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DETERMINATION OF LEAD IN RABBIT BLOOD
HASKELL LABORATORY REPORT NO. 241-80 MR-3540

Blood samples from rabbits exposed dermally to lead naphthanate in paint (H-13,257) were received for determination of lead content. Samples were diluted with nitric acid and analyzed by graphite furnace atomic absorption spectrophotometry using a standard additions method. Volume corrections for addition of heparin solution were applied to all samples. Results of lead measurements for six sampling periods are as follows:

<u>Sample Number</u> (Exposure Groups)	<u>Measured Lead Conc. (ug/L)</u>		
	<u>Day 0</u> <u>2-4-80</u>	<u>Day 5</u> <u>2-8-80</u>	<u>Day 10</u> <u>2-13-80</u>
15010	N.D.*	253 $\pm$ 17	176 $\pm$ 19
15011	29 $\pm$ 3**	155 $\pm$ 11	164 $\pm$ 19
15012	38 $\pm$ 4	385 $\pm$ 42	158 $\pm$ 15
15013	N.D.	216 $\pm$ 11	252 $\pm$ 9
15014	N.D.	436 $\pm$ 23	338 $\pm$ 49
15015	N.D.	436 $\pm$ 12	205 $\pm$ 15
15016	N.D.	105 $\pm$ 19	359 $\pm$ 26
15017	N.D.	520 $\pm$ 40	207 $\pm$ 8
15018	N.D.	365 $\pm$ 23	N.D. ^{††}
15019	N.D.	405 $\pm$ 18	N.D. ^{††}
Average	-	328	232

* N.D. - none detected with a minimum detection limit of 25 ug/L.

** $\pm$ - expresses a range of uncertainty due to addition of heparin solution in the range of 0.5 to 1.0 ml to samples.

†† - samples noted to be very dilute, not included in average.

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Sample Number (Exposure Groups)	Measured Lead Conc. (Mg/L)		
	Day 0 2-4-80	Day 5 2-8-80	Day 10 2-13-80
15020	31 $\pm$ 3	349 $\pm$ 39	123 $\pm$ 16
15021	N.D.	490 $\pm$ 53	252 $\pm$ 7
15022	N.D.	104 $\pm$ 15	N.D. ^{††}
15023	N.D.	88 [†]	N.D. ^{††}
15024	N.D.	363 $\pm$ 16	288 $\pm$ 20
15025	N.D.	482 $\pm$ 42	636 $\pm$ 44
15026	N.D.	348 $\pm$ 43	303 $\pm$ 17
15027	N.D.	308 $\pm$ 21	393 $\pm$ 23
15028	N.D.	480 $\pm$ 27	350 $\pm$ 17
15029	N.D.	640 $\pm$ 18	472 $\pm$ 30
Average	-	365	352

	Day 15 2-18-80	Day 29 3-3-80	Day 39 3-13-80
15010	311	54	132
15011	179	117	60
15012	199	157	76
15013	317	138	90
15014	255	191	134
15015	344	100	76
15016	297	100	32
15017	300	223	84
15018	229	241	69
15019	208	97	68
Average	264	142	82

† - Sample spilled, no heparin volume correction applied.

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<u>Sample Number</u> (Exposure Groups)	<u>Day 15</u> <u>2-18-80</u>	<u>Day 29</u> <u>3-3-80</u>	<u>Day 39</u> <u>3-13-80</u>
15020	266	281	119
15021	455	306	169
15022	631	220	120
15023	491	268	161
15024	502	304	113
15025	493	270	87
15026	365	218	80
15027	392	364	N.D.
15028	167	254	150
15029	1156	284	137
Average	492	277	114

<u>Sample Number</u> (Control Group)	<u>Day 0</u> <u>2-4-80</u>	<u>Day 15</u> <u>2-18-80</u>	<u>Day 39</u> <u>3-13-80</u>
15030	N.D.	N.D.	N.D.
15031	N.D.	N.D.	124
15032	N.D.	N.D.	N.D.
15033	N.D.	N.D.	N.D.
15034	N.D.	N.D.	N.D.
15035	N.D.	N.D.	N.D.
15036	N.D.	N.D.	N.D.
15037	N.D.	N.D.	N.D.
15038	N.D.	N.D.	N.D.
15039	N.D.	80	N.D.

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