to 72	0.15	0.21	0.18	0.2	0.19	0.03
-	Subtotal	0.14	0.26	0.3	0.35	0.26	0.09
Urine + Cage Rinse	Subtotal	4.56	3.78	3.27	5.67	4.32	1.04
Feces	0 to 24	BLOQ (0.01)	0.03	0.02	0.01	0.02	0.01
Feces	24 to 48	BLOQ (0.02)	0.03	BLOQ (0.02)	0.03	0.03	0.00
Feces	48 to 72	BLOQ (0.02)	BLOQ (0.01)	0.03	0.08	0.05	0.03
-	Subtotal	NA	0.06	0.05	0.12	0.06	0.05
Total	-	5.30	4.59	4.01	6.25	5.04	0.97

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	1160	510	NC	-	0.001	0.0008
Muscle (hind leg)	BLOD	-	NC	-	BLOQ	-
Skin (abdominal)	71.7	19.6	NC	-	0.024	0.0072
Blood	BLOD	-	BLOD	-	BLOQ	-
Plasma	46	8	NC	-	<0.0001	<0.0001
Spleen	BLOD	-	NC	-	BLOQ	-
Liver	BLOD	-	NC	-	BLOQ	-
Kidney	177	53	NC	-	0.0027	0.0005
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	45	8	NC	-	0.0015	0.0001
Thyroid	BLOD	-	NC	-	BLOQ	-
Marrow	BLOD	-	NC	-	BLOQ	-
Testes	BLOD	-	NC	-	BLOQ	-
Pancreas	BLOD	-	NC	-	BLOQ	-
Femur	BLOD	-	NC	-	BLOQ	-
Total	-	-	-	-	0.0445	0.008

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Disposition Summary – Percent of Dose Recovered

Sample	18_01	18_02	18_03	18_04	Mean	SD
Absorbed	-	-	-	-	-	-
Urine ^{a, c}	4.56	3.78	3.27	5.67	4.32	1.04
Feces	BLOQ	0.06	0.05	0.12	0.06	0.05
Tissues	0.0484	0.0362	0.0392	0.0541	0.0445	0.008
GI Tract Contents	0.01	<0.005	0.01	0.01	0.01	0.00
Subtotal	4.62	3.88	3.37	5.85	4.43	1.08
Unabsorbed	-	-	-	-	-	-
Gauze	9.15	4.98	13.02	10.84	9.50	3.40
Appliance	1.60	0.65	0.91	0.96	1.03	0.40
Dose site skin rinse	71.7	68.2	64.5	64.0	67.1	3.6
Subtotal	82.5	73.8	78.4	75.8	77.6	3.7
Dose site	4.81	8.56	10.4	9.55	8.32	2.46
Total	91.9	86.2	92.2	91.2	90.4	2.8

^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.

10% dermal dose approximately equivalent to 50 mg/kg.