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

Dennis P. Whalen
Executive Deputy Commissioner

October 21, 1999

ERYTHROCYTE PROTOPORPHYRIN - PROFICIENCY TEST
SURVEY #3

Dear Laboratory Director:

Results of the second proficiency test event for **Erythrocyte Protoporphyrin (EP)** have been evaluated and graded. The test materials were prepared from whole goat blood. Five animals were dosed with lead acetate prior to the test to generate elevated EP levels. On August 30, 1999, approximately 400-mL of blood were drawn from each animal into separate plastic blood bags containing EDTA. Each animal yielded a separate pool with EP levels ranging from 34 µg/dL to 131 µg/dL. Aliquots of whole blood were transferred into additive-free evacuated glass tubes and mailed to extraction participants August 31, 1999. The remaining blood was prepared for hematofluorometer (HF) participants with EP levels ranging from 42 µg/dL to 122 µg/dL. To eliminate fluorescent artifacts, erythrocytes were separated from plasma, washed with normal saline and re-suspended in a citrate-glycerol solution. Aliquots of the blood-product were transferred into additive-free evacuated glass tubes and mailed to all HF participants September 14, 1999. To pass the proficiency for EP, a laboratory must maintain $\geq 80\%$ (4 out of 5) on at least two consecutive testing events, or two out of three consecutive testing events.

EXTRACTION METHOD

Target values are calculated using results from 14 participating laboratories. Your laboratory's individual performance record for EP-extraction over the last three surveys (or test events) will be mailed separately. The next PT event for the extraction method will be mailed **February 2, 2000**. Contact the State laboratory staff at (518) 473-0452 if the PT materials have not arrived within 5 days of the scheduled mailout date.

HEMATOFLUOROMETRY

Target values for AVIV instruments are calculated using results from 14 referee laboratories, and are given as µg/dL, assumed hct 35. Target values for Helena Protofluor-Z instruments are calculated using results from six referee laboratories, and are given as µmol ZPP/mol heme. Your laboratory's individual performance record for EP-hematofluorometer over the last three surveys (or test events) will be mailed separately. The next PT event for the hematofluorometer method will be mailed **February 16, 2000**. Contact the State laboratory staff at (518) 473-0452 if the PT materials have not arrived within 5 days of the scheduled mailout date.

Thank you for your participation.

Sincerely,

Patrick J. Parsons, Ph.D.
Section Head, Erythrocyte Protoporphyrin PT Program

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New York State Department of Health

ZP PROFICIENCY TEST RESULTS, SURVEY #3

Testing year 1999, dated 21 October 1999

PERFORMANCE OF PARTICIPATING LABORATORIES

LAB CODE	METHOD	RESULTS (μmol ZPP/mol heme)					NORMALIZED MEAN
		99-11	-12	-13	-14	-15	
Target values:		96	91	66	113	167	
109	Helena Hemat	92	86	66	108	161	0.96
110	Helena Hemat	99	95	70	117	171	1.04
201	Helena Hemat	105	97	74	124	179	1.09
204	Helena Hemat	94	96	62	115	174	1.01
206	Helena Hemat	88	82	62	105	156	0.92
208	Helena Hemat	107	103	75	132 *	201 *	1.15
225	Helena Hemat	95	88	61	111	160	0.96
290	Helena Hemat	109	105	80 *	131 *	190	1.16
338	Helena Hemat	48 *	46 *	34 *	55 *	82 *	0.50
340	Helena Hemat	98	89	66	113	165	1.00

Percent satisfactory results for all participants: 82.0%

STATISTICAL SUMMARY

ZP Proficiency Test #3. Testing year 1999. Report date: 21 October 1999

LAB CODE	METHOD	Reference laboratory results				
		RESULTS ($\mu\text{mol ZPP/mol heme}$)				
		99-11	-12	-13	-14	-15
109	Helena Hemat	92	86	66	108	161
110	Helena Hemat	99	95	70	117	171
201	Helena Hemat	105	97	74	124	179
204	Helena Hemat	94	96	62	115	174
206	Helena Hemat	88	82	62	105	156
225	Helena Hemat	95	88	61	111	160
	Number of sample measurements:	6	6	6	6	6
	Mean (target value):	96	91	66	113	167
	Standard deviation:	5.9	6.2	5.2	6.8	9.1
	RSD (%):	6.2	6.8	7.9	6.0	5.5
	Acceptable range:					
	Upper limit	110	105	76	130	192
	Lower limit	82	77	56	96	142

SUMMARY OF RESULTS

	Number, mean and standard deviation for each sample																	
	99			-11			-12			-13			-14			-15		
	##	Mn	RSD	##	Mn	RSD	##	Mn	RSD	##	Mn	RSD	##	Mn	RSD			
Reference	6	96	6	6	91	7	6	66	8	6	113	6	6	167	5			
Evaluated (b)	4	91	32	4	86	32	4	64	32	4	108	34	4	160	34			
All labs.	10	94	19	10	89	19	10	65	19	10	111	20	10	164	20			