

B L O O D L E A D
C O M P A R I S O N
S T A T I S T I C S

2nd Quarter

(April, May, June)

1982

Lead Industries Association, Inc.

CYWI 3-000867

LIA is pleased to present the following summary of biological monitoring data provided by members of the lead industry. These summaries should enable individual companies to compare their results with companies in the same industry sector as well as with the lead industry as a whole.

Total Number of Companies Responding	<u>18</u>
Total Number of Plant Sites	<u>69</u>
Total Number of Individuals Sampled	<u>8,533</u>
Total Number of Individual Tests:	
a. Blood Leads (PbB)	<u>11,726</u>
b. Zinc Protoporphyrin (ZPP)	<u>6,178</u>
c. Hemoglobin (Hb)	<u>4,825</u>

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Primary Smelting and Refining

Sites: 7

of individuals 2787

Month	Number of Samples	PbB (ug/100g)		Samples in Each PbB (ug/100g)										ZPP (ug/100g)	Hb
		Mean ($\bar{X}$)	S.D.*	<20	20-30	30-40	40-50	50-60	60-70	70-80	>80				
April	706	42.1	12.4	5.1	10.2	24.4	29.6	27.3	2.6	.7	.1	$\frac{\bar{x}}{s}$ 200 60.0	589 15.7		
May	450	40.3	13.7	9.4	9.2	23.8	32	20.9	4.0	.5	.1	$\frac{\bar{x}}{s}$ 510 70.3	701 15.4		
June	2180	38.6	12.6	8.5	12.7	29.5	29.8	16.0	3.2	0.4	-	$\frac{\bar{x}}{s}$ 1877 62.9	775 15.7		

Secondary Lead Smelters

Sites: 7

of individuals 401

Month	Number of Samples	PbB (ug/100g)		Samples in Each PbB (ug/100g)									ZPP (ug/100g)	Hb
		Mean ($\bar{x}$)	S.D.*	<20	20-30	30-40	40-50	50-60	60-70	70-80	>80			
April	117	39.6	14.4	14.3	5.1	22.2	34.5	21.4	4.3	—	—	$\frac{\bar{x}}{s}$ 38 35.3	0 —	
May	96	41.5	13.7	8.3	14.6	17.7	26.0	28.1	3.2	—	—	$\frac{\bar{x}}{s}$ 30 32.0	0 —	
June	345	33.3	14.0	19.1	24.6	21.4	20.6	11.3	2.9	—	—	$\frac{\bar{x}}{s}$ 267 43.1	0 —	

Oxide and Chemical Manufacturing

Sites: 7

of individuals 258

Month	Number of Samples	PbB (µg/100g)		Samples in Each PbB (µg/100g)									ZPP (µg/100g)	Hb
		Mean ($\bar{x}$)	S.D.*	<20	20-30	30-40	40-50	50-60	60-70	70-80	>80			
April	139	45.3	12.8	2.1	9.4	22.3	25.2	24.5	15.1	1.4	-	$\frac{\bar{x}}{s}$ 115 118.7	43 15.7	
May	141	44.6	13.4	2.1	12.1	22.7	34.1	24.1	13.5	1.4	-	$\frac{\bar{x}}{s}$ 128 105.4	84 15.3	
June	125	118.7	107.7	20.0	12.8	19.2	24.0	19.2	4.8	-	-	$\frac{\bar{x}}{s}$ 118 104.6	30 14.8	

Battery Manufacturing

Sites: 13

of individuals 3845

Month	Number of Samples	PbB (ug/100g)		Samples in Each PbB (ug/100g)								ZPP (ug/100g)	Hb
		Mean ($\bar{x}$)	S.D.*	<20	20-30	30-40	40-50	50-60	60-70	70-80	>80		
April	2329	40.6	11.1	3.9	12.1	26.7	36.5	18.1	2.4	0.2	0.0	$\frac{\bar{x}}{s}$ 648 104.2	834 14.3
May	1748	43.0	10.6	2.1	9.4	21.8	39.0	23.5	4.2	0.1	-	$\frac{\bar{x}}{s}$ 579 103.6	726 14.5
June	1816	41.2	10.8	3.5	11.2	25.2	38.0	18.7	3.1	0.4	-	$\frac{\bar{x}}{s}$ 715 113.1	903 14.5

Other

Sites: 15

of individuals 1242

Month	Number of Samples	PbB (ug/100g)		Samples in Each PbB (ug/100g)									ZPP (ug/100g)	Hb
		Mean ($\bar{x}$)	S.D.*	<20	20-30	30-40	40-50	50-60	60-70	70-80	>80			
April	194	32.0	13.9	18.6	26.3	27.3	18.0	7.2	2.1	-	0.5	$\frac{\bar{x}}{s}$ 101 40.2	65 14.4	
May	160	29.8	13.3	25.7	27.5	23.1	17.5	3.1	2.3	0.6	-	$\frac{\bar{x}}{s}$ 115 44.7	38 14.7	
June	780	20.7	10.0	58.2	23.8	11.8	4.6	1.4	0.1	-	-	$\frac{\bar{x}}{s}$ 727 32.3	37 14.6	

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The following is an summary by industry sector for six months beginning with First Quarter 1982 and ending in Second Quarter 1982, using the last blood lead monitoring value for each worker. However, some companies did not provide data in both quarters.

Ind. Sector	Number of Samples	PbB (ug/100cc)		Samples in Each PbB (ug/100cc)										Total #	Total ug/100cc	Hb
		Mean ($\bar{x}$)	S.D. *	<20	20-30	30-40	40-50	50-60	60-70	70-80	80					
Prim.	4269	38.0	12.9	8.5	15.6	30.9	25.6	16.1	3.1	0.3	0.1	$\frac{\theta}{x}$	3567	62.1	2062	15.7
Sec.	624	32.2	13.3	19.2	26.0	26.3	18.1	8.5	2.1	-	-	$\frac{\theta}{x}$	455	13.8	170	15.7
Oxide & Chem.	351	36.5	15.8	18.8	12.8	25.6	21.1	14.0	6.6	1.1	-	$\frac{\theta}{x}$	325	82.4	150	15.2
Batt.	5327	37.5	11.6	6.7	18.8	30.0	29.3	13.2	2.0	0.2	0.2	$\frac{\theta}{x}$	1747	89.5	2325	14.5
Other	2193	22.7	10.8	47.8	27.6	15.8	7.4	1.3	0.1	-	0.0	$\frac{\theta}{x}$	1941	30.7	188	14.6



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