



STATE OF NEW YORK
DEPARTMENT OF HEALTH

Wadsworth Center The Governor Nelson A. Rockefeller Empire State Plaza P.O. Box 509 Albany, New York 12201-0509

Antonia C. Novello, M.D., M.P.H.
Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

November 23, 1999

BLOOD LEAD PROFICIENCY TEST SURVEY #3, 1999

Dear Laboratory Director:

A statistical summary report for all proficiency test (PT) results evaluated in the third Blood Lead survey (event) of 1999 is enclosed. Participating laboratories are identified by a confidential three-digit code number assigned by the PT program. LeadCare® results will continue to be included in the summary report for informational purposes only, until sufficient data have been collected to determine how best to grade them.

Each laboratory will receive an individual performance summary for the last three PT test events under separate cover. To pass the PT for blood lead, a laboratory must achieve a minimum score of 80% (4 out of 5 correct) on two consecutive testing events, or two out of three consecutive testing events.

PT Materials

The blood-based test materials were prepared by dosing five goats with lead acetate prior to the test. On October 19, 1999, 400-500 mL of blood were drawn from each animal into a blood bag containing 750 mg K₂EDTA. Each animal provided a separate pool with lead concentrations ranging from 7 - 78 µg/dL whole blood. Aliquots of whole blood were transferred into additive-free evacuated glass tubes, and shipped to participating laboratories October 20, 1999. PT samples for laboratories using the LeadCare® system were shipped by overnight express for delivery October 20, 1999. Target values were established by a ≥90% consensus of 14 referee laboratories.

CLIA '88 Certification

Laboratories outside of New York State can have their PT results from this program evaluated for federal regulatory purposes under CLIA '88. The laboratory director should notify the regional HCFA office, and should provide our program with the address to whom PT results should be sent.

OSHA approval

Participation in this program may also be used to obtain approval for blood lead testing from the Occupational Safety and Health Administration (OSHA), U.S Dept. of Labor. For further information on OSHA approval, contact William E. Babcock, OSHA SLC Analytical Laboratory, 1781 South, 300 West, Salt Lake City, UT 84115.

The next PT event for blood lead is scheduled to be mailed March 1, 2000. Please inform the laboratory staff at 518-473-0452 if the test materials have not arrived by March 8, 2000. The postmark deadline for reporting results is **March 15, 2000.**

Thank you for your participation.

Sincerely,

Patrick J. Parsons, Ph.D.
Section Head, Blood Lead Proficiency Testing Program

New York State Department of Health

PB PROFICIENCY TEST RESULTS, SURVEY #3

Testing Year 1999, dated 23 November 1999

PERFORMANCE OF PARTICIPATING LABORATORIES

Lab code	Method	RESULTS (µg/dL whole blood)					Normalized Mean	Info only
		99-11	-12	-13	-14	-15		
		Target values						
		7	31	14	78	59		
101	ASV-ESA 3010	9	30	15	79	61	1.02	
102	ETAAS-ZL	6	30	14	81	61	1.01	
102	ASV-LeadCare	5	30	12	>65	62	0.93	Info
103	ETAAS-ZL	6	32	14	72	62	1.00	
104	ETAAS-ZL	6	29	13	71	55	0.93	
106	ETAAS-ZL	6	27	12	81	56	0.93	Info
107	ETAAS-ZL	8	32	16	73	57	1.02	
108	ETAAS-ZL	7	31	14	80	61	1.01	
109	ETAAS-Z	6	31	14	78	60	1.00	
109	ASV-LeadCare	4	28	14	>65	61	0.94	Info
110	ETAAS-ZL	7	30	14	78	57	0.98	
110	ASV-LeadCare	4	27	11	>65	55	0.86	Info
112	ASV-ESA 3010	9	32	16	84	60	1.07	
115	ETAAS-Z	6	30	13	84	62	1.01	
119	ETAAS-ZL	7	31	14	81	58	1.01	
121	ETAAS-ZL	7	33	14	93 *	68 *	1.10	Info
123	ETAAS-ZL	6	29	14	78	59	0.98	
125	ETAAS-ZL	7	30	14	77	59	0.99	
126	ETAAS-Z	6	30	14	78	61	1.00	
131	ETAAS-ZL	7	31	14	79	58	1.00	
132	ETAAS-ZL	6	30	13	80	57	0.97	
143	ETAAS-ZL	7	28	12	74	56	0.91	
144	ETAAS-D2	4	31	12	80	60	0.97	
145	ASV-ESA 3010	10	36 *	18	105 *	71 *	1.25	
146	ETAAS-ZL	5	26 *	12	78	51 *	0.89	
147	ETAAS-ZL	6	31	14	81	60	1.01	
150	ASV-ESA 3010	6	28	12	72	54	0.90	
152	ASV-ESA 3010	9	32	15	83	61	1.05	
156	ETAAS-ZL	6	31	14	73	58	0.98	
158	ETAAS-ZL	6	29	13	78	57	0.96	
159	ETAAS-ZL	7	33	16	86	62	1.09	
160	ETAAS-ZL	7	29	13	75	63	0.97	

164	ETAAS-ZL	6	29	13	75	58	0.95	
166	ASV-ESA 3010	8	29	16	88 *	63	1.07	
168	ETAAS-ZL	6	30	14	76	60	0.99	
170	ETAAS-D2	6	31	15	79	57	1.01	
174	ASV-ESA 3010	4	29	14	81	59	0.99	
179	ETAAS-ZL	6	30	13	80	59	0.98	
181	ETAAS-ZL	7	30	14	80	60	1.00	
183	ASV-ESA 3010	5	28	11	73	54	0.89	
185	ASV-ESA 3010	8	34	16	86	67 *	1.12	
195	ICP-MS	6	29	13	57 *	76 *	0.97	Info
197	ETAAS-D2	7	30	15	79	58	1.01	
198	ETAAS-ZL	7	29	14	82	58	0.99	
199	ETAAS-ZL	7	31	13	81	56	0.98	
200	ETAAS-ZL	6	30	14	77	58	0.98	
204	ASV-ESA 3010	7	31	15	80	60	1.03	
206	ICP-MS	6	27	12	76	62	0.94	
208	ETAAS-ZL	6	32	14	80	61	1.02	
212	ASV-ESA 3010	5	31	14	79	58	1.00	
215	ETAAS-ZL	6	30	14	78	62	1.00	
219	ASV-ESA 3010	6	29	13	79	58	0.96	Info
221	ETAAS-D2	4	22 *	8 *	64 *	50 *	0.79	
225	ETAAS-ZL	7	30	14	81	60	1.01	
229	ETAAS-Z	7	29	14	77	60	0.98	
231	ETAAS-D2	5	28	11	74	56	0.90	
232	ASV-ESA 3010	5	30	13	81	58	0.98	
235	ASV-ESA 3010	4	30	12	86	65	1.01	
237	ETAAS-ZL	7	31	15	80	62	1.04	
238	ASV-ESA 3010	3	26 *	12	78	59	0.92	
241	ASV-ESA 3010	5	31	12	94 *	69 *	1.06	
243	ASV-ESA 3010	6	32	14	86	65	1.06	
247	ETAAS-ZL	7	30	15	86	57	1.03	
248	ETAAS-D2	6	26 *	12	64 *	47 *	0.83	
249	ASV-ESA 3010	7	28	15	74	52 *	0.95	
251	ASV-ESA 3010	9	32	17	85	65	1.11	
254	ETAAS-D2	6	28	14	75	57	0.96	
261	ASV-ESA 3010	6	29	13	82	62	0.99	
269	ETAAS-ZL	6	30	15	106 *	65	1.12	
270	ETAAS-ZL	6	29	13	78	59	0.97	
271	ASV-ESA 3010	6	29	12	79	60	0.96	
272	ETAAS-ZL	8	30	14	73	55	0.96	
273	ASV-ESA 3010	9	23 *	12	69 *	54	0.85	
274	ETAAS-ZL	6	32	13	82	62	1.02	
279	ASV-ESA 3010	7	26 *	16	79	58	0.99	
281	ASV-ESA 3010	6	32	16	87 *	66 *	1.10	
282	ASV-ESA 3010	4	28	12	68 *	55	0.89	
284	ASV-ESA 3010	4	29	13	80	60	0.98	

285	ASV-ESA 3010	6	29	13	81	61	0.98	
286	ASV-ESA 3010	7	33	14	88 *	67 *	1.08	
290	ASV-ESA 3010	5	26 *	11	77	55	0.89	
291	ASV-ESA 3010	6	32	14	87 *	67 *	1.07	
293	ETAAS-D2	6	29	13	73	53	0.92	
295	ASV-ESA 3010	4	32	12	94 *	65	1.05	
297	ASV-ESA 3010	5	29	13	83	6 *	0.98	
300	ASV-ESA 3010	6	32	14	91 *	69 *	1.09	
301	ETAAS-ZL	6	32	14	94 *	63	1.08	
304	ASV-ESA 3010	6	28	12	75	58	0.93	
305	ICP-MS	6	30	14	80	60	1.00	
308	ASV-ESA 3010	5	28	15	72	54	0.95	
309	ETAAS-ZL	6	30	14	83	61	1.02	
310	ASV-ESA 3010	4	25 *	11	77	57	0.89	
312	ICP-MS	7	33	14	87 *	65	1.07	
314	ASV-ESA 3010	6	30	13	83	62	1.00	
317	ETAAS-ZL	6	32	14	89 *	66 *	1.07	
318	ASV-ESA 3010	4	30	13	91 *	72 *	1.07	
323	ASV-ESA 3010	6	30	14	87 *	65	1.05	
325	ETAAS-ZL	6	29	14	77	59	0.98	Info
331	ICP-MS	6	36 *	13	83	73 *	1.10	
333	ETAAS-ZL	7	34	15	83	63	1.08	
334	ASV-LeadCare	5	33	14	>65	63	0.99	Info
336	ASV-ESA 3010	0 *	28	9 *	90 *	64	1.05	
338	ETAAS-ZL	6	30	14	78	60	1.00	
340	ASV-ESA 3010	7	31	14	82	61	1.02	
343	ASV-LeadCare	4	30	12	>65	63	0.93	Info

Percent satisfactory results for all participants: 89.3%

STATISTICAL SUMMARY

REFERENCE LABORATORY RESULTS

LAB CODE	METHOD	RESULTS ($\mu\text{g/dL}$ whole blood)				
		99-11	-12	-13	-14	-15
101	ASV-ESA 3010	9	30	15	79	61
102	ETAAS-ZL	6	30	14	81	61
103	ETAAS-ZL	6	32	14	72	62
104	ETAAS-ZL	6	29	13	71	55
107	ETAAS-ZL	8	32	16	73	57
109	ETAAS-Z	6	31	14	78	60
110	ETAAS-ZL	7	30	14	78	57
147	ETAAS-ZL	6	31	14	81	60
198	ETAAS-ZL	7	29	14	82	58
199	ETAAS-ZL	7	31	13	81	56
200	ETAAS-ZL	6	30	14	77	58
212	ASV-ESA 3010	5	31	14	79	58
243	ASV-ESA 3010	6	32	14	86	65
293	ETAAS-D2	6	29	13	73	53
Number of sample measurements:		14	14	14	14	14
Mean (target value):		7	31	14	78	59
Standard deviation:		1.0	1.1	0.8	4.3	3.1
RSD (%):		15.7	3.6	5.6	5.6	5.3
Acceptable range:						
Upper limit		11	35	18	86	65
Lower limit		3	27	10	70	53

SUMMARY OF RESULTS CLASSIFIED BY TECHNIQUE AND TYPE OF LAB

	Number, mean and relative standard deviation for each sample														
	99	-11		-12			-13			-14			-15		
	##	Mn	RSD	##	Mn	RSD	##	Mn	RSD	##	Mn	RSD	##	Mn	RSD
TECHNIQUE(a)															
ASV-ESA 3010	40	6	28	41	30	8	41	14	14	41	82	9	40	61	8
ETAAS-ZL	42	6	10	42	30	5	42	14	6	42	80	8	42	60	5
ETAAS-Z	4	6	8	4	30	3	4	14	4	4	79	4	4	61	2
ETAAS-D2	8	6	19	8	28	11	8	13	19	8	74	9	8	55	8
ICP-MS	5	6	7	5	31	11	5	13	6	5	77	15	5	67	10
ASV-LeadCare	5	4	12	5	30	8	5	13	11	5	>65	--	5	61	6
All laboratories	104	6	21	105	30	8	105	14	11	105	80	10	104	60	8
CLASS															
Reference	14	7	16	14	31	4	14	14	6	14	78	6	14	59	5
Evaluated(b)	79	6	21	81	30	8	81	14	12	81	81	9	80	60	8
Other(c)	10	5	20	10	30	7	10	13	9	10	71	15	10	62	10