New York State Department of Health
Wadsworth Center
The Governor Nelson A. Rockefeller Empire State Plaza
PO Box 509 Albany, NY 12201-0509

Trace Elements Proficiency Testing Program
Urine
Performance Evaluation

Shipment Date: May 07, 2014

Test Event: 142

PFI: 1067
Jill Taylor, Ph.D.
Wadsworth Center - Biggs Laboratory
PO Box 509 Empire State Plaza
Albany, NY 12201-0509

Report reviewed: _____ _____
Signature Date

The next proficiency test in this category is scheduled for September 10, 2014. If you have any questions regarding your results, please contact Mary Fran Verostek, Ph.D at (518) 474-7161 or trel@wadsworth.org.

Report Date: July 09, 2014 (Date Generated: 10-Jul-2014)
Report ID: 1067TRELU142-1

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Analyte	Sample	Your Response	Target	Acceptable Range	D/Dmax	Relative Distance from Target -1	0	1	Score
Arsenic (ug/L)	UE14-06	72.6	66.0	52.8 - 79.2	0.50			X	100
- DRC/CC-ICP-MS	UE14-07	36.8	34.6	27.7 - 41.5	0.32		X		100
	UE14-08	141.0	127.8	102.2 - 153.4	0.52			X	100
	UE14-09	103.0	91.0	72.8 - 109.2	0.66			X	100
	UE14-10	202.0	175.9	140.7 - 211.1	0.74			X	100
									Analyte Score: 100
				Average D/Dmax:	**0.55**				**Pass**
Cadmium (ug/L)	UE14-06	13.1	13.0	11.0 - 15.0	0.05		X		100
- ICP-MS	UE14-07	6.6	6.6	5.6 - 7.6	0.00		X		100
	UE14-08	9.5	9.3	7.9 - 10.7	0.14		X		100
	UE14-09	11.9	11.7	9.9 - 13.5	0.11		X		100
	UE14-10	2.7	2.6	1.6 - 3.6	0.10		X		100
									Analyte Score: 100
				Average D/Dmax:	**0.08**				**Pass**
Lead (ug/L)	UE14-06	188.0	189.8	149.8 - 229.8	-0.04		X		100
- ICP-MS	UE14-07	94.0	95.7	55.7 - 135.7	-0.04		X		100
	UE14-08	133.0	136.1	96.1 - 176.1	-0.08		X		100
	UE14-09	169.0	170.9	130.9 - 210.9	-0.05		X		100
	UE14-10	36.2	36.7	0.0 - 76.7	-0.01		X		100
									Analyte Score: 100
				Average D/Dmax:	**-0.04**				**Pass**

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Mercury (ug/L)	UE14-06	61.2	60.8	42.6 - 79.0	0.02		X		100
- ICP-MS	UE14-07	16.6	16.1	11.3 - 20.9	0.10		X		100
	UE14-08	94.3	92.7	64.9 - 120.5	0.06		X		100
	UE14-09	33.6	32.0	22.4 - 41.6	0.17		X		100
	UE14-10	47.2	44.9	31.4 - 58.4	0.17		X		100
									Analyte Score: 100
				Average D/Dmax:	**0.10**				**Pass**
Antimony (ug/L)	UE14-06	12.9		-					Edu†
- ICP-MS	UE14-07	6.46		-					Edu†
	UE14-08	9.28		-					Edu†
	UE14-09	11.8		-					Edu†
	UE14-10	2.56		-					Edu†
Barium (ug/L)	UE14-06	16.1		-					Edu†
- ICP-MS	UE14-07	8.25		-					Edu†
	UE14-08	11.6		-					Edu†
	UE14-09	14.7		-					Edu†
	UE14-10	3.31		-					Edu†
Beryllium (ug/L)	UE14-06	17.0		-					Edu†
- ICP-MS	UE14-07	7.69		-					Edu†
	UE14-08	12.0		-					Edu†
	UE14-09	15.2		-					Edu†
	UE14-10	3.41		-					Edu†

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Caesium (ug/L)	UE14-06	66.6		-					Edu†
- ICP-MS	UE14-07	34.2		-					Edu†
	UE14-08	47.7		-					Edu†
	UE14-09	59.9		-					Edu†
	UE14-10	14.4		-					Edu†
Chromium (ug/L)	UE14-06	33.9		-					Edu†
- DRC/CC-ICP-MS	UE14-07	18.0		-					Edu†
	UE14-08	24.1		-					Edu†
	UE14-09	30.2		-					Edu†
	UE14-10	7.52		-					Edu†
Cobalt (ug/L)	UE14-06	8.09		-					Edu†
- ICP-MS	UE14-07	3.69		-					Edu†
	UE14-08	5.07		-					Edu†
	UE14-09	7.05		-					Edu†
	UE14-10	9.30		-					Edu†
Copper (ug/L)	UE14-06	646		-					Edu†
- ICP-MS	UE14-07	326		-					Edu†
	UE14-08	469		-					Edu†
	UE14-09	593		-					Edu†
	UE14-10	134		-					Edu†

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Analyte	Sample	Your Response	Target	Acceptable Range	D/Dmax	Relative Distance from Target -1	0	1	Score
Manganese (ug/L)	UE14-06	16.0		-					Edu†
- DRC/CC-ICP-MS	UE14-07	8.52		-					Edu†
	UE14-08	11.2		-					Edu†
	UE14-09	14.2		-					Edu†
	UE14-10	3.14		-					Edu†
Molybdenum (ug/L)	UE14-06	184		-					Edu†
- ICP-MS	UE14-07	102		-					Edu†
	UE14-08	136		-					Edu†
	UE14-09	166		-					Edu†
	UE14-10	53.6		-					Edu†
Nickel (ug/L)	UE14-06	18.3		-					Edu†
- ICP-MS	UE14-07	10.1		-					Edu†
	UE14-08	14.8		-					Edu†
	UE14-09	18.9		-					Edu†
	UE14-10	7.22		-					Edu†
Platinum (ug/L)	UE14-06	6.42		-					Edu†
- ICP-MS	UE14-07	3.24		-					Edu†
	UE14-08	4.55		-					Edu†
	UE14-09	5.82		-					Edu†
	UE14-10	1.25		-					Edu†

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Analyte	Sample	Your Response	Target	Acceptable Range	D/Dmax	Relative Distance from Target -1	0	1	Score
Selenium (ug/L)	UE14-06	176		-					Edu†
- DRC/CC-ICP-MS	UE14-07	90.7		-					Edu†
	UE14-08	125		-					Edu†
	UE14-09	156		-					Edu†
	UE14-10	37.6		-					Edu†
Tellurium (ug/L)	UE14-06	13.4		-					Edu†
- ICP-MS	UE14-07	6.74		-					Edu†
	UE14-08	9.68		-					Edu†
	UE14-09	12.3		-					Edu†
	UE14-10	2.73		-					Edu†
Thallium (ug/L)	UE14-06	31.9		-					Edu†
- ICP-MS	UE14-07	15.9		-					Edu†
	UE14-08	22.4		-					Edu†
	UE14-09	28.4		-					Edu†
	UE14-10	6.17		-					Edu†
Tin (ug/L)	UE14-06	32.5		-					Edu†
- ICP-MS	UE14-07	16.2		-					Edu†
	UE14-08	23.0		-					Edu†
	UE14-09	29.0		-					Edu†
	UE14-10	6.37		-					Edu†

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Analyte	Sample	Your Response	Target	Acceptable Range	D/Dmax	Relative Distance from Target -1	0	1	Score
Tungsten (ug/L)	UE14-06	12.9		-					Edu†
- ICP-MS	UE14-07	6.45		-					Edu†
	UE14-08	9.19		-					Edu†
	UE14-09	11.6		-					Edu†
	UE14-10	2.47		-					Edu†
Uranium (ug/L)	UE14-06	1.58		-					Edu†
- ICP-MS	UE14-07	0.779		-					Edu†
	UE14-08	1.10		-					Edu†
	UE14-09	1.39		-					Edu†
	UE14-10	0.300		-					Edu†
Zinc (ug/L)	UE14-06	773		-					Edu†
- ICP-MS	UE14-07	428		-					Edu†
	UE14-08	587		-					Edu†
	UE14-09	728		-					Edu†
	UE14-10	241		-					Edu†

NOTES:

1. Laboratory results were evaluated using criteria specified by the New York State Department of Health. Analytes were evaluated against targets derived from the robust mean of the results reported by all participants in this event. The robust statistics were obtained utilizing algorithms based on those presented in ISO 13528: 2005E Statistical methods for use in proficiency testing by interlaboratory comparisons.
2. D/Dmax: D represents the deviation of a result from the target value. Dmax represents the maximal allowable deviation from that target. For satisfactory performance, the D/Dmax value must fall between -1 and +1. A negative D/Dmax indicates that your result is below the target value; a positive D/Dmax means your result is above the target value. A blank entry in this column indicates that your result either contains a qualifier (< or >) or is non-gradable, in which case "N/G" is shown in the "Score" column. The average D/Dmax is provided to assess overall test performance for each analyte. A close review of your laboratory's results is recommended if D/Dmax is > +/- 0.5 for a result or analyte.

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3. The graph plots show the relative distance of your laboratory's result (represented by an "X") from the target value for each sample analyzed. Any result exceeding the high or low limit by >25% of the D/Dmax is indicated by a pound sign (#).
4. Summaries of participant statistics from this and prior Trace Elements proficiency test events are available on the Internet at: http://www.wadsworth.org/testing/lead/ptresults.htm
5. The source of the five urine-based proficiency survey materials shipped 7 May 2014 is human urine obtained from donor volunteers. After treatment to stabilize mercury and separation into five pools, urine pools were spiked with different amounts of arsenic, cadmium, mercury and lead as inorganic salts, and supplemented with additional trace elements that comprise the "NHANES suite". The test material (UE14-06, UE14-07, UE14-08, UE14-09, UE14-10) was subsequently dispensed as 10-mL aliquots into acid-leached polypropylene cryovials and stored at -80C prior to distributing to participants for analysis.
6. Additional NHANES elements in urine pools: antimony, barium, beryllium, cobalt, caesium, molybdenum, platinum, thallium, uranium and tungsten
7. Additional elements in urine pools: aluminum, chromium, copper, manganese, nickel, selenium, tellurium, tin, vanadium and zinc

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Event:	May 07, 2014	January 15, 2014	September 11, 2013	
Analyte	Score	Score	Score	Status
Arsenic (ug/L)	100% Sat	100% Sat	100% Sat	Successful
Cadmium (ug/L)	100% Sat	100% Sat	100% Sat	Successful
Lead (ug/L)	100% Sat	100% Sat	100% Sat	Successful
Mercury (ug/L)	100% Sat	100% Sat	100% Sat	Successful
Aluminum (ug/L)	Not Offered	Not Offered	Not Offered	
Antimony (ug/L)	Educational	P/C†	P/C†	Educational
Barium (ug/L)	Educational	P/C†	P/C†	Educational
Beryllium (ug/L)	Educational	P/C†	P/C†	Educational
Bismuth (ug/L)	Not Offered	Not Offered	Not Offered	
Caesium (ug/L)	Educational	P/C†	P/C†	Educational
Chromium (ug/L)	Educational	P/C†	P/C†	Educational
Cobalt (ug/L)	Educational	P/C†	P/C†	Educational
Copper (ug/L)	Educational	P/C†	P/C†	Educational
Iodine (ug/L)	Not Offered	Not Offered	Not Offered	
Manganese (ug/L)	Educational	P/C†	P/C†	Educational
Molybdenum (ug/L)	Educational	P/C†	P/C†	Educational
Nickel (ug/L)	Educational	P/C†	P/C†	Educational
Platinum (ug/L)	Educational	P/C†	P/C†	Educational
Selenium (ug/L)	Educational	P/C†	P/C†	Educational
Tellurium (ug/L)	Educational	P/C†	P/C†	Educational
Thallium (ug/L)	Educational	P/C†	P/C†	Educational
Tin (ug/L)	Educational	P/C†	P/C†	Educational
Tungsten (ug/L)	Educational	P/C†	P/C†	Educational

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Event:	**May 07, 2014**	**January 15, 2014**	**September 11, 2013**	
Analyte	Score	Score	Score	Status
Uranium (ug/L)	Educational	P/C†	P/C†	Educational
Vanadium (ug/L)	Not Offered	Not Offered	Not Offered	
Zinc (ug/L)	Educational	P/C†	P/C†	Educational
Event Score:	100% Sat	100% Sat	100% Sat	Successful

Unsatisfactory (Unsat) performance is the failure to attain the minimum satisfactory score for the category or analyte for a testing event. A second unsatisfactory score in one of the next two testing events for the same analyte or category will result in an unsuccessful performance. Please refer to the CLRS Program Guide, available at www.wadsworth.org/clep, for category specific grading criteria.

† N/G = non-gradable
† P/C = Pass credit was issued for one or more test results that were non-gradable

† Edu = For educational analyte responses, values that appear under the column designated "target value" are more correctly described as the participant mean value, and are given for informational purposes only. Designating an analyte as "educational" implies a lack of robustness in the assigned target value and/or the absence of quality specifications for performance assessment purposes.

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