Analytical Sequence

Method : Cu_CHEM212_Hayes13

Group 1

Seq.	Loc.	Sample ID
1	8	Blank
2	1	0ppm
3	2	1ppm
4	3	2ppm
5	4	3ppm
6	5	4ppm
7	6	5ppm
8	7	6ppm
9	8	blank
10	9	83
11	10	90dup
12	11	92
13	12	84
14	13	90
15	14	88
16	15	91
17	16	85
18	17	87
19	18	89
20	19	85dup
21	20	unk
22	21	86
23	8	blank
24	4	3ppm
25	9	83
26	10	90dup
27	11	92
28	12	84
29	13	90
30	14	88
31	15	91
32	16	85
33	17	87
34	18	89
35	19	85dup
36	20	unk
37	21	86
38	8	blank
39	4	3ppm

Analysis Begun

Logged In Analyst: Brian Technique: AA Flame
Spectrometer Model: AA800, S/N No information available Autosampler Model: S10

Sample Information File: C:\data-AA\Chem212_Hayes\Fall2013\Group Spencer\CHEM 212.sif
Batch ID:
Results Data Set: Group spencer
Results Library: C:\data-AA\Chem212_Hayes\Fall2013\Group Spencer\Results.mdb

Sequence No.: 1 Autosampler Location: 8
Sample ID: Blank Date Collected: 10/10/2013 4:27:03 PM
Analyst: Data Type: Original

Replicate Data: Blank

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1		[0.00]	0.363	16:27:29	Yes
2		[0.00]	0.363	16:27:34	Yes
Mean:		[0.00]	0.363		
SD:		0.00	0.0002		
%RSD:		0.00	0.06		

Auto-zero performed.

Sequence No.: 2 Autosampler Location: 1
Sample ID: 0ppm Date Collected: 10/10/2013 4:27:55 PM
Analyst: Data Type: Original

Replicate Data: 0ppm

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1		[0]	0.000	16:28:21	Yes
2		[0]	0.000	16:28:26	Yes
Mean:		[0]	0.000		
SD:		0	0.0002		
%RSD:		0	54.36		

Standard number 1 applied. [0]
Correlation Coef.: Slope: 0.00000 Intercept: 0.00000

Sequence No.: 3 Autosampler Location: 2
Sample ID: 1ppm Date Collected: 10/10/2013 4:28:47 PM
Analyst: Data Type: Original

Replicate Data: 1ppm

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1		[1]	0.004	16:29:13	Yes
2		[1]	0.004	16:29:18	Yes
Mean:		[1]	0.004		
SD:		0	0.0000		
%RSD:		0	0.51		

Standard number 2 applied. [1]
Correlation Coef.: 0.997855 Slope: 0.00425 Intercept: 0.00016

Sequence No.: 4 Autosampler Location: 3
Sample ID: 2ppm Date Collected: 10/10/2013 4:29:39 PM
Analyst: Data Type: Original

Replicate Data: 2ppm

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1		[2]	0.011	16:30:06	Yes
2		[2]	0.010	16:30:10	Yes

Mean:	[2]	0.011
SD:	0	0.0001
%RSD:	0	0.89

Standard number 3 applied. [2]
Correlation Coef.: 0.995254 Slope: 0.00510 Intercept: -0.00001

Sequence No.: 5 **Autosampler Location: 4**
Sample ID: 3ppm **Date Collected: 10/10/2013 4:30:32 PM**
Analyst: **Data Type: Original**

Replicate Data: 3ppm

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1		[3]	0.017	16:30:59	Yes
2		[3]	0.017	16:31:04	Yes
Mean:		[3]	0.017		
SD:		0	0.0002		
%RSD:		0	1.17		

Standard number 4 applied. [3]
Correlation Coef.: 0.996640 Slope: 0.00549 Intercept: -0.00018

Sequence No.: 6 **Autosampler Location: 5**
Sample ID: 4ppm **Date Collected: 10/10/2013 4:31:26 PM**
Analyst: **Data Type: Original**

Replicate Data: 4ppm

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1		[4]	0.023	16:31:53	Yes
2		[4]	0.023	16:31:58	Yes
Mean:		[4]	0.023		
SD:		0	0.0004		
%RSD:		0	1.79		

Standard number 5 applied. [4]
Correlation Coef.: 0.997757 Slope: 0.00569 Intercept: -0.00032

Sequence No.: 7 **Autosampler Location: 6**
Sample ID: 5ppm **Date Collected: 10/10/2013 4:32:20 PM**
Analyst: **Data Type: Original**

Replicate Data: 5ppm

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1		[5]	0.029	16:32:46	Yes
2		[5]	0.029	16:32:51	Yes
Mean:		[5]	0.029		
SD:		0	0.0004		
%RSD:		0	1.38		

Standard number 6 applied. [5]
Correlation Coef.: 0.998582 Slope: 0.00577 Intercept: -0.00041

Sequence No.: 8 **Autosampler Location: 7**
Sample ID: 6ppm **Date Collected: 10/10/2013 4:33:12 PM**
Analyst: **Data Type: Original**

Replicate Data: 6ppm

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1		[6]	0.035	16:33:37	Yes
2		[6]	0.035	16:33:42	Yes
Mean:		[6]	0.035		
SD:		0	0.0001		
%RSD:		0	0.28		

Standard number 7 applied. [6]
Correlation Coef.: 0.999029 Slope: 0.00583 Intercept: -0.00048

Calibration data for Cu 327.4 Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. mg/L	Calculated Conc. mg/L	Standard Deviation	%RSD
Blank	0.0000	0	0.0827	0.00	0.1
0ppm	0.0003	0.0	0.1380	0.00	54.4
1ppm	0.0044	1.0	0.8397	0.00	0.5
2ppm	0.0105	2.0	1.8888	0.00	0.9
3ppm	0.0168	3.0	2.9577	0.00	1.2
4ppm	0.0229	4.0	4.0142	0.00	1.8
5ppm	0.0288	5.0	5.0209	0.00	1.4
6ppm	0.0348	6.0	6.0581	0.00	0.3

Correlation Coef.: 0.999029 Slope: 0.00583 Intercept: -0.00048

Sequence No.: 9 **Autosampler Location: 8**
Sample ID: blank **Date Collected: 10/10/2013 4:34:04 PM**
Analyst: **Data Type: Original**

Replicate Data: blank

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	0.1247	0.1247	0.000	16:34:30	Yes
2	0.1268	0.1268	0.000	16:34:35	Yes
Mean:	0.1258	0.1258	0.000		
SD:	0.0015	0.0015	0.0000		
%RSD:	1.171	1.171	3.42		

Sequence No.: 10 **Autosampler Location: 9**
Sample ID: 83 **Date Collected: 10/10/2013 4:34:56 PM**
Analyst: **Data Type: Original**

Replicate Data: 83

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	5.622	5.622	0.032	16:35:23	Yes
2	5.527	5.527	0.032	16:35:28	Yes
Mean:	5.575	5.575	0.032		
SD:	0.0669	0.0669	0.0004		
%RSD:	1.200	1.200	1.22		

Sequence No.: 11 **Autosampler Location: 10**
Sample ID: 90dup **Date Collected: 10/10/2013 4:35:50 PM**
Analyst: **Data Type: Original**

Replicate Data: 90dup

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	4.032	4.032	0.023	16:36:16	Yes
2	3.953	3.953	0.023	16:36:21	Yes
Mean:	3.993	3.993	0.023		
SD:	0.0561	0.0561	0.0003		
%RSD:	1.404	1.404	1.43		

Sequence No.: 12 **Autosampler Location: 11**
Sample ID: 92 **Date Collected: 10/10/2013 4:36:43 PM**
Analyst: **Data Type: Original**

Replicate Data: 92

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	5.643	5.643	0.032	16:37:10	Yes
2	5.588	5.588	0.032	16:37:15	Yes
Mean:	5.616	5.616	0.032		

SD:	0.0385	0.0385	0.0002
%RSD:	0.6858	0.6858	0.70

Sequence No.: 13 **Autosampler Location: 12**
Sample ID: 84 **Date Collected: 10/10/2013 4:37:37 PM**
Analyst: **Data Type: Original**

Replicate Data: 84

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	5.142	5.142	0.029	16:38:04	Yes
2	5.163	5.163	0.030	16:38:09	Yes
Mean:	5.153	5.153	0.030		
SD:	0.0150	0.0150	0.0001		
%RSD:	0.2918	0.2918	0.30		

Sequence No.: 14 **Autosampler Location: 13**
Sample ID: 90 **Date Collected: 10/10/2013 4:38:31 PM**
Analyst: **Data Type: Original**

Replicate Data: 90

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	3.813	3.813	0.022	16:38:59	Yes
2	3.824	3.824	0.022	16:39:04	Yes
Mean:	3.818	3.818	0.022		
SD:	0.0077	0.0077	0.0000		
%RSD:	0.2015	0.2015	0.21		

Sequence No.: 15 **Autosampler Location: 14**
Sample ID: 88 **Date Collected: 10/10/2013 4:39:26 PM**
Analyst: **Data Type: Original**

Replicate Data: 88

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	5.174	5.174	0.030	16:39:52	Yes
2	5.185	5.185	0.030	16:39:57	Yes
Mean:	5.180	5.180	0.030		
SD:	0.0078	0.0078	0.0000		
%RSD:	0.1510	0.1510	0.15		

Sequence No.: 16 **Autosampler Location: 15**
Sample ID: 91 **Date Collected: 10/10/2013 4:40:18 PM**
Analyst: **Data Type: Original**

Replicate Data: 91

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	5.243	5.243	0.030	16:40:44	Yes
2	5.313	5.313	0.030	16:40:49	Yes
Mean:	5.278	5.278	0.030		
SD:	0.0493	0.0493	0.0003		
%RSD:	0.9349	0.9349	0.95		

Sequence No.: 17 **Autosampler Location: 16**
Sample ID: 85 **Date Collected: 10/10/2013 4:41:10 PM**
Analyst: **Data Type: Original**

Replicate Data: 85

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	4.627	4.627	0.026	16:41:36	Yes

2	4.652	4.652	0.027	16:41:41	Yes
Mean:	4.640	4.640	0.027		
SD:	0.0180	0.0180	0.0001		
%RSD:	0.3877	0.3877	0.39		

Sequence No.: 18 **Autosampler Location: 17**
Sample ID: 87 **Date Collected: 10/10/2013 4:42:02 PM**
Analyst: **Data Type: Original**

Replicate Data: 87

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	4.468	4.468	0.026	16:42:28	Yes
2	4.469	4.469	0.026	16:42:33	Yes
Mean:	4.468	4.468	0.026		
SD:	0.0003	0.0003	0.0000		
%RSD:	0.0060	0.0060	0.01		

Sequence No.: 19 **Autosampler Location: 18**
Sample ID: 89 **Date Collected: 10/10/2013 4:42:54 PM**
Analyst: **Data Type: Original**

Replicate Data: 89

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	5.415	5.415	0.031	16:43:20	Yes
2	5.423	5.423	0.031	16:43:25	Yes
Mean:	5.419	5.419	0.031		
SD:	0.0059	0.0059	0.0000		
%RSD:	0.1082	0.1082	0.11		

Sequence No.: 20 **Autosampler Location: 19**
Sample ID: 85dup **Date Collected: 10/10/2013 4:43:46 PM**
Analyst: **Data Type: Original**

Replicate Data: 85dup

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	4.857	4.857	0.028	16:44:12	Yes
2	4.825	4.825	0.028	16:44:17	Yes
Mean:	4.841	4.841	0.028		
SD:	0.0226	0.0226	0.0001		
%RSD:	0.4661	0.4661	0.47		

Sequence No.: 21 **Autosampler Location: 20**
Sample ID: unk **Date Collected: 10/10/2013 4:44:38 PM**
Analyst: **Data Type: Original**

Replicate Data: unk

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	4.617	4.617	0.026	16:45:04	Yes
2	4.647	4.647	0.027	16:45:09	Yes
Mean:	4.632	4.632	0.027		
SD:	0.0206	0.0206	0.0001		
%RSD:	0.4452	0.4452	0.45		

Sequence No.: 22 **Autosampler Location: 21**
Sample ID: 86 **Date Collected: 10/10/2013 4:45:31 PM**
Analyst: **Data Type: Original**

Replicate Data: 86

Repl	SampleConc	StndConc	BlnkCorr	Time	Signal

#	mg/L	mg/L	Signal		Stored
1	4.227	4.227	0.024	16:45:57	Yes
2	4.215	4.215	0.024	16:46:02	Yes
Mean:	4.221	4.221	0.024		
SD:	0.0079	0.0079	0.0000		
%RSD:	0.1860	0.1860	0.19		

Sequence No.: 23 **Autosampler Location: 8**
Sample ID: blank **Date Collected: 10/10/2013 4:46:24 PM**
Analyst: **Data Type: Original**

Replicate Data: blank

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	-0.0303	-0.0303	-0.001	16:46:50	Yes
2	-0.0380	-0.0380	-0.001	16:46:55	Yes
Mean:	-0.0342	-0.0342	-0.001		
SD:	0.0054	0.0054	0.0000		
%RSD:	15.82	15.82	4.62		

Sequence No.: 24 **Autosampler Location: 4**
Sample ID: 3ppm **Date Collected: 10/10/2013 4:47:17 PM**
Analyst: **Data Type: Original**

Replicate Data: 3ppm

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	2.593	2.593	0.015	16:47:44	Yes
2	2.639	2.639	0.015	16:47:48	Yes
Mean:	2.616	2.616	0.015		
SD:	0.0328	0.0328	0.0002		
%RSD:	1.254	1.254	1.29		

Sequence No.: 25 **Autosampler Location: 9**
Sample ID: 83 **Date Collected: 10/10/2013 4:48:11 PM**
Analyst: **Data Type: Original**

Replicate Data: 83

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	5.372	5.372	0.031	16:48:37	Yes
2	5.304	5.304	0.030	16:48:42	Yes
Mean:	5.338	5.338	0.031		
SD:	0.0482	0.0482	0.0003		
%RSD:	0.9036	0.9036	0.92		

Sequence No.: 26 **Autosampler Location: 10**
Sample ID: 90dup **Date Collected: 10/10/2013 4:49:04 PM**
Analyst: **Data Type: Original**

Replicate Data: 90dup

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	3.836	3.836	0.022	16:49:31	Yes
2	3.885	3.885	0.022	16:49:35	Yes
Mean:	3.860	3.860	0.022		
SD:	0.0348	0.0348	0.0002		
%RSD:	0.9022	0.9022	0.92		

Sequence No.: 27 **Autosampler Location: 11**
Sample ID: 92 **Date Collected: 10/10/2013 4:49:57 PM**
Analyst: **Data Type: Original**

Replicate Data: 92

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	5.510	5.510	0.032	16:50:24	Yes
2	5.505	5.505	0.032	16:50:29	Yes
Mean:	5.508	5.508	0.032		
SD:	0.0041	0.0041	0.0000		
%RSD:	0.0747	0.0747	0.08		

Sequence No.: 28 **Autosampler Location: 12**
Sample ID: 84 **Date Collected: 10/10/2013 4:50:51 PM**
Analyst: **Data Type: Original**

Replicate Data: 84

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	5.047	5.047	0.029	16:51:18	Yes
2	5.022	5.022	0.029	16:51:23	Yes
Mean:	5.035	5.035	0.029		
SD:	0.0180	0.0180	0.0001		
%RSD:	0.3568	0.3568	0.36		

Sequence No.: 29 **Autosampler Location: 13**
Sample ID: 90 **Date Collected: 10/10/2013 4:51:46 PM**
Analyst: **Data Type: Original**

Replicate Data: 90

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	3.692	3.692	0.021	16:52:13	Yes
2	3.744	3.744	0.021	16:52:18	Yes
Mean:	3.718	3.718	0.021		
SD:	0.0370	0.0370	0.0002		
%RSD:	0.9946	0.9946	1.02		

Sequence No.: 30 **Autosampler Location: 14**
Sample ID: 88 **Date Collected: 10/10/2013 4:52:40 PM**
Analyst: **Data Type: Original**

Replicate Data: 88

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	5.080	5.080	0.029	16:53:06	Yes
2	5.063	5.063	0.029	16:53:11	Yes
Mean:	5.072	5.072	0.029		
SD:	0.0118	0.0118	0.0001		
%RSD:	0.2322	0.2322	0.24		

Sequence No.: 31 **Autosampler Location: 15**
Sample ID: 91 **Date Collected: 10/10/2013 4:53:33 PM**
Analyst: **Data Type: Original**

Replicate Data: 91

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	5.167	5.167	0.030	16:53:58	Yes
2	5.142	5.142	0.029	16:54:03	Yes
Mean:	5.154	5.154	0.030		
SD:	0.0179	0.0179	0.0001		
%RSD:	0.3479	0.3479	0.35		

Sequence No.: 32 **Autosampler Location: 16**
Sample ID: 85 **Date Collected: 10/10/2013 4:54:24 PM**
Analyst: **Data Type: Original**

Replicate Data: 85

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	4.548	4.548	0.026	16:54:50	Yes
2	4.583	4.583	0.026	16:54:55	Yes
Mean:	4.565	4.565	0.026		
SD:	0.0251	0.0251	0.0001		
%RSD:	0.5499	0.5499	0.56		

Sequence No.: 33 **Autosampler Location: 17**
Sample ID: 87 **Date Collected: 10/10/2013 4:55:16 PM**
Analyst: **Data Type: Original**

Replicate Data: 87

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	4.329	4.329	0.025	16:55:42	Yes
2	4.330	4.330	0.025	16:55:47	Yes
Mean:	4.329	4.329	0.025		
SD:	0.0008	0.0008	0.0000		
%RSD:	0.0189	0.0189	0.02		

Sequence No.: 34 **Autosampler Location: 18**
Sample ID: 89 **Date Collected: 10/10/2013 4:56:08 PM**
Analyst: **Data Type: Original**

Replicate Data: 89

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	5.268	5.268	0.030	16:56:34	Yes
2	5.318	5.318	0.031	16:56:39	Yes
Mean:	5.293	5.293	0.030		
SD:	0.0357	0.0357	0.0002		
%RSD:	0.6749	0.6749	0.69		

Sequence No.: 35 **Autosampler Location: 19**
Sample ID: 85dup **Date Collected: 10/10/2013 4:57:00 PM**
Analyst: **Data Type: Original**

Replicate Data: 85dup

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	4.735	4.735	0.027	16:57:26	Yes
2	4.756	4.756	0.027	16:57:31	Yes
Mean:	4.746	4.746	0.027		
SD:	0.0145	0.0145	0.0001		
%RSD:	0.3046	0.3046	0.31		

Sequence No.: 36 **Autosampler Location: 20**
Sample ID: unk **Date Collected: 10/10/2013 4:57:53 PM**
Analyst: **Data Type: Original**

Replicate Data: unk

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	4.476	4.476	0.026	16:58:19	Yes
2	4.516	4.516	0.026	16:58:24	Yes
Mean:	4.496	4.496	0.026		
SD:	0.0288	0.0288	0.0002		
%RSD:	0.6397	0.6397	0.65		

Sequence No.: 37 **Autosampler Location: 21**

Sample ID: 86
Analyst:
Date Collected: 10/10/2013 4:58:45 PM
Data Type: Original

Replicate Data: 86

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	4.127	4.127	0.024	16:59:12	Yes
2	4.045	4.045	0.023	16:59:17	Yes
Mean:	4.086	4.086	0.023		
SD:	0.0584	0.0584	0.0003		
%RSD:	1.428	1.428	1.46		

Sequence No.: 38
Sample ID: blank
Analyst:
Autosampler Location: 8
Date Collected: 10/10/2013 4:59:38 PM
Data Type: Original

Replicate Data: blank

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	-0.1821	-0.1821	-0.002	17:00:05	Yes
2	-0.1667	-0.1667	-0.001	17:00:09	Yes
Mean:	-0.1744	-0.1744	-0.001		
SD:	0.0109	0.0109	0.0001		
%RSD:	6.246	6.246	4.24		

Sequence No.: 39
Sample ID: 3ppm
Analyst:
Autosampler Location: 4
Date Collected: 10/10/2013 5:00:31 PM
Data Type: Original

Replicate Data: 3ppm

Repl #	SampleConc mg/L	StndConc mg/L	BlnkCorr Signal	Time	Signal Stored
1	2.516	2.516	0.014	17:00:58	Yes
2	2.577	2.577	0.015	17:01:03	Yes
Mean:	2.547	2.547	0.014		
SD:	0.0428	0.0428	0.0002		
%RSD:	1.682	1.682	1.74		