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**CONVENTIONAL WET CHEMISTRY ICP-AES
DEVELOPMENT FOR RPP-WTP AY-102/C-106
MELTER FEED SLURRY SIMULANTS – A
STATISTICAL REVIEW OF THE RESULTS FROM
THE PHASE I STUDY**

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April 2005

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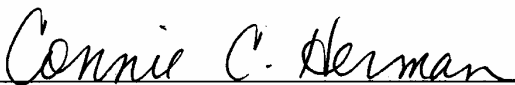


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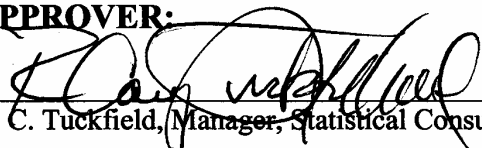


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EXECUTIVE SUMMARY

The River Protection Project (RPP) – Hanford Waste Treatment and Immobilization Plant (WTP) is to prepare and process High Level Waste (HLW) streams into glass waste forms that will meet HLW disposal requirements. Samples of HLW sludge and samples of this sludge mixed with glass-forming chemicals are to be taken and analyzed for process control. Glass characterization from the melter is not included in the scope. The development of viable analytical protocols to provide the required elemental analyses of these samples with rapid turnaround times (before and after addition of the glass-forming chemicals) has been defined as an RPP statement of work for the Analytical Development Section (ADS) of the Savannah River National Laboratory (SRNL). Wet chemistry is serving as the baseline comparison to laser ablation for method development.

One of the simulants used in this study by ADS was AY-102/C-106 melter feed slurry simulant, a simulant used to represent HLW samples after the addition of glass-forming chemicals. Several different dissolution methods were used by ADS in preparing samples of this simulant for elemental analyses by inductively coupled plasma-atomic emission spectroscopy (ICP-AES). The measurements generated by this process were provided to SRNL's Statistical Consulting Section (SCS) for analysis.

The measurement data generated for samples of the RPP-WTP AY-102/C-106 melter feed slurry simulant are presented in this report and the different approaches used to prepare the samples are statistically compared. Comparisons among three of the dissolution methods are highlighted in this analysis. The methods are: sodium peroxide fusion in nickel crucibles, acidification with HNO_3/HCL at room temperature, and cesium carbonate fusion in zirconium crucibles. A summary table of the measurement averages generated by the three methods is presented. The cesium carbonate fusion method yielded measurements with significantly different mean values from the other two preparation methods for several of the elements.

This report is being provided for informational purposes and supplements the technical report by Coleman and Edwards, "SRNL Phase I Tests of Wet Chemical Non-Dilute/ICP-AES Elemental Analysis Methods for Simulated HLW 2A and HLW 2B Hanford Waste Treatment Plant Samples – Interim Report," WSRC-TR-2005-00169, SRNL-RPP-2005-00023.

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LIST OF ACRONYMS

ADS	Analytical Development Section
ANOVA	Analysis of Variance
HLW	High Level Waste
HSD	Honestly Significant Difference
JMP	Pronounced “jump.” It’s a statistical software package, a registered trademark of SAS Institute, Inc.
LCS	Laboratory Control Sample
MFDS	Melter Feed Dried Solids
MFPV	Melter Feed Preparation Vessel
MFS	Melter Feed (Dried) Solids
MFVG	Melter Feed Vitrified Glass (Vitrified Solids)
RPP	River Protection Project
SCS	Statistical Consulting Section
SRNL	Savannah River National Laboratory
SRS	Savannah River Site
WTP	Waste Treatment Plant

1.0 INTRODUCTION AND BACKGROUND

The River Protection Project (RPP) – Hanford Waste Treatment and Immobilization Plant (WTP) is to prepare and process Hanford High Level Waste (HLW) streams into glass waste forms that will meet HLW disposal requirements. The Pretreatment Facility will transfer the HLW to the Melter Feed Preparation Vessel (MFPV) in the vitrification facility as part of this process. In the MFPV, the HLW sludge is to be blended with glass-forming chemicals to produce slurry that is an acceptable melter feed. Variations in the sludge retrieval, pretreatment, and vitrification processes will cause deviations in the nominal melter feed compositions and resulting glass chemistry. Samples of the MFPV are to be taken and analyzed to assess the extent of the deviations in the nominal melter feed. Specifically, MFPV samples are to be taken for each HLW batch transferred to this tank before the addition of the glass-forming chemicals; the samples are to be analyzed; the analytical results are to be used to guide the addition of the glass-forming chemicals; and after their addition, another set of MFPV samples is to be taken and analyzed. This final set of analytical measurements is to serve as the basis for the acceptance of the MFPV contents for transfer to the melter. Samples have to be analyzed and the results reported within 9 hours to ensure that feed is available to the melter. The development of viable analytical protocols to provide the required elemental analyses of these MFPV samples (before and after addition of the glass-forming chemicals) with rapid turnaround times has been defined as an RPP statement of work [1] for the Savannah River National Laboratory (SRNL). The characterization of the glass waste form produced by the melter is not included in the scope of this work.

In accepting this work, SRNL's Analytical Development Section (ADS) issued a Task Technical and Quality Assurance Plan [2] that covered a set of activities that were to be conducted by ADS using simulants previously prepared for the RPP-WTP program as the first phase (Phase I) of study. One of the simulants was melter feed slurry containing AY-102/C-106 simulant with glass-forming chemicals. Different dissolution methods were used by ADS in preparing samples of this simulant (on a dried solids and a vitrified solids basis) for elemental analyses by inductively coupled plasma-atomic emission spectroscopy (ICP-AES). Wet chemistry is serving as the baseline comparison to laser ablation for method development. The measurements generated by this process were provided to SRNL's Statistical Consulting Section (SCS) for analysis.

The purpose of this technical report is to present a statistical interpretation of the analytical data generated by ADS and provide a comparison of the results. This report is being provided for informational purposes and supplements the technical report by Coleman and Edwards, "SRNL Phase I Tests of Wet Chemical Non-Dilute/ICP-AES Elemental Analysis Methods for Simulated HLW 2A and HLW 2B Hanford Waste Treatment Plant Samples – Interim Report," WSRC-TR-2005-00169, SRNL-RPP-2005-00023. The statistical analyses were carried out using JMP® Version 5.1.2 [3] from SAS Institute, Inc. The validation and verification for this statistical software is provided in [4].

2.0 RESULTS

In this section the measurement data generated for samples of the RPP-WTP AY-102/C-106 melter feed slurry simulant are presented and the different approaches used to prepare the samples are statistically compared. A summary table of three of the dissolution methods used to analyze the samples of this material on a dried-solids basis is highlighted in the discussion that follows.

2.1 A Description of the Measurement Data

The measurement data from this ADS study are provided in Table A1 and Table A2 in the Appendix. Two tables are used to cover all of the elemental analyses that were recorded during this investigation. Table A1 provides elemental concentrations in parts per million (ppm) for the following elements: silver (Ag), aluminum (Al), boron (B), barium (Ba), calcium (Ca), cadmium (Cd), cerium (Ce), copper (Cu), iron (Fe), potassium (K), lanthanum (La), lithium (Li), magnesium (Mg), manganese (Mn), and molybdenum (Mo). Table A2 provides elemental concentrations in ppm for the following elements: sodium (Na), nickel (Ni), phosphorous (P), lead (Pb), sulfur (S), antimony (Sb), silicon (Si), tin (Sn), strontium (Sr), thorium (Th), titanium (Ti), tellurium (Tl), uranium (U), yttrium (Y), zinc (Zn), and zirconium (Zr). In addition to the elements, there are columns identifying the form of the simulant used for the analysis, the preparation method and type of crucible (if a crucible was used) employed to dissolve the sample and the type of sample involved. There were three different preparation/crucible combinations investigated for the simulant on a dried-solids basis and on a vitrified-solids basis. Table 2-1 provides a listing of these combinations.

**Table 2-1 A Listing of Preparation Methods Utilized
with Form of the AY-102/C-106 Melter Feed Slurry Simulant**

Form of Simulant	Preparation Method/Type of Crucible
AY-102/C-106 MFDS (melter feed dried-solids)	Cesium Carbonate Fusion/Pt
AY-102/C-106 MFDS (melter feed dried-solids)	Sodium Peroxide Fusion/Ni
AY-102/C-106 MFS (melter feed dried-solids)	Acidification w HNO ₃ /HCl
AY-102/C-106 MFVG (melter feed vitrified-solids)	Cesium Carbonate Fusion/Pt
AY-102/C-106 MFVG (melter feed vitrified-solids)	Potassium Carbonate/Pt
AY-102/C-106 MFVG (melter feed vitrified-solids)	Sodium Peroxide Fusion/Ni

The types of samples for this study included: blanks, trial samples (samples of the simulant), laboratory control samples (LCS), and spiked samples (samples of the simulant spiked with known amounts of one or more elements). The first three types of samples are the focus in the analyses that follow and these are used to provide insight into the relative performances of the dissolution methods investigated as part of this Phase I effort. However, note that the trial samples are the primary focus of the statistical comparisons. Measurements that were below the detection limit of the analytical process (indicated by a “<” in Tables A1 and A2) were replaced by half of the detection limit in the analyses that follow. Also, note that some values were not reported for some elements as indicated by a missing value (a blank) or the letters “NA” (for Not Available) in the tables. An example of this situation is provided by the lack of Ni measurements for samples dissolved in a nickel crucible.

2.2 Preliminary Plots of Measurement Data

Exhibit A1 in the Appendix provides a plot of the measurements by type of sample across all of the forms of the simulant and preparation methods by element in the sequence that the data were reported by ADS.

2.3 Statistical Comparisons

Exhibit A2 in the Appendix provides statistical comparisons among the preparation methods and forms of the simulant for each element for each type of sample. The statistical comparisons include a one-way analysis of variance (ANOVA) for these data (when enough data are available) investigating for a difference in the mean recoveries over these sets of measurements for the specified element. A statistically significant difference in the mean recoveries (at the 5% significance level) is indicated by a

value of 0.05 or less for “Prob>F” in these exhibits. If no value is provided for “Prob>F” in the exhibit, there was not enough data to conduct the statistical test. The means and standard deviations of the sets of measurements for each form of the simulant for each preparation method are also given in this exhibit.

Table 2-2 provides summary information for the measurements generated using the three preparation methods for the dried-solids form of this melter feed slurry simulant along with the LCS and blank samples. Exhibit A3 in the Appendix provides a more specific set of comparisons among the samples of the dried solids form of this melter feed slurry prepared by these three methods. In this exhibit, JMP’s Tukey-Kramer HSD (honestly significant difference) test is used to investigate for all differences among the mean measurements over the three preparation methods for each element. The results of this test for each element is a symmetric matrix covering the preparation methods used with positive entries in the matrix indicating a pair of preparation methods that yielded mean measurements that are significantly different.

In Table 2-2, if the cesium carbonate fusion preparation yielded measurements for the trial samples in Exhibit A3 in the Appendix that indicated a statistically significant different mean from the means of both of the other preparation methods, that entry is shaded.

**Table 2-2 Average Recovery (µg/g) by Element for AY-102/C-106 Melter Feed Slurry
on a Dried Solids Basis by Preparation Method**

Element	Trial (Simulant) Samples			LCSs (Laboratory Control Samples)			Blanks		
	Sodium Peroxide Fusion/Ni Crucible	Acidification with HNO ₃ /HCL	Cesium Carbonate Fusion/Pt Crucible	Sodium Peroxide Fusion/Ni Crucible	Acidification with HNO ₃ /HCL	Cesium Carbonate Fusion/Pt Crucible	Sodium Peroxide Fusion/Ni Crucible	Acidification with HNO ₃ /HCL	Cesium Carbonate Fusion/Pt Crucible
Ag	407.8	187.0	642.8	33.0	33.0	83.2	17.2	17.2	17.2
Al	10450.0	7380.0	10425.0	22450.0	24700.0	23600.0	156.5	156.5	156.5
B	10200.0	11700.0	10850.0	23300.0	24900.0	23700.0	62.0	62.0	62.0
Ba	442.0	323.3	352.0	1055.0	987.5	933.0	95.8	13.8	43.6
Ca	1867.5	1426.7	1387.5	12300.0	12750.0	10150.0	349.0	55.0	55.0
Cd	26.1	25.0	30.7	69.3	69.3	90.5	36.1	36.1	36.1
Ce	797.8	767.0	667.0	953.0	1245.0	525.0	209.5	209.5	209.5
Cr	916.5	370.0	405.8	1550.0	1200.0	632.5	420.0	33.1	33.1
Cu	57.7	76.6	105.0	39.7	39.7	51.8	20.7	20.7	20.7
Fe	37575.0	38100.0	36725.0	101500.0	10300.0	99100.0	87.5	7.1	7.1
K	3377.5	2306.7	2697.5	28900.0	29900.0	24050.0	1960.0	835.0	835.0
La	400.8	419.7	376.3	210.0	424.0	177.0	70.5	70.5	70.5
Li	4800.0	4843.3	4420.0	16550.0	17400.0	14700.0	36.1	36.1	36.1
Mg	403.3	380.3	397.3	5200.0	5295.0	5135.0	12.1	12.1	12.1
Mn	8235.0	8506.7	8002.5	14850.0	15050.0	14450.0	5.2	5.2	5.2
Mo	910.8	150.0	130.4	1650.0	1785.0	384.8	806.0	153.0	153.0
Na	.	32266.7	30525.0	.	.	80200.0	.	373.0	373.0
Ni	.	1246.7	1212.0	.	.	8350.0	.	49.9	49.9
P	932.5	891.7	1098.8	2480.0	2480.0	3240.0	1290.0	1290.0	1290.0
Pb	2265.0	1806.7	1026.3	1747.5	1747.5	2282.5	910.0	910.0	910.0
S	275.6	.	.	735.0	.	.	381.5	.	.
Sb	1905.0	212.3	229.5	3630.0	3870.0	674.0	1670.0	98.0	98.0
Si	86025.0	5206.7	82725.0	232000.0	238000.0	223500.0	89.5	89.5	89.5
Sn	574.4	550.2	676.3	1530.0	1530.0	2000.0	795.0	795.0	795.0
Sr	673.0	548.3	535.8	2675.0	2625.0	2120.0	80.9	27.5	27.5
Th	66.8	.	.	159.0	.	.	67.9	.	.
Ti	8.7	2.2	17.5	7060.0	7135.0	6990.0	12.1	3.2	3.2
Tl	343.3	.	.	944.0	.	.	375.0	.	.
U	141.6	.	.	578.5	.	.	259.0	.	.
Y	67.5	1460.0	74.0	330.3	330.3	431.5	172.0	172.0	172.0
Zn	4270.0	3310.0	2988.3	2315.0	2670.0	204.5	1130.0	17.2	17.2
Zr	654.0	279.7	513.0	1145.0	1105.0	876.5	97.2	9.2	9.2

Multiple digestion methods were tested because no single digestion method is suitable for all of the elemental analyses needed for WTP process control. Although several combinations of two digestion methods would supply the needed elemental analyses, a tandem dissolution approach of a sodium peroxide fusion in a nickel crucible and a warm-acid method has certain advantages in terms of combining a very aggressive digestion (the sodium peroxide fusion) with a very rapid method (the warm-acid method). The former method provides analyses for all elements of interest except Na and Ni while the later method, which may not completely dissolve the sample, does dissolve the Na and Ni elements to provide analyses for this pair of elements that cannot be obtained from the sodium peroxide fusion. This tandem approach was then compared with a cesium carbonate fusion in platinum crucibles. This later approach was investigated because of its potential as a single-digestion method for the elemental analysis of the WTP process samples.

The results from Table 2-2 indicate that the cesium carbonate fusion method yielded measurements with mean values that were statistically smaller at the 5% significance level than the mean values for the measurements from the other two preparation methods for: Fe, Li, Mn, Na, and Pb, while the mean values for Ag, Cu, and Ti for the cesium carbonate fusion method were statistically larger at the 5% significance level than the mean values for the other two preparation methods. The cesium carbonate fusion measurement averages for B, Ba, K, and Zr were statistically different from the means of both of the other preparation methods, even though the cesium carbonate fusion measurement averages fell in between the averages of the measurements of the other two preparation methods. For example, consider Fe, the analyte with the highest measured concentrations for the simulant samples that showed a statistically significant difference among the mean values. The average cesium carbonate fusion value (36,725 µg/g) for Fe is 2.3% smaller than the average sodium peroxide fusion value (37,575 µg/g) and 3.6% smaller than the average warm acid value (38,100 µg/g). However, accuracy and precision requirements for the WTP elemental analyses have not yet been established. Thus, even though there are statistically significant differences, it is not clear that these point to analytical issues at this stage of the study. As seen in the plots of Exhibit A2, the precision was quite good for many of the elements on many of the sets of analyses, which leads to comparisons among the methods that are sensitive to small differences for those elements.

3.0 CONCLUSIONS

The measurement data generated for samples of the RPP-WTP AY-102/C-106 simulant after the addition of glass forming chemicals are presented in this report and the different approaches used to prepare the samples are statistically compared. Comparisons among three of the dissolution methods are highlighted in this analysis. The methods are: sodium peroxide fusion in nickel crucibles, acidification with HNO₃/HCL at room temperature, and cesium carbonate fusion in zirconium crucibles. A summary table of the measurement averages generated by the three methods is presented. The cesium carbonate fusion method yielded measurements with mean values that were significantly different from the other two preparation methods for several of the elements.

4.0 REFERENCES

- [1] “WSRC-SRNL NTP Wet Chemistry & Laser Ablation Testing,” CCN 0918450, August 2004.
- [2] Herman, C. C., C. J. Coleman, and K. E. Zeigler, “Task Technical and Quality Assurance Plan for Conventional Wet Chemistry and Laser Ablation ICP-AES Development,” WSRC-TR-2004-00447, SRNL-RPP-2004-00073, Revision 0, October 2004.
- [3] SAS Institute, Inc., **JMP™ Version 5 Statistics and Graphics Guide**, SAS Institute, Inc., Cary NC, 2002.
- [4] Baker, R. A., T. B. Edwards, S. P. Harris, C. D. Harvel, and E. P. Shine, “Software QA Plan and Verification & Validation for Commercial Statistical Packages Utilized by the Statistical Consulting Section of SRNL (U),” WSRC-RP-99-00422, Revision 4, May 2005.

APPENDIX
Supporting Tables and Exhibits

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Table A1. First Set of Elemental Analyses of Samples of WTP-RPP AY-102/C-106 Melter Feed Slurry

Simulant	Prep/Crucible	Type of Sample	Ag (ppm)	Al (ppm)	B (ppm)	Ba (ppm)	Ca (ppm)	Cd (ppm)	Ce (ppm)	Cr (ppm)	Cu (ppm)	Fe (ppm)	K (ppm)	La (ppm)	Li (ppm)	Mg (ppm)	Mn (ppm)	Mo (ppm)
AY-102/C-106 MFS	Acidification w HNO3/HCl/	Blank	<34.4	<313	<124	<27.5	<110	<72.2	<419	<66.2	<41.3	<14.2	<1670	<141	<72.2	<24.1	<10.3	<306
AY-102/C-106 MFS	Acidification w HNO3/HCl/	Trial	256	7130	11600	316	1420	<62.1	879	351	77	38200	2490	448	4860	365	8540	<264
AY-102/C-106 MFS	Acidification w HNO3/HCl/	Trial	125	7140	11800	328	1430	<42.9	706	377	76	38000	2150	404	4790	388	8490	223
AY-102/C-106 MFS	Acidification w HNO3/HCl/	Trial	180	7870	11700	326	1430	<44.7	716	382	76.8	38100	2280	407	4880	388	8490	<190
AY-102/C-106 MFS	Acidification w HNO3/HCl/	LCS	<66.9	24600	24800	1020	12800	<140	1310	1400	<80.3	10300	30500	430	17300	5280	15000	2080
AY-102/C-106 MFS	Acidification w HNO3/HCl/	LCS	<65.2	24800	25000	955	12700	<137	1180	1000	<78.3	10300	29300	418	17500	5310	15100	1490
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	Blank	<34.4	<313	<124	43.6	<110	<72.2	<419	<66.2	<41.3	<14.2	<1670	<141	<72.2	<24.1	<10.3	<306
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	Trial	636	10200	10900	343	1450	<53.1	624	416	105	36400	2600	358	4330	400	7920	<293
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	Trial	526	10500	10900	361	1340	<69.7	736	382	111	37200	2800	397	4450	404	8110	<228
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	Trial	732	10500	10700	346	1340	<61.9	646	410	101	36500	2710	369	4440	389	7950	<263
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	Trial	677	10500	10900	358	1420	<61.0	662	415	103	36800	2680	381	4460	396	8030	<259
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	LCS	122	23600	23600	921	10200	<176	<1020	592	<101	99000	23300	<344	14700	5100	14400	<748
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	LCS	<88.7	23600	23800	945	10100	<186	<1080	673	<106	99200	24800	<364	14700	5170	14500	<791
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	Blank	<34.4	<313	<124	95.8	349	<72.2	<419	420	<41.3	<175	1960	<141	<72.2	<24.1	<10.3	806
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	Trial	288	10200	10100	431	1690	<56.4	772	798	49.8	37300	3480	397	4720	392	8180	764
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	Trial	425	10600	10100	425	1830	<55.5	818	834	55.7	37900	3170	408	4840	406	8280	811
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	Trial	452	10500	10300	445	2030	<52.6	874	944	62.4	37700	3450	404	4790	408	8280	998
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	Trial	466	10500	10300	467	1920	<44.2	727	1090	62.9	37400	3410	394	4850	407	8200	1070
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	LCS	<66.9	22400	23700	1090	12400	<140	932	1790	<80.3	102000	26900	<274	16500	5190	14800	1670
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	LCS	<65.2	22500	22900	1020	12200	<137	974	1310	<78.3	101000	30900	283	16600	5210	14900	1630
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	Blank	<34.4	<313	<124	95.8	349	<72.2	<419	420	<41.3	<175	1960	<141	<72.2	<24.1	<10.3	806
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	Trial	502	10600	10100	407	1750	<54.0	813	750	60.8	37900	3540	401	4720	413	8310	579
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	Trial	477	10600	9980	645	1700	<54.7	892	1950	89.7	37600	3500	412	4690	304	8270	2270
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	Trial	405	10600	9930	498	1930	<49.8	785	1170	62.6	37900	3690	412	4870	406	8310	1210
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	Trial	494	11000	9760	525	2200	<63.1	851	1320	63.2	39000	3890	434	4910	410	8520	1490
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	LCS	<66.9	22400	23700	1090	12400	<140	932	1790	<80.3	102000	26900	<274	16500	5190	14800	1670
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	LCS	<65.2	22500	22900	1020	12200	<137	974	1310	<78.3	101000	30900	283	16600	5210	14900	1630
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	Blank	<19.8	<180	<71.3	35.2	<63.4	<41.6	<242	<38.1	<23.8	<8.20	1020	<81.2	<41.6	<13.9	<5.94	<177
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	Trial	528	11200	10700	369	1380	46.8	614	429	91.1	37100	3250	359	4520	418	8120	<161
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	Trial	499	11300	11100	381	1390	49.8	720	430	94.3	37400	3580	390	4550	416	8190	<202
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	Trial	543	11300	10600	371	1400	46.1	648	423	92.8	37400	3010	372	4580	429	8200	<170
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	Trial	600	11100	10800	364	1360	45	589	451	90.6	36900	3270	357	4450	408	8040	<177
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	Trial	596	11100	11100	358	1370	44.6	578	433	87.8	36700	2660	354	4480	412	8040	<141
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	LCS	125	23700	24700	928	10500	<115	<666	679	67.1	99900	25500	<224	15100	5200	14600	<486
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	LCS	<57.7	23900	24600	946	10500	<121	<703	578	<69.2	100000	25400	<236	15200	5260	14700	<514
AY-102/C-106 MFVG	Potassium Carbonate/Pt	Blank	<26.8	<244	<96.5	<21.5	<85.8	<56.3	<327	<51.6	<32.2	<11.1		<110	78	<18.8	<8.04	<239
AY-102/C-106 MFVG	Potassium Carbonate/Pt	Trial	443	11100	10800	332	1320	<42.3	666	411	86.4	36300		382	4560	402	7900	<180
AY-102/C-106 MFVG	Potassium Carbonate/Pt	Trial	397	11000	10800	332	1280	<63.0	783	406	91	35300		395	4400	382	7830	<267
AY-102/C-106 MFVG	Potassium Carbonate/Pt	Trial	472	11000	10800	337	1310	<48.2	755	380	93.4	36000		399	4550	396	7860	<205

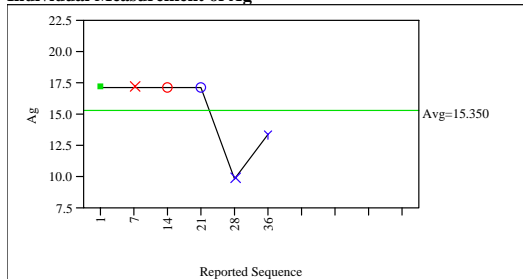
Table A2. Second Set of Elemental Analyses of Samples of WTP-RPP AY-102/C-106 Melter Feed Slurry

Simulant	Prep/Crucible	Type of Sample	Na (ppm)	Ni (ppm)	P (ppm)	Pb (ppm)	S (ppm)	Sb (ppm)	Si (ppm)	Sn (ppm)	Sr (ppm)	Th (ppm)	Ti (ppm)	Tl (ppm)	U (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)
AY-102/C-106 MFS	Acidification w HNO3/HCl/	Blank	<746	<99.7	<2580	<1820		<196	<179	<1590	<55.0		<6.32			<344	<34.4	<18.3
AY-102/C-106 MFS	Acidification w HNO3/HCl/	Trial	32300	1260	<2220	1740		232	4590	<1370	545		<5.43			<296	3330	277
AY-102/C-106 MFS	Acidification w HNO3/HCl/	Trial	32300	1220	<1530	1760		193	4780	<945	547		<3.75			<204	3300	304
AY-102/C-106 MFS	Acidification w HNO3/HCl/	Trial	32200	1260	<1600	1920		212	6250	<986	553		<3.91			4130	3300	258
AY-102/C-106 MFS	Acidification w HNO3/HCl/	LCS	NA	Ni	<5020	<3540		4530	237000	<3100	2640		7100			<669	3220	1020
AY-102/C-106 MFS	Acidification w HNO3/HCl/	LCS	NA	NA	<4900	<3450		3210	239000	<3020	2610		7170			<652	2120	1190
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	Blank	<746	<99.7	<2580	<1820		<196	<179	<1590	<55.0		<6.32			<344	<34.4	<18.3
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	Trial	30300	1190	<2470	<1700		191	78500	<1170	545		18.8			<253	2961	492
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	Trial	30800	1258	<1920	<1350		262	84800	<1530	537		15.7			<331	3042	531
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	Trial	30400	1210	<2220	1730		215	83200	<1370	519		17.5			1.94	2960	515
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	Trial	30600	1190	<2180	<1700		250	84400	<1340	542		18			1.94	2990	514
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	LCS	80300	8190	<6300	<4440		534	222000	<3890	2100		6980			<839	199	864
AY-102/C-106 MFDS	Cesium Carbonate Fusion/Pt	LCS	80100	8510	<6660	<4690		814	225000	<4110	2140		7000			<887	210	889
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	Blank			<2580	<1820	<763	1670	<179	<1590	80.9	67.9	<24.1	375	259	<344	1130	97.2
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	Trial			<2020	2070	<596	1660	85200	<1240	630	63.9	<18.8	311	<134	<268	4040	634
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	Trial			<1980	2340	<586	1540	87100	<1220	656	55.5	<18.5	382	284	<264	4030	642
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	Trial			<1880	2230	<556	1950	86300	<1160	713	72.2	<17.5	366	163	1.93	4350	664
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	Trial			<1580	2420	<467	2470	85500	<975	693	75.5	<14.7	314	<105	1.96	4660	676
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	LCS			<5020	<3540	<1490	4260	231000	<3100	2710	175	7050	1100	679	<669	2790	1110
AY-102/C-106 MFDS	Sodium Peroxide Fusion/Ni	LCS			<4900	<3450	<1450	3000	233000	<3020	2640	143	7070	788	478	<652	1840	1180
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	Blank			<2580	<1820	<763	1670	<179	<1590	80.9	67.9	<24.1	375	259	<344	1130	97.2
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	Trial			<1930	2100	<570	1170	86400	<1190	652	49.7	<18.0	318	199	<257	3750	639
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	Trial			<1960	3030	<578	5450	85200	1370	682	186	<18.2	647	207	<260	6880	782
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	Trial			<1780	2540	<526	2840	86000	<1100	706	106	<16.6	439	189	1.93	4980	695
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	Trial			<2260	2590	<667	3330	88300	<1390	775	103	<21.0	494	200	1.93	5400	742
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	LCS			<5020	<3540	<1490	4260	231000	<3100	2710	175	7050	1100	679	<669	2790	1110
AY-102/C-106 MFVG	Sodium Peroxide Fusion/Ni	LCS			<4900	<3450	<1450	3000	233000	<3020	2640	143	7070	788	478	<652	1840	1180
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	Blank	524	<57.4	<1490	<1050		<113	<103	<917	<31.7		<3.64			<198	<19.8	<10.5
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	Trial	32400	1160	<1360	<958		226	85400	<839	532		19.1			<181	3090	530
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	Trial	33100	1190	<1700	<1200		287	85900	<1050	531		20			<227	3130	530
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	Trial	32400	1210	<1430	<1010		249	85900	<881	541		18.4			<190	3090	539
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	Trial	31900	1210	<1490	<1050		224	83900	<918	531		18.3			2.5	3030	494
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	Trial	31700	1180	<1190	<839		182	83900	<734	535		18.9			2.52	3030	501
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	LCS	85500	8330	<4100	<2890		581	230000	<2530	2130		7020			<546	220	904
AY-102/C-106 MFVG	Cesium Carbonate Fusion/Pt	LCS	85600	8400	<4330	<3050		709	232000	<2670	2150		7070			<577	211	928
AY-102/C-106 MFVG	Potassium Carbonate/Pt	Blank	<582	<77.8	<2010	<1420		<153	<139	<1240	<42.9		<4.93			<268	<26.8	<14.2
AY-102/C-106 MFVG	Potassium Carbonate/Pt	Trial	29000	1090	<1510	1520		242	82000	<933	543		18.9			1.93	2960	494
AY-102/C-106 MFVG	Potassium Carbonate/Pt	Trial	29100	565	<2250	<1590		260	81300	<1390	514		20.1			1.92	2930	483
AY-102/C-106 MFVG	Potassium Carbonate/Pt	Trial	29000	929	<1720	1610		297	82400	<1060	533		18.8			1.93	2970	504

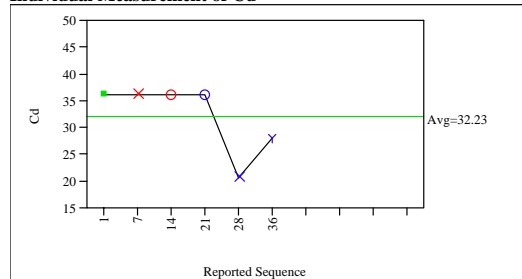
Exhibit A1. Elemental Measurements Plotted by Sample Type in Reported Sequence

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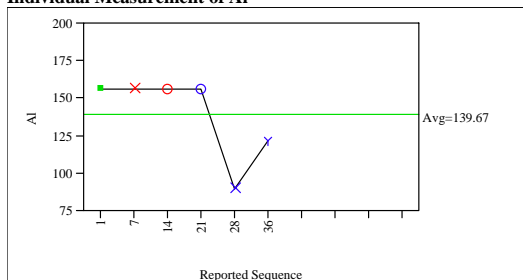
Individual Measurement of Ag



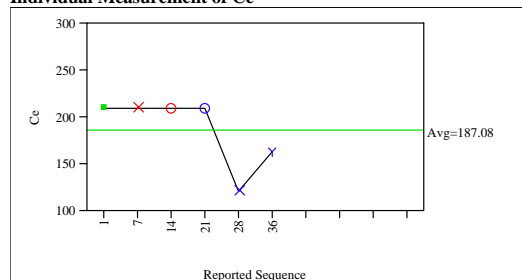
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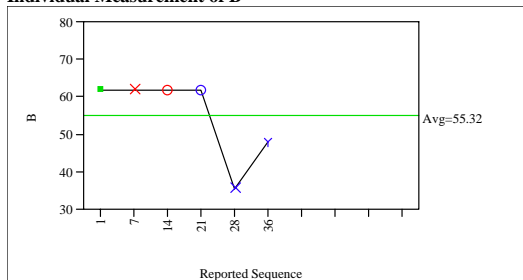
Individual Measurement of Al



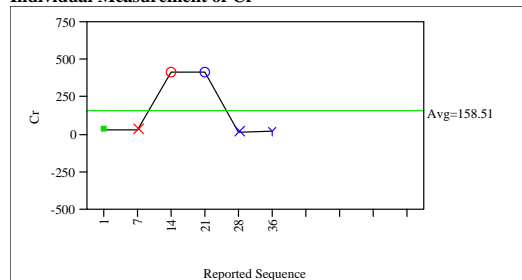
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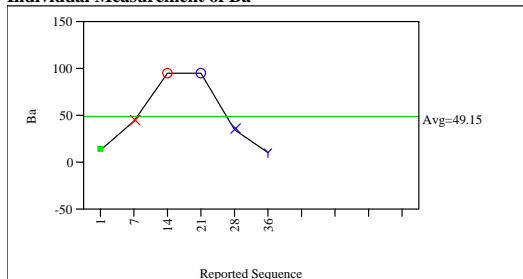
Individual Measurement of B



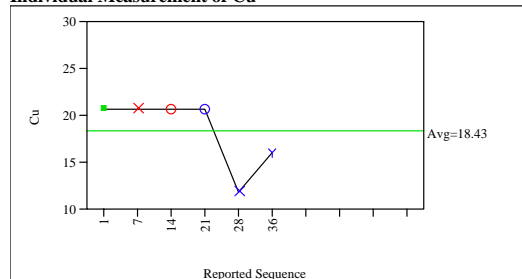
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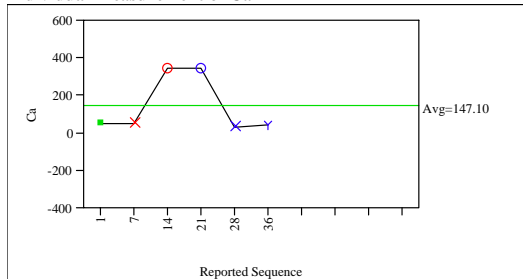
Individual Measurement of Ba



Individual Measurement of Cu



Individual Measurement of Ca



Individual Measurement of Fe

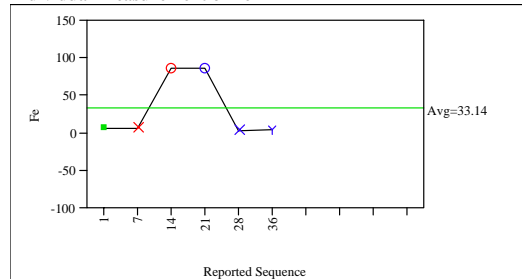
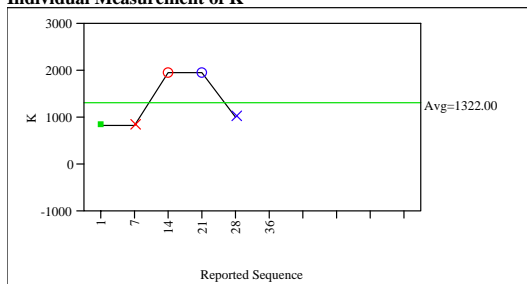


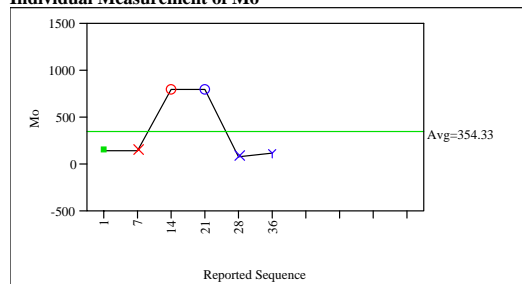
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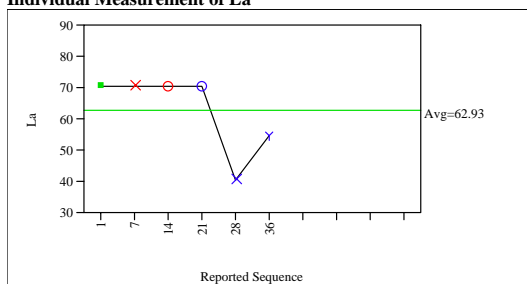
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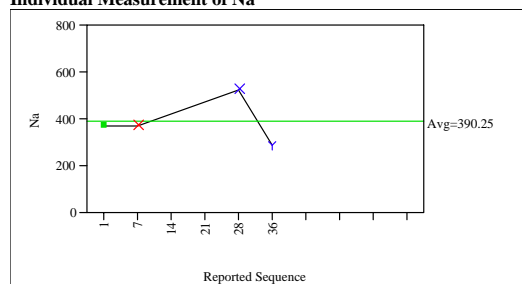
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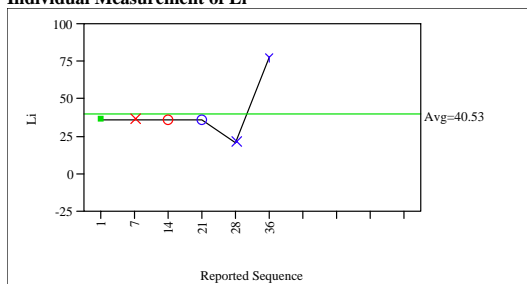
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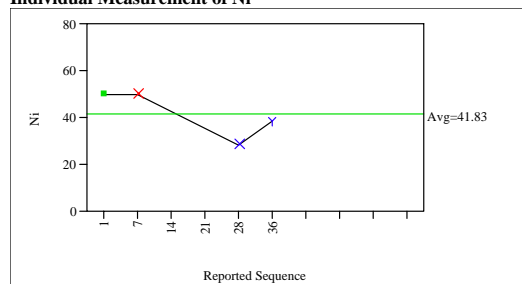
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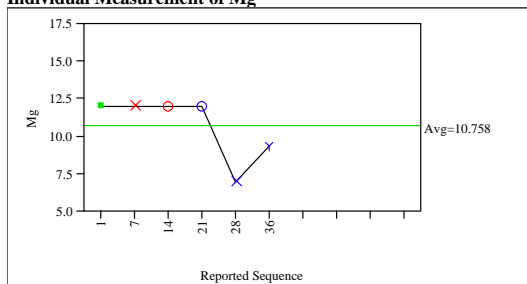
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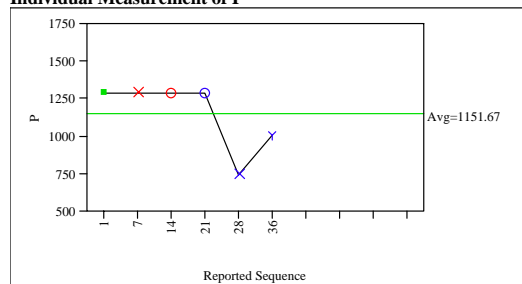
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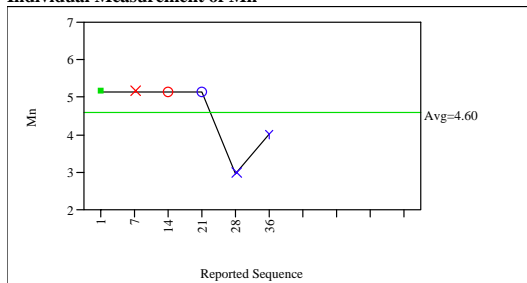
Individual Measurement of Mg



Individual Measurement of P



Individual Measurement of Mn



Individual Measurement of Pb

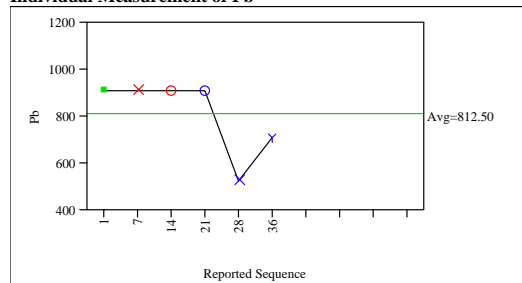
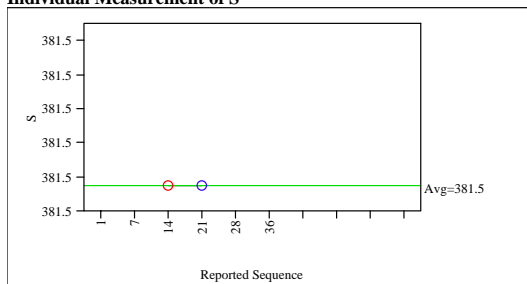


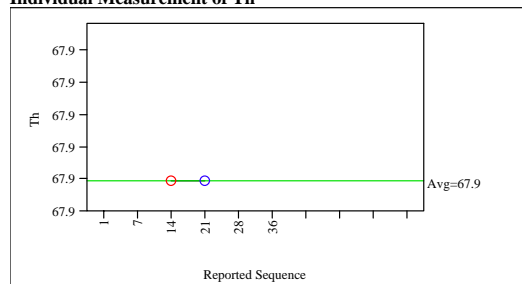
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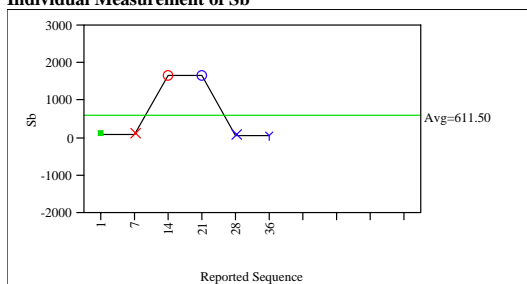
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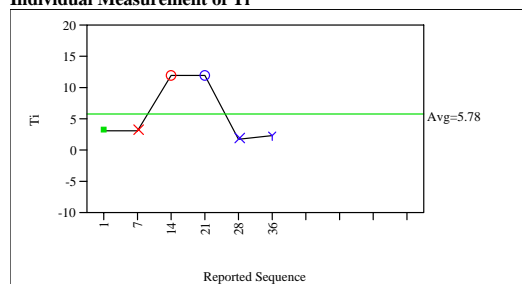
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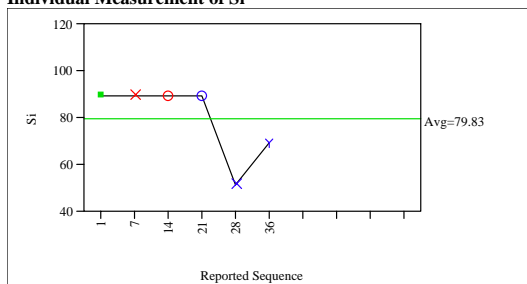
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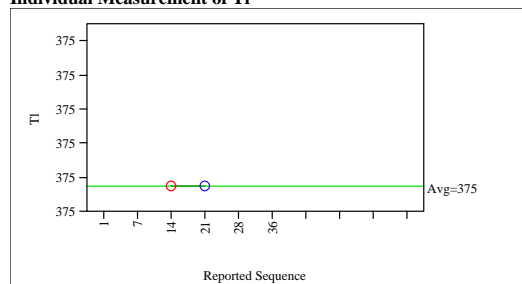
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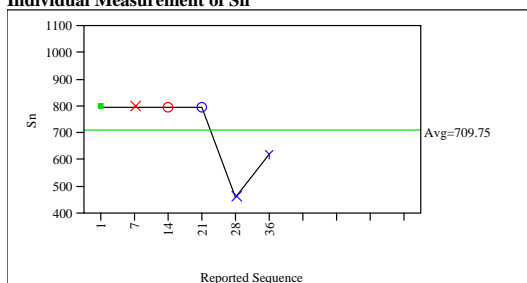
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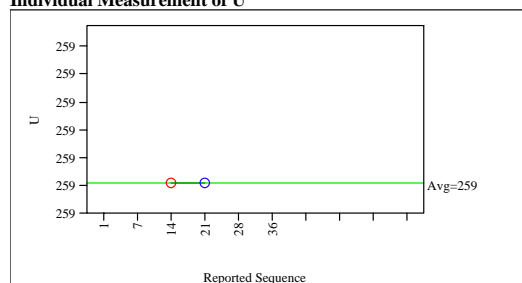
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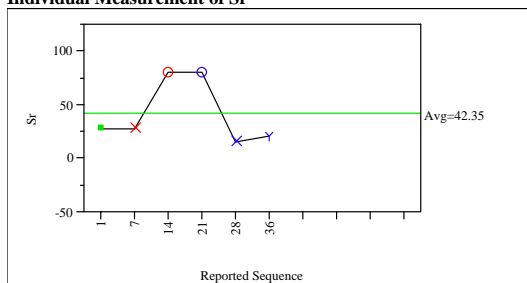
Individual Measurement of Sn



Individual Measurement of U



Individual Measurement of Sr



Individual Measurement of Y

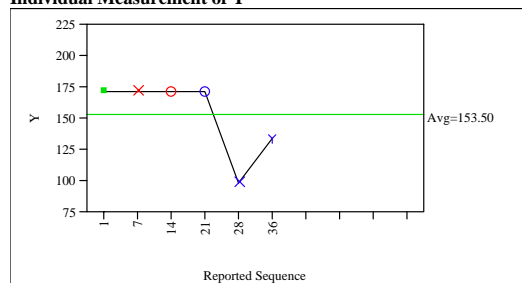
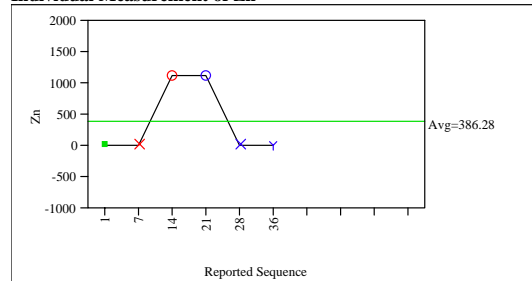


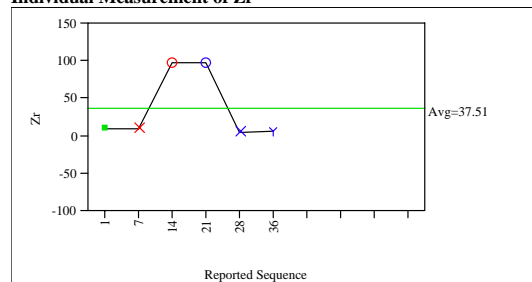
Exhibit A1. Elemental Measurements Plotted by Sample Type in Reported Sequence

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Individual Measurement of Zn

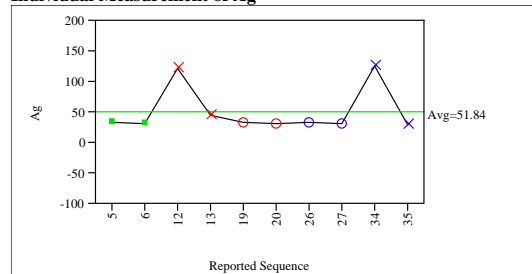


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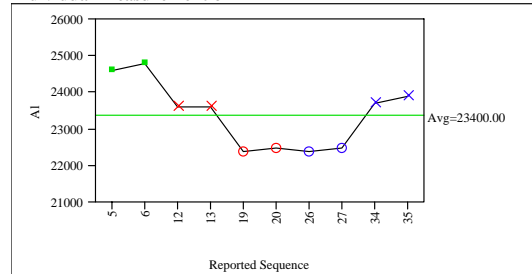


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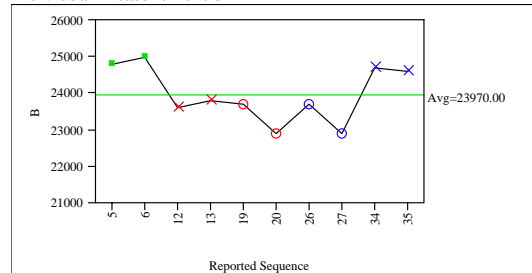
Individual Measurement of Ag



Individual Measurement of Al

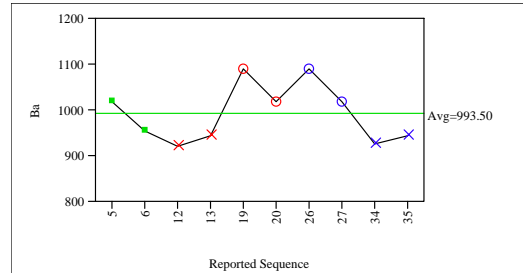


Individual Measurement of B

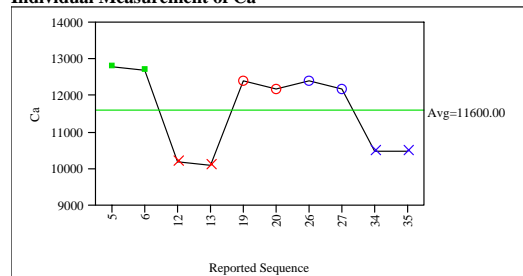


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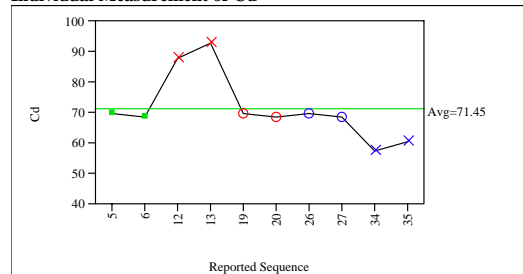
Individual Measurement of Ba



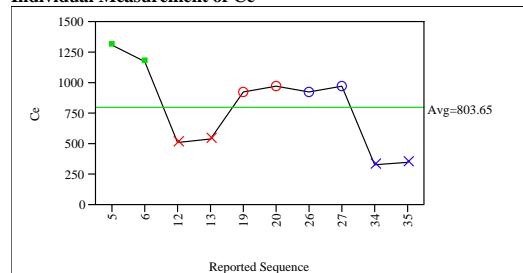
Individual Measurement of Ca



Individual Measurement of Cd



Individual Measurement of Ce



Individual Measurement of Cr

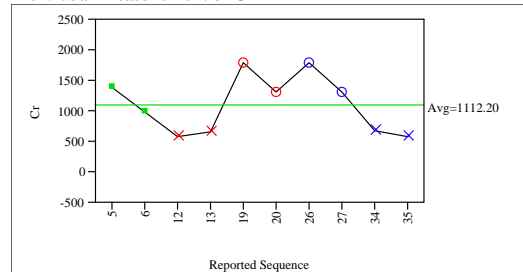
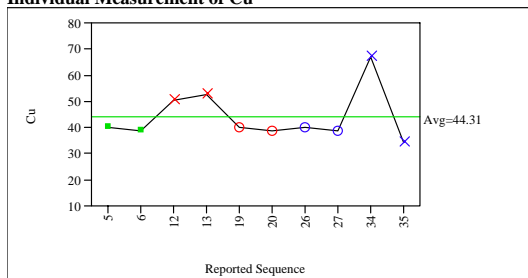


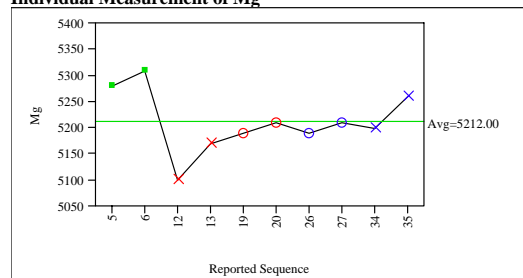
Exhibit A1. Elemental Measurements Plotted by Sample Type in Reported Sequence

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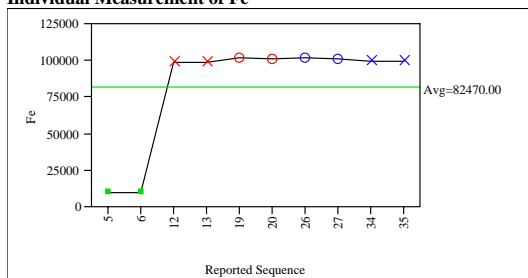
Individual Measurement of Cu



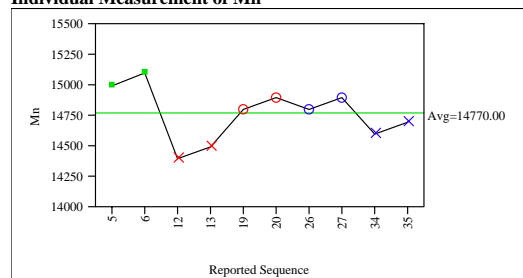
Individual Measurement of Mg



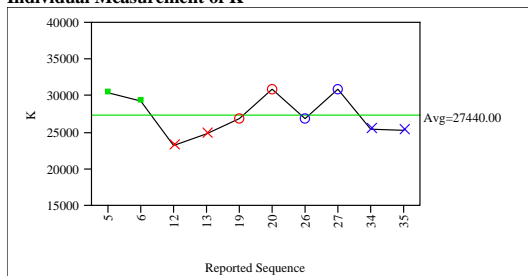
Individual Measurement of Fe



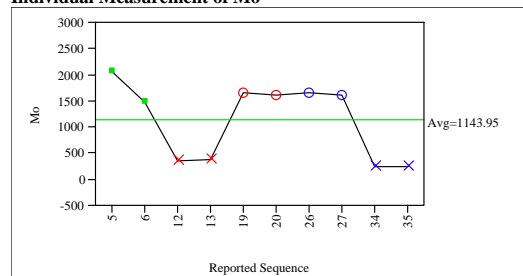
Individual Measurement of Mn



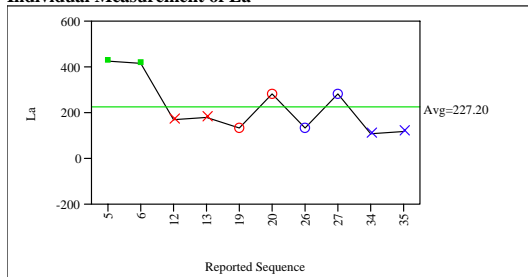
Individual Measurement of K



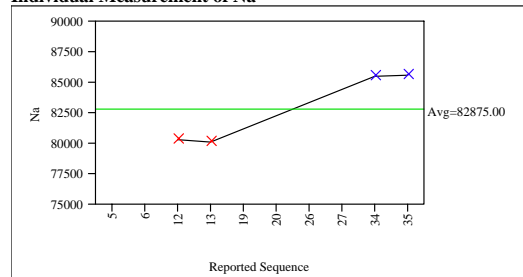
Individual Measurement of Mo



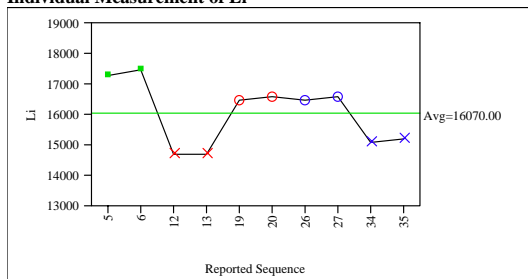
Individual Measurement of La



Individual Measurement of Na



Individual Measurement of Li



Individual Measurement of Ni

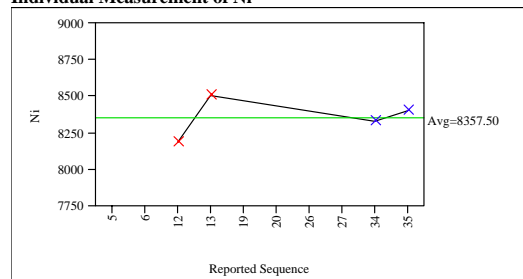
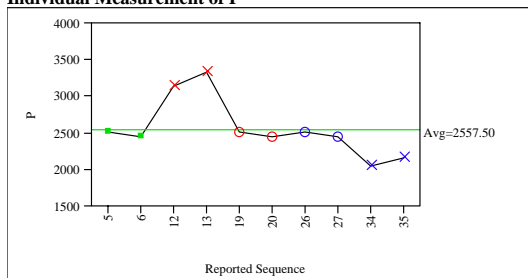


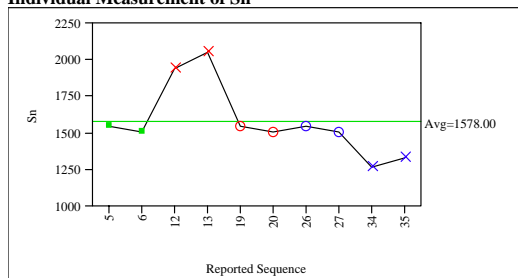
Exhibit A1. Elemental Measurements Plotted by Sample Type in Reported Sequence

Type of Sample=LCS

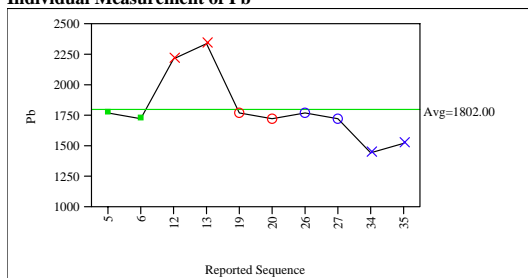
Individual Measurement of P



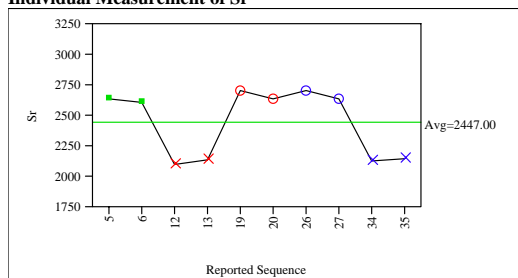
Individual Measurement of Sn



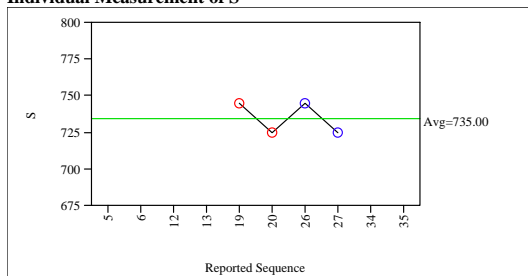
Individual Measurement of Pb



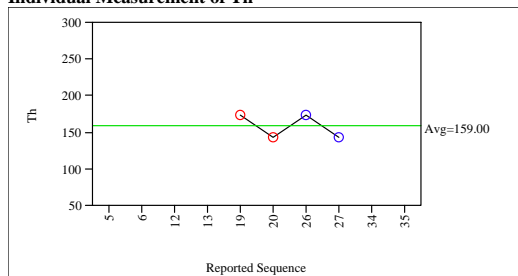
Individual Measurement of Sr



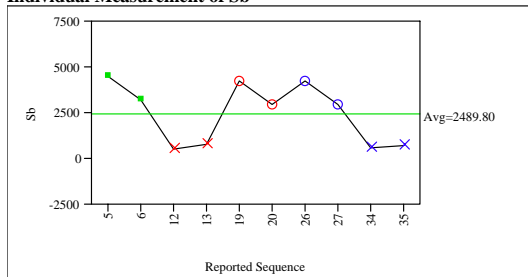
Individual Measurement of S



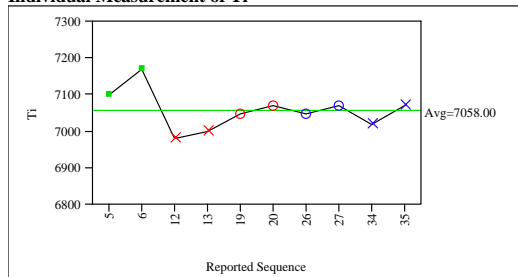
Individual Measurement of Th



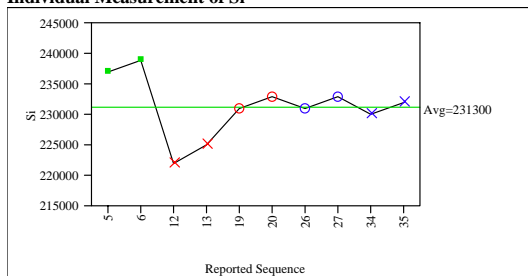
Individual Measurement of Sb



Individual Measurement of Ti



Individual Measurement of Si



Individual Measurement of Tl

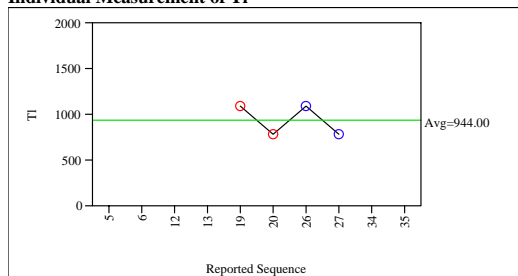
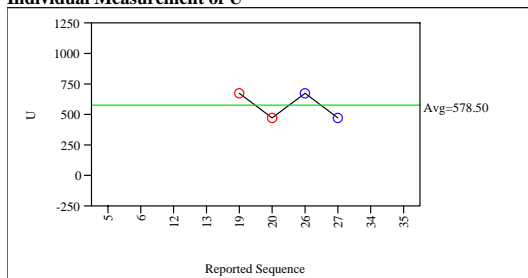


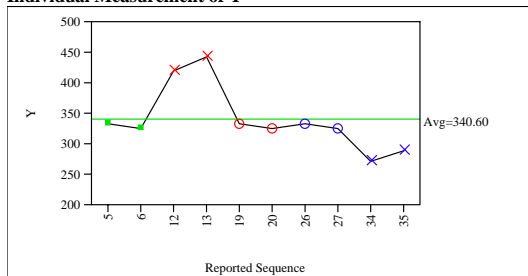
Exhibit A1. Elemental Measurements Plotted by Sample Type in Reported Sequence

Type of Sample=LCS

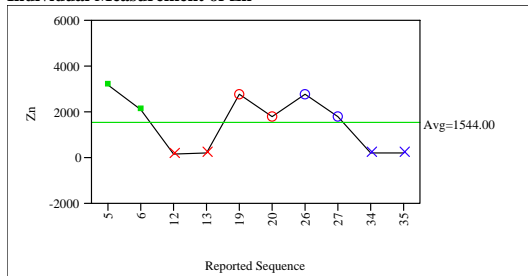
Individual Measurement of U



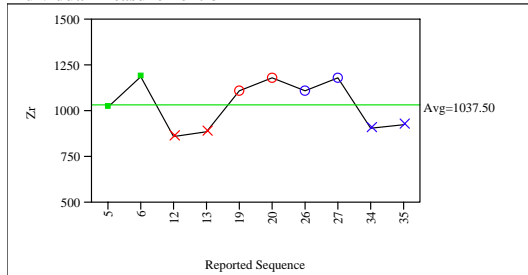
Individual Measurement of Y



Individual Measurement of Zn

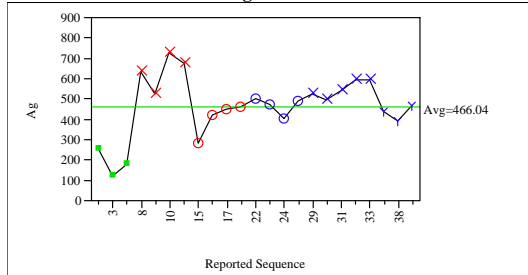


Individual Measurement of Zr



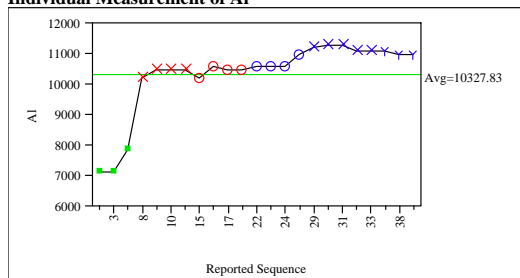
Type of Sample=Trials

Individual Measurement of Ag

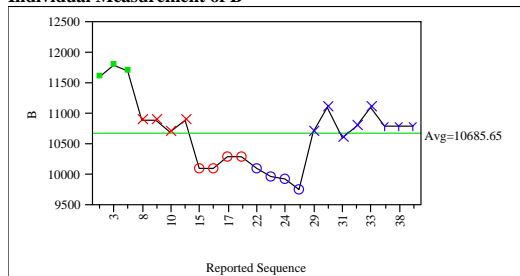


Type of Sample=Trials

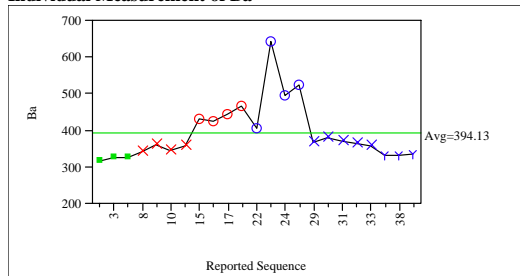
Individual Measurement of Al



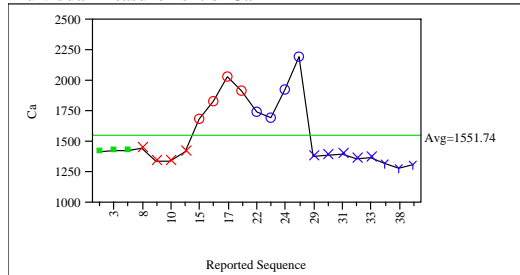
Individual Measurement of B



Individual Measurement of Ba



Individual Measurement of Ca



Individual Measurement of Cd

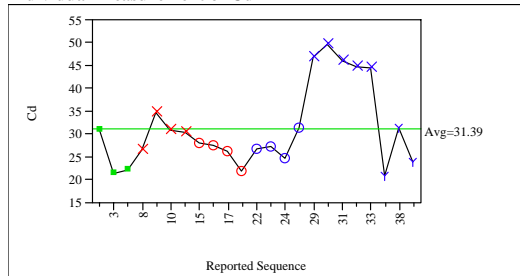
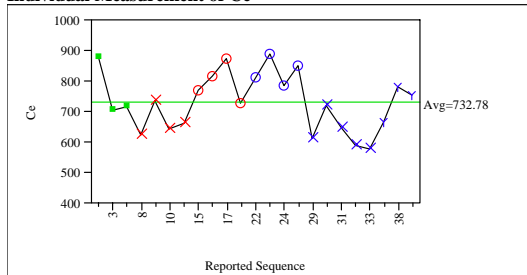


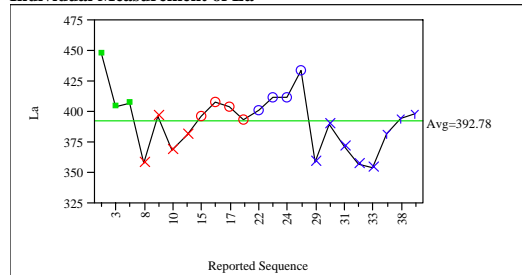
Exhibit A1. Elemental Measurements Plotted by Sample Type in Reported Sequence

Type of Sample=Trials

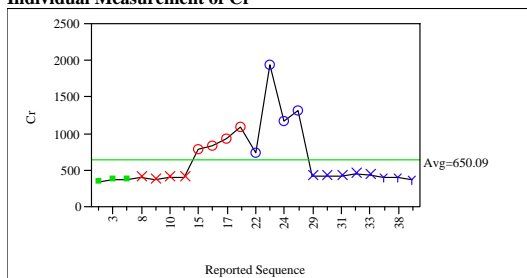
Individual Measurement of Ce



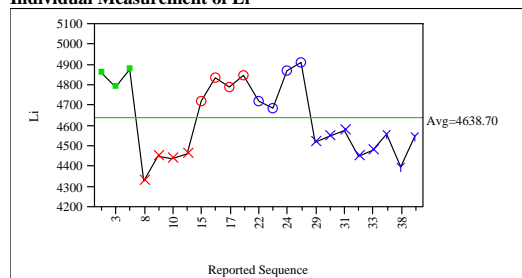
Individual Measurement of La



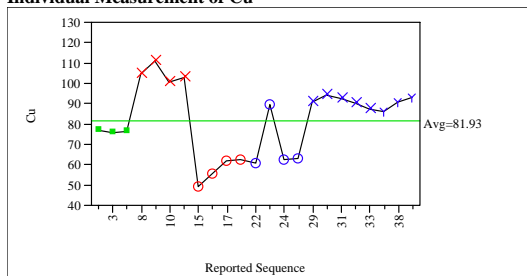
Individual Measurement of Cr



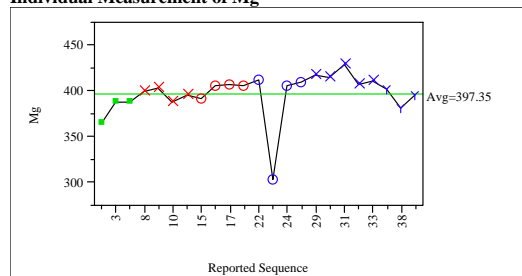
Individual Measurement of Li



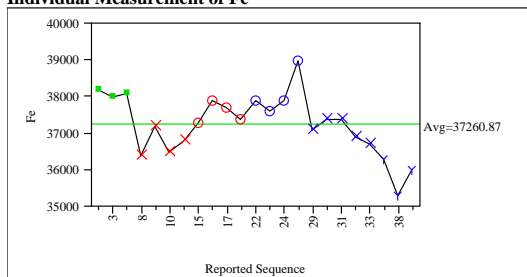
Individual Measurement of Cu



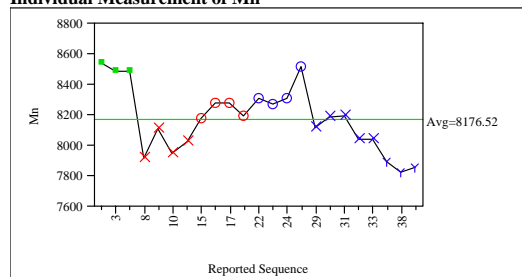
Individual Measurement of Mg



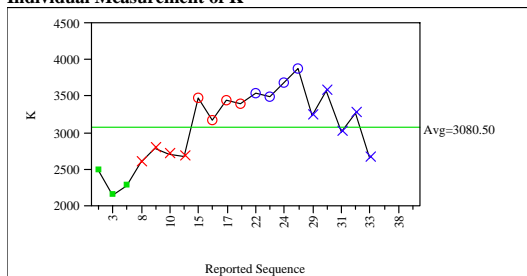
Individual Measurement of Fe



Individual Measurement of Mn



Individual Measurement of K



Individual Measurement of Mo

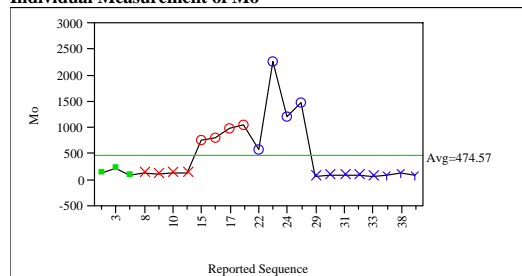
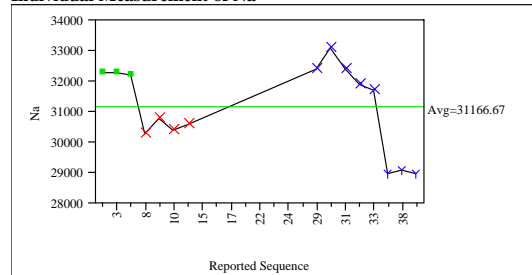


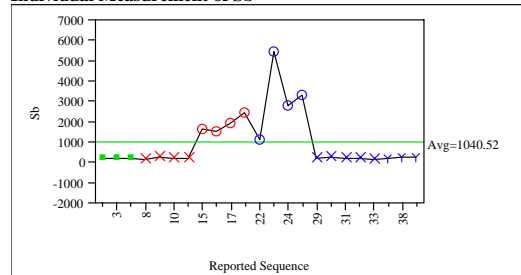
Exhibit A1. Elemental Measurements Plotted by Sample Type in Reported Sequence

Type of Sample=Trials

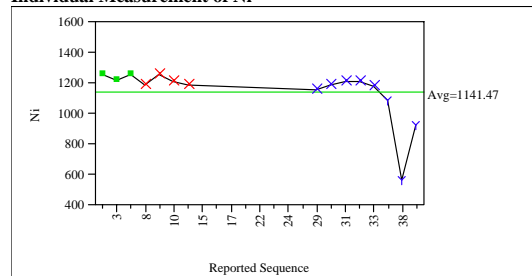
Individual Measurement of Na



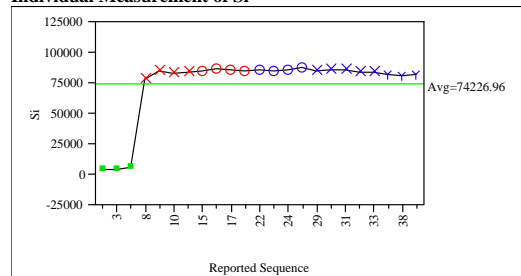
Individual Measurement of Sb



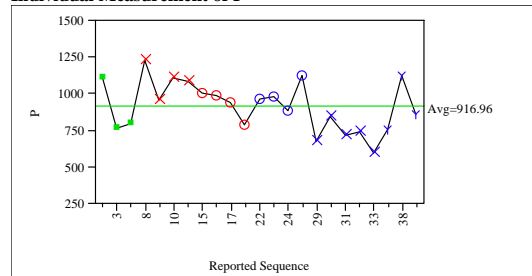
Individual Measurement of Ni



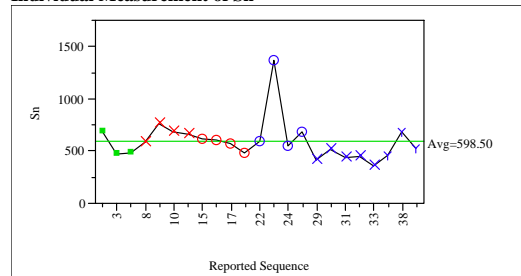
Individual Measurement of Si



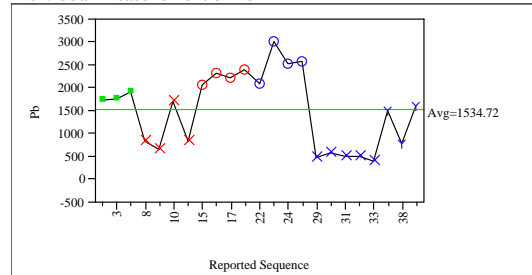
Individual Measurement of P



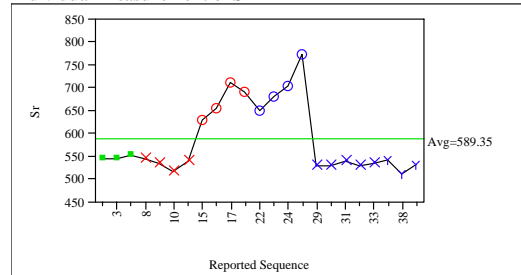
Individual Measurement of Sn



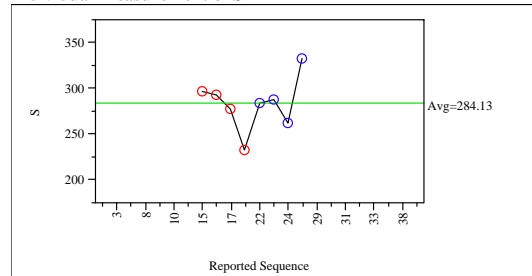
Individual Measurement of Pb



Individual Measurement of Sr



Individual Measurement of S



Individual Measurement of Th

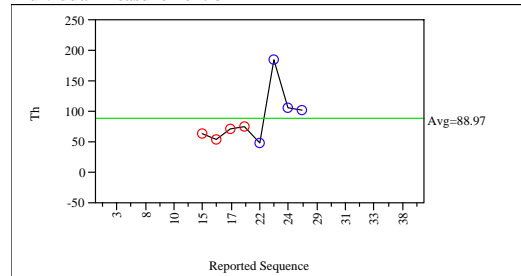
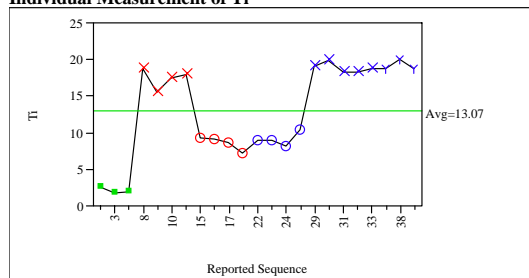


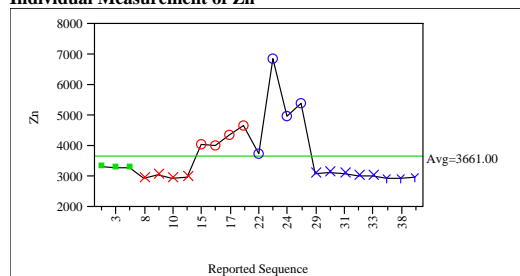
Exhibit A1. Elemental Measurements Plotted by Sample Type in Reported Sequence

Type of Sample=Trials

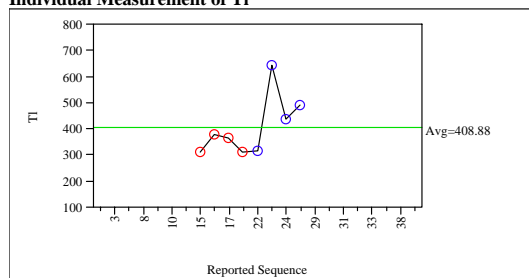
Individual Measurement of Ti



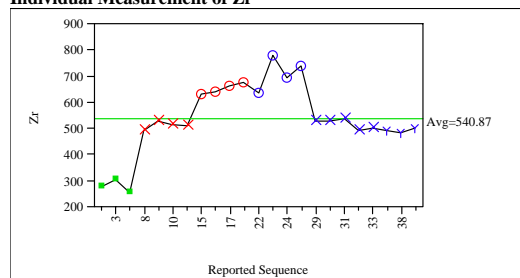
Individual Measurement of Zn



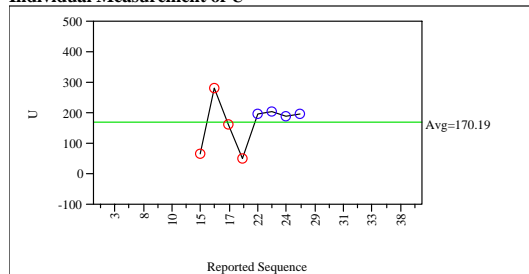
Individual Measurement of Tl



Individual Measurement of Zr



Individual Measurement of U



Individual Measurement of Y

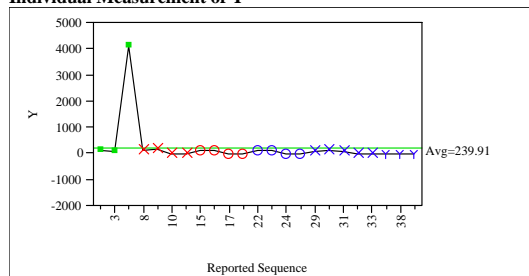
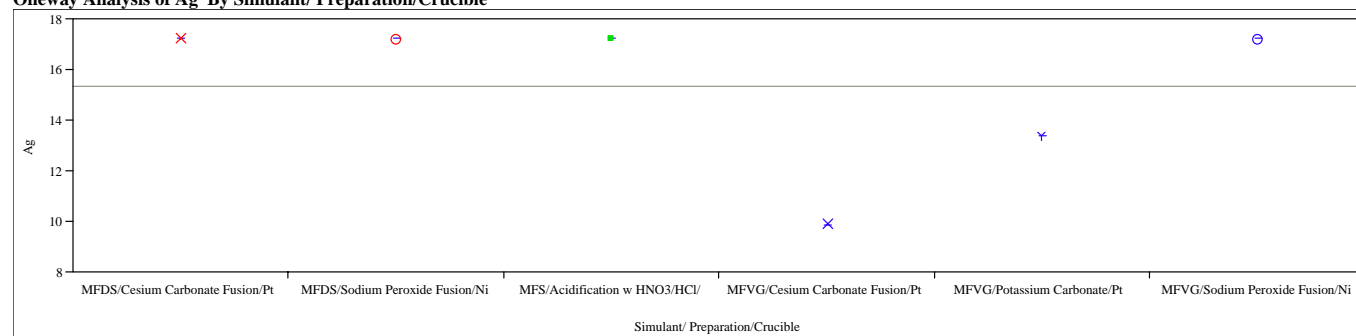


Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Type of Sample=Blank

Oneway Analysis of Ag By Simulant/ Preparation/Crucible



Oneway Anova

Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 15.35
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	47.195000	9.43900	.	.
Error	0	0.000000	.	.	.
C. Total	5	47.195000	.	.	.

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	17.2000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	17.2000	.	.	.
MFS/Acidification w HNO3/HCl/	1	17.2000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	9.9000	.	.	.
MFVG/Potassium Carbonate/Pt	1	13.4000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	17.2000	.	.	.

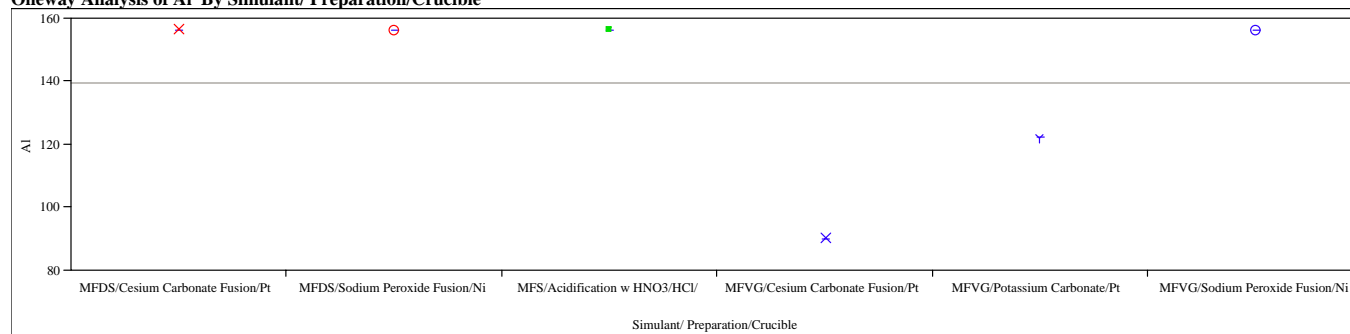
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	17.2000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	17.2000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	17.2000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	9.9000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	13.4000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	17.2000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Al By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 139.6667
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	3912.3333	782.467	.	.
Error	0	0.0000	.		
C. Total	5	3912.3333			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	156.500	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	156.500	.	.	.
MFS/Acidification w HNO3/HCl/	1	156.500	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	90.000	.	.	.
MFVG/Potassium Carbonate/Pt	1	122.000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	156.500	.	.	.

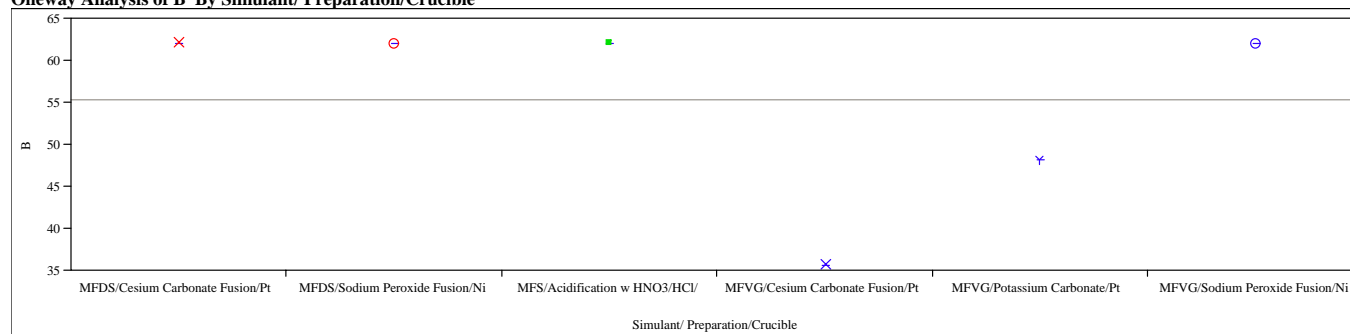
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	156.500	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	156.500	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	156.500	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	90.000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	122.000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	156.500	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of B By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 55.31667
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	615.38333	123.077	.	.
Error	0	0.00000	.		
C. Total	5	615.38333			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	62.0000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	62.0000	.	.	.
MFS/Acidification w HNO3/HCl/	1	62.0000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	35.6500	.	.	.
MFVG/Potassium Carbonate/Pt	1	48.2500	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	62.0000	.	.	.

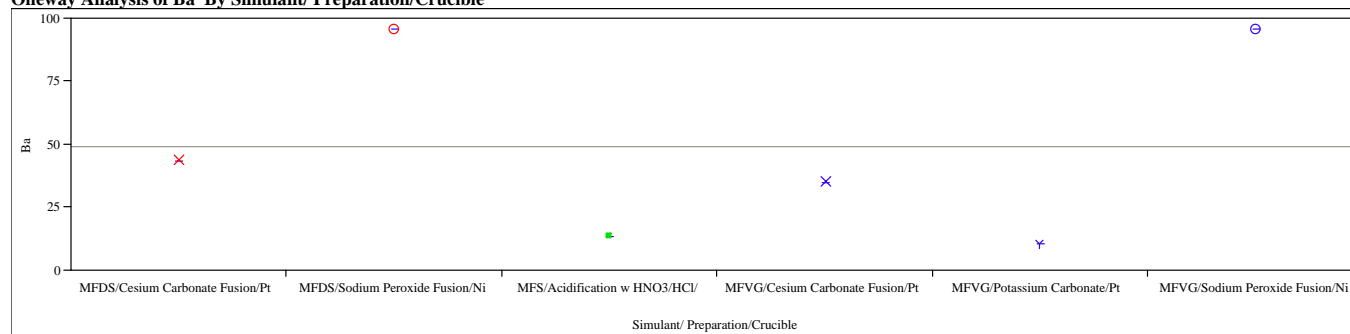
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	62.0000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	62.0000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	62.0000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	35.6500	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	48.2500	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	62.0000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ba By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 49.15
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	7305.5700	1461.11	.	.
Error	0	0.0000	.		
C. Total	5	7305.5700			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	43.6000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	95.8000	.	.	.
MFS/Acidification w HNO3/HCl/	1	13.7500	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	35.2000	.	.	.
MFVG/Potassium Carbonate/Pt	1	10.7500	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	95.8000	.	.	.

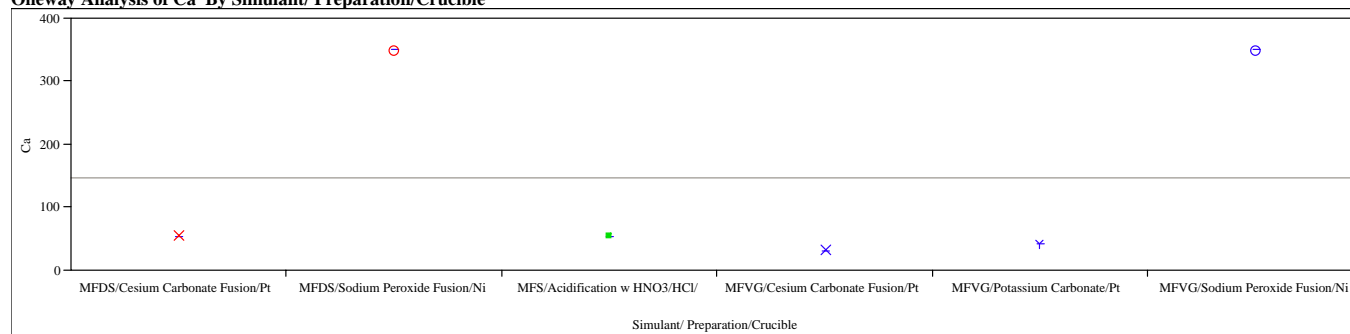
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	43.6000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	95.8000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	13.7500	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	35.2000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	10.7500	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	95.8000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ca By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 147.1
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	122666.84	24533.4	.	.
Error	0	0.00	.		
C. Total	5	122666.84			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	55.000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	349.000	.	.	.
MFS/Acidification w HNO3/HCl/	1	55.000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	31.700	.	.	.
MFVG/Potassium Carbonate/Pt	1	42.900	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	349.000	.	.	.

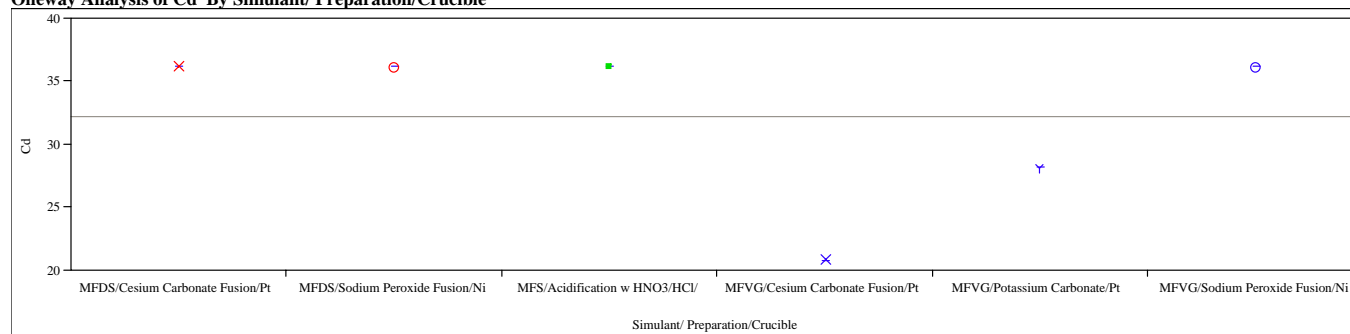
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	55.000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	349.000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	55.000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	31.700	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	42.900	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	349.000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Cd By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 32.225
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	207.19875	41.4398	.	.
Error	0	0.00000	.		
C. Total	5	207.19875			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	36.1000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	36.1000	.	.	.
MFS/Acidification w HNO3/HCl/	1	36.1000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	20.8000	.	.	.
MFVG/Potassium Carbonate/Pt	1	28.1500	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	36.1000	.	.	.

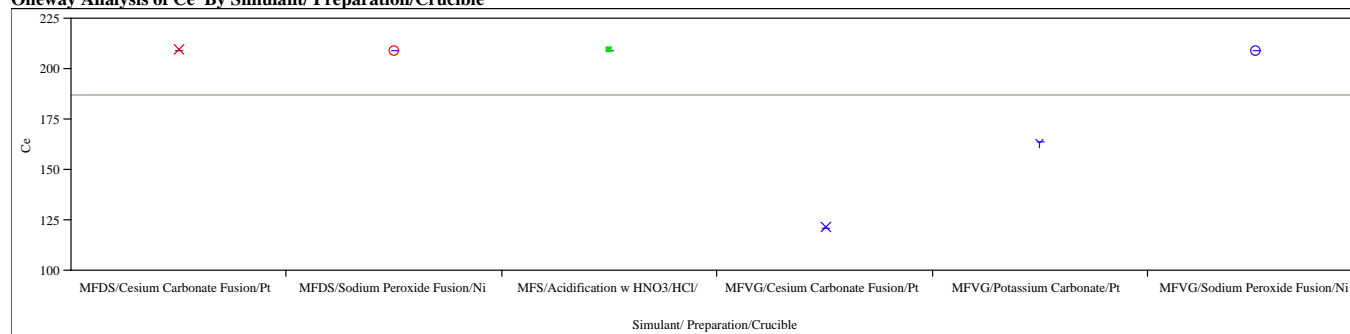
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	36.1000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	36.1000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	36.1000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	20.8000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	28.1500	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	36.1000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ce By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 187.0833
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	6933.208	1386.64	.	.
Error	0	-9.095e-13	.		
C. Total	5	6933.208			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	209.500	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	209.500	.	.	.
MFS/Acidification w HNO3/HCl/	1	209.500	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	121.000	.	.	.
MFVG/Potassium Carbonate/Pt	1	163.500	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	209.500	.	.	.

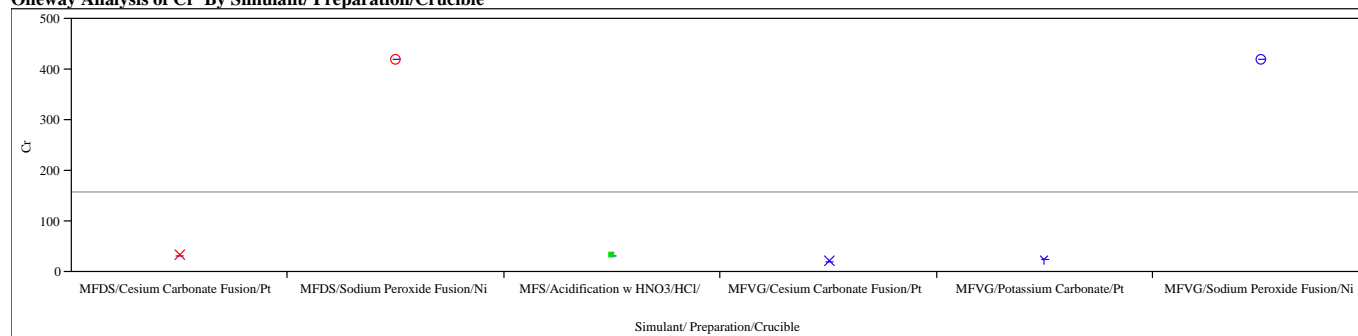
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	209.500	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	209.500	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	209.500	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	121.000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	163.500	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	209.500	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Cr By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 158.5083
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	205270.41	41054.1	.	.
Error	0	2.9104e-11	.		
C. Total	5	205270.41			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	33.100	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	420.000	.	.	.
MFS/Acidification w HNO3/HCl/	1	33.100	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	19.050	.	.	.
MFVG/Potassium Carbonate/Pt	1	25.800	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	420.000	.	.	.

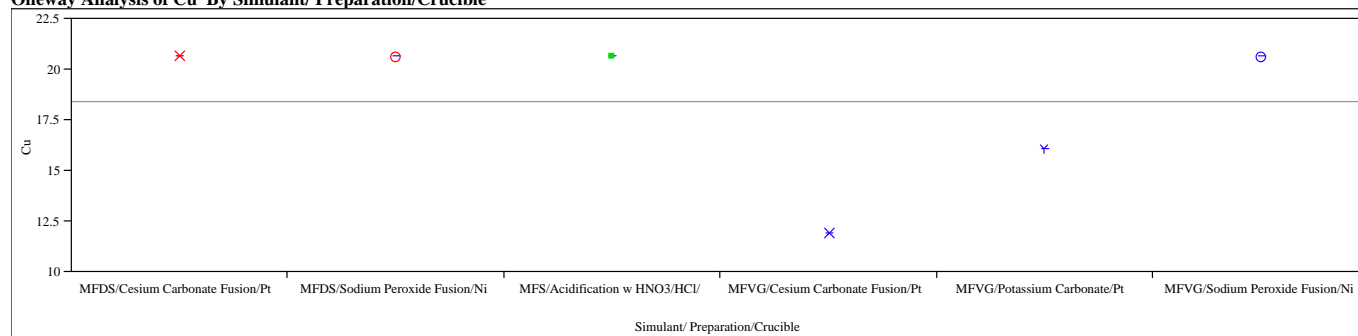
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	33.100	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	420.000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	33.100	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	19.050	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	25.800	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	420.000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Cu By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 18.43333
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	67.783333	13.5567	.	.
Error	0	0.000000	.		
C. Total	5	67.783333			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	20.6500	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	20.6500	.	.	.
MFS/Acidification w HNO3/HCl/	1	20.6500	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	11.9000	.	.	.
MFVG/Potassium Carbonate/Pt	1	16.1000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	20.6500	.	.	.

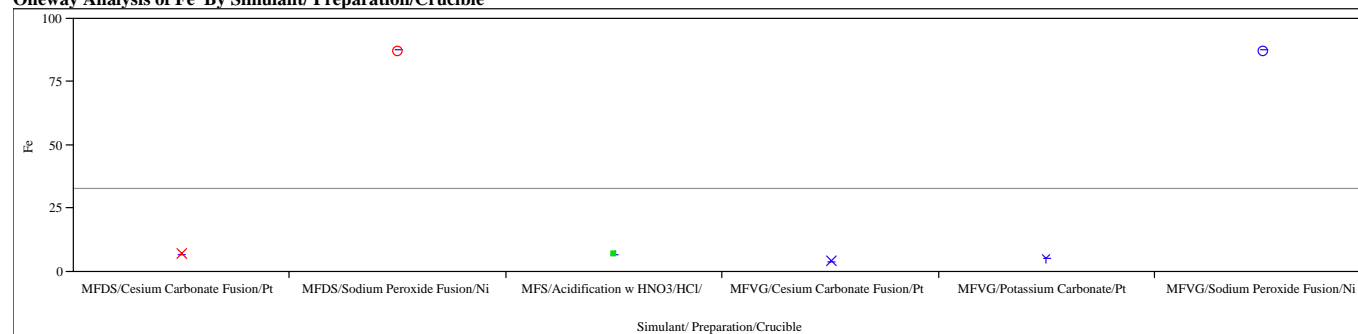
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	20.6500	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	20.6500	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	20.6500	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	11.9000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	16.1000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	20.6500	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Fe By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 33.14167
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	8870.7121	1774.14	.	.
Error	0	0.0000	.		
C. Total	5	8870.7121			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	7.1000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	87.5000	.	.	.
MFS/Acidification w HNO3/HCl/	1	7.1000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	4.1000	.	.	.
MFVG/Potassium Carbonate/Pt	1	5.5500	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	87.5000	.	.	.

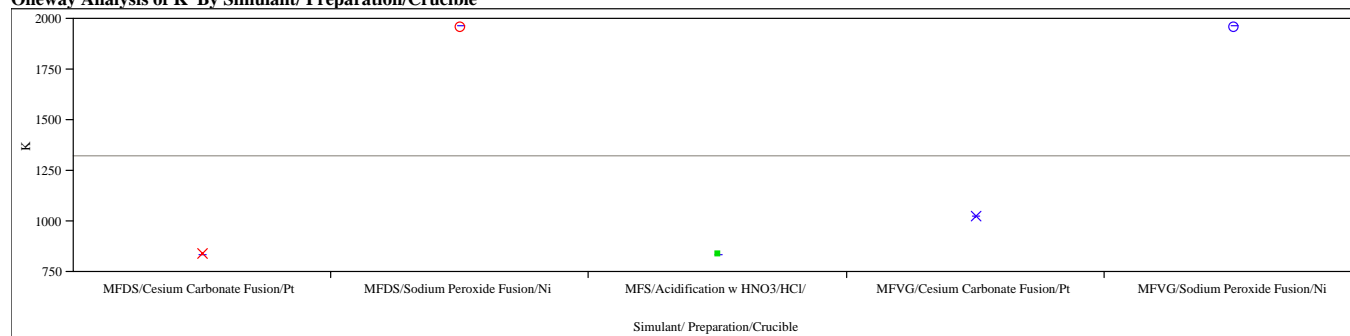
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	7.1000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	87.5000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	7.1000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	4.1000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	5.5500	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	87.5000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of K By Simulant/ Preparation/Crucible



Missing Rows

1 Oneway Anova

Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 1322
Observations (or Sum Wgts) 5

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	1379630.0	344908	.	.
Error	0	0.0	.	.	.
C. Total	4	1379630.0			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	835.00	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	1960.00	.	.	.
MFS/Acidification w HNO3/HCl/	1	835.00	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	1020.00	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	1960.00	.	.	.

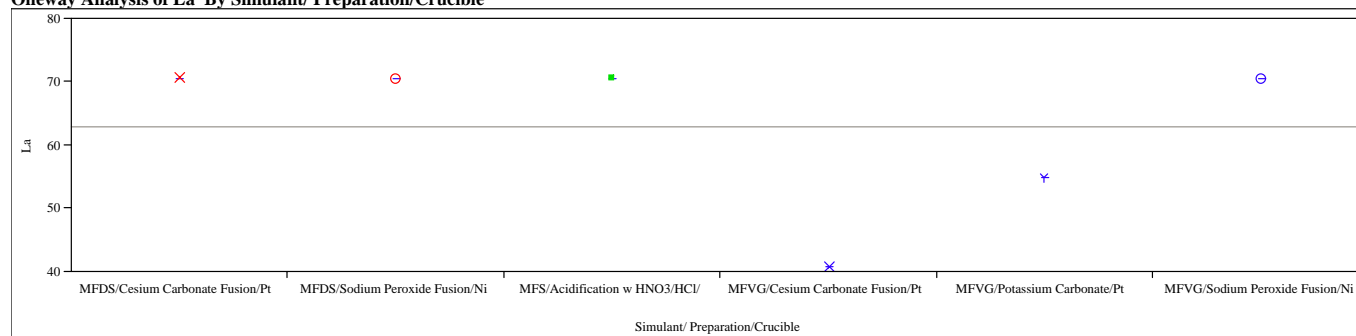
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	835.00	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	1960.00	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	835.00	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	1020.00	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	1960.00	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of La By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 62.93333
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	790.73333	158.147	.	.
Error	0	0.00000	.		
C. Total	5	790.73333			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	70.5000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	70.5000	.	.	.
MFS/Acidification w HNO3/HCl/	1	70.5000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	40.6000	.	.	.
MFVG/Potassium Carbonate/Pt	1	55.0000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	70.5000	.	.	.

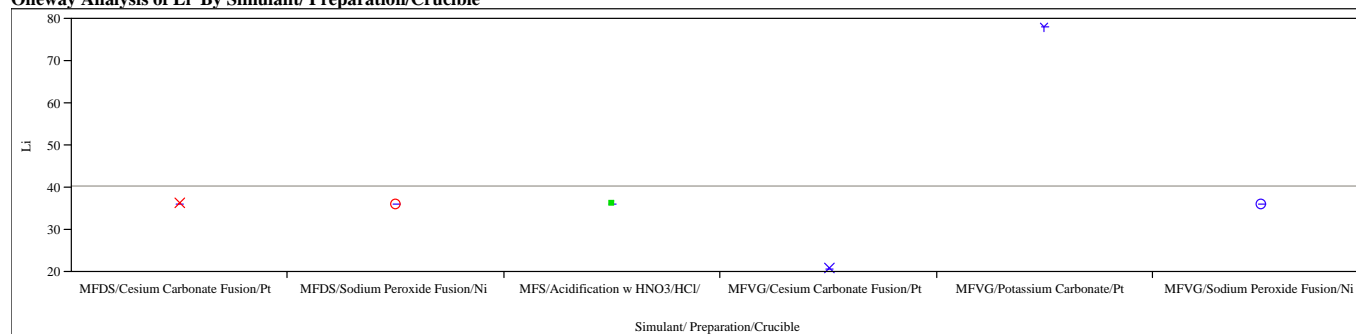
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	70.5000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	70.5000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	70.5000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	40.6000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	55.0000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	70.5000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Li By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 40.53333
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	1871.7733	374.355	.	.
Error	0	2.2737e-13	.		
C. Total	5	1871.7733			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	36.1000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	36.1000	.	.	.
MFS/Acidification w HNO3/HCl/	1	36.1000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	20.8000	.	.	.
MFVG/Potassium Carbonate/Pt	1	78.0000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	36.1000	.	.	.

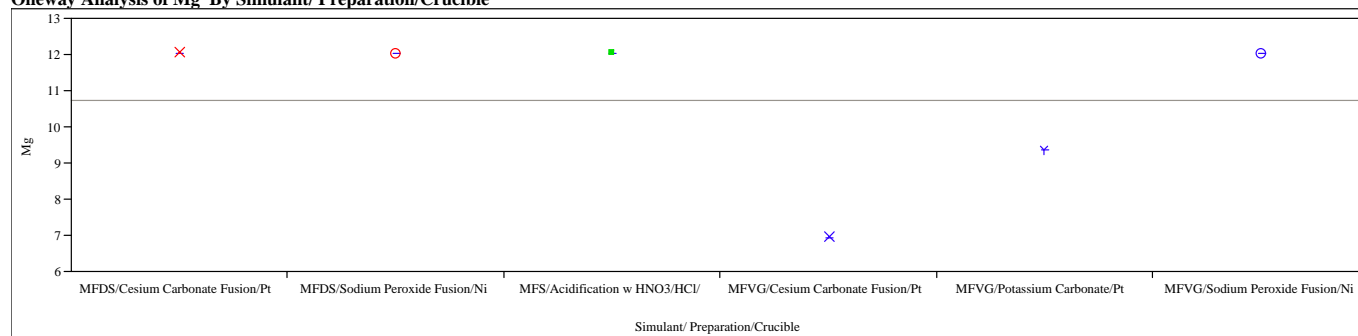
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	36.1000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	36.1000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	36.1000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	20.8000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	78.0000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	36.1000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Mg By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 10.75833
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	23.022083	4.60442	.	.
Error	0	3.5527e-15	.		
C. Total	5	23.022083			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	12.0500	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	12.0500	.	.	.
MFS/Acidification w HNO3/HCl/	1	12.0500	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	6.9500	.	.	.
MFVG/Potassium Carbonate/Pt	1	9.4000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	12.0500	.	.	.

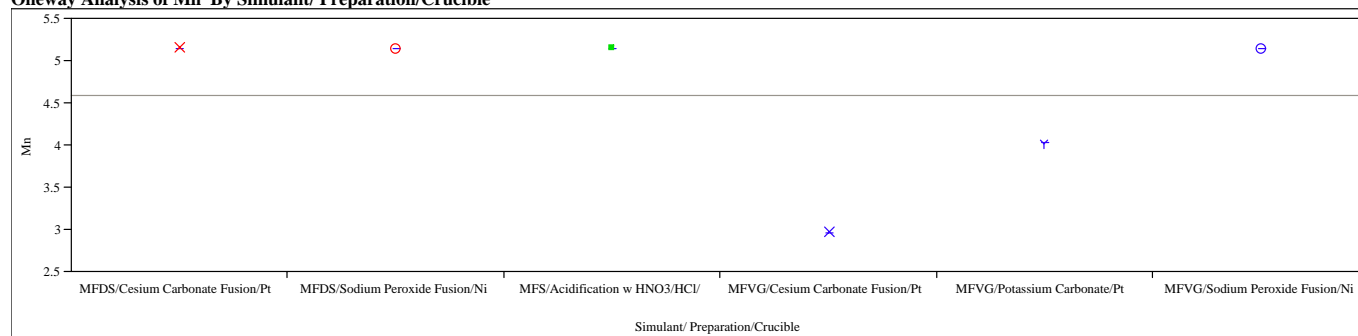
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	12.0500	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	12.0500	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	12.0500	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	6.9500	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	9.4000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	12.0500	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Mn By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 4.598333
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	4.2032833	0.840657	.	.
Error	0	0.0000000	.		
C. Total	5	4.2032833			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	5.15000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	5.15000	.	.	.
MFS/Acidification w HNO3/HCl/	1	5.15000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	2.97000	.	.	.
MFVG/Potassium Carbonate/Pt	1	4.02000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	5.15000	.	.	.

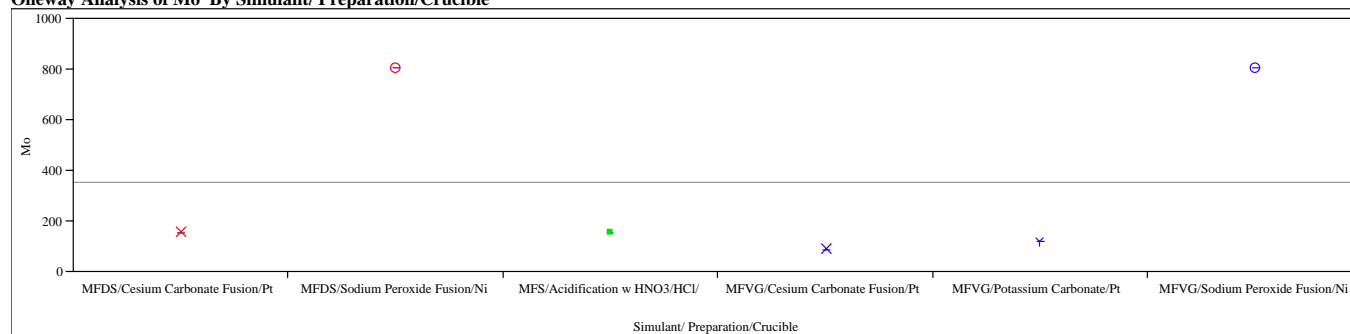
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	5.15000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	5.15000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	5.15000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	2.97000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	4.02000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	5.15000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Mo By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 354.3333
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	614889.8	122978	.	.
Error	0	-1.164e-10	.		
C. Total	5	614889.8			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	153.000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	806.000	.	.	.
MFS/Acidification w HNO3/HCl/	1	153.000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	88.500	.	.	.
MFVG/Potassium Carbonate/Pt	1	119.500	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	806.000	.	.	.

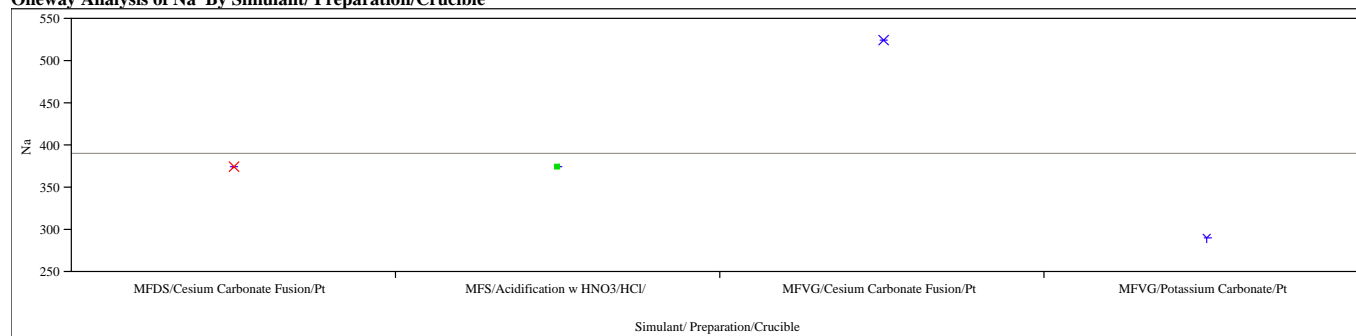
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	153.000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	806.000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	153.000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	88.500	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	119.500	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	806.000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Na By Simulant/ Preparation/Crucible



Missing Rows

2Oneway Anova

Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 390.25
Observations (or Sum Wgts) 4

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	3	28334.750	9444.92	.	.
Error	0	0.000	.	.	.
C. Total	3	28334.750			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	373.000	.	.	.
MFS/Acidification w HNO3/HCl/	1	373.000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	524.000	.	.	.
MFVG/Potassium Carbonate/Pt	1	291.000	.	.	.

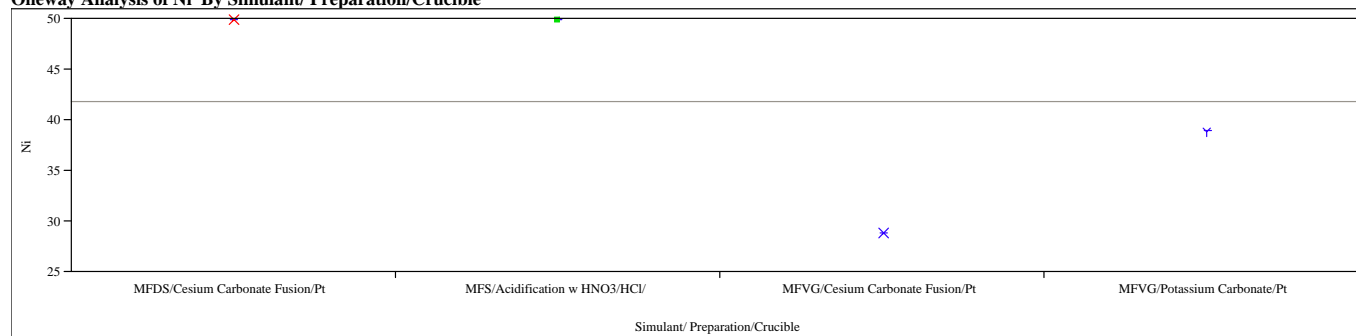
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	373.000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	373.000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	524.000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	291.000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ni By Simulant/ Preparation/Crucible



Missing Rows

2Oneway Anova

Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 41.825
Observations (or Sum Wgts) 4

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	3	309.62250	103.208	.	.
Error	0	0.00000	.	.	.
C. Total	3	309.62250	.	.	.

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	49.8500	.	.	.
MFS/Acidification w HNO3/HCl/	1	49.8500	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	28.7000	.	.	.
MFVG/Potassium Carbonate/Pt	1	38.9000	.	.	.

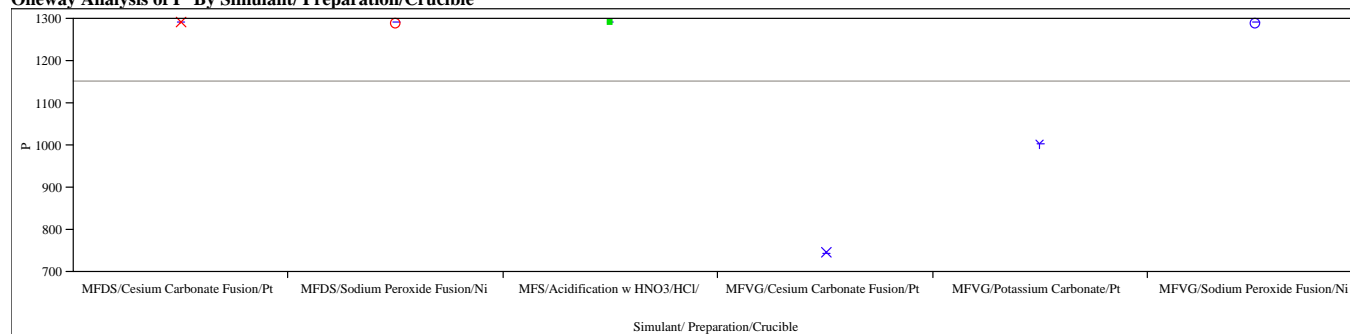
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	49.8500	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	49.8500	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	28.7000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	38.9000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of P By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 1151.667
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	263433.33	52686.7	.	.
Error	0	0.00	.		
C. Total	5	263433.33			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	1290.00	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	1290.00	.	.	.
MFS/Acidification w HNO3/HCl/	1	1290.00	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	745.00	.	.	.
MFVG/Potassium Carbonate/Pt	1	1005.00	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	1290.00	.	.	.

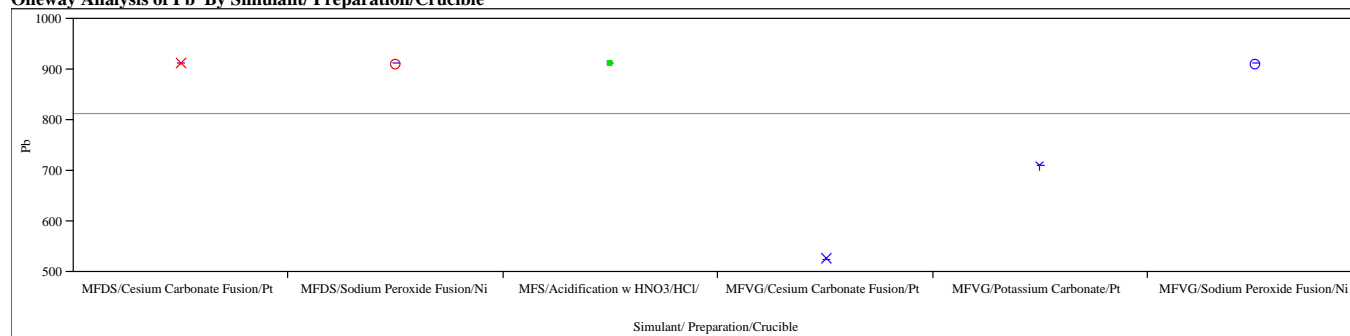
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	1290.00	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	1290.00	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	1290.00	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	745.00	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	1005.00	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	1290.00	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Pb By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 812.5
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	131187.50	26237.5	.	.
Error	0	0.00	.		
C. Total	5	131187.50			

Means for Oneway Anova

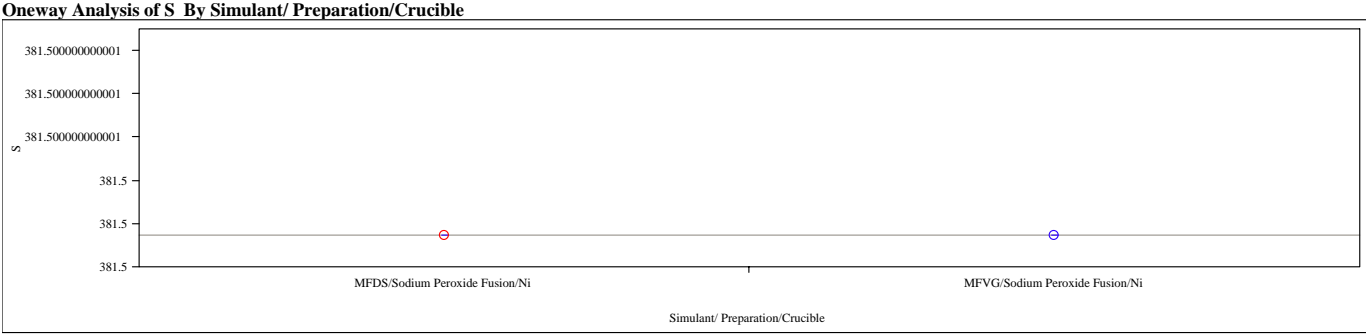
Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	910.000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	910.000	.	.	.
MFS/Acidification w HNO3/HCl/	1	910.000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	525.000	.	.	.
MFVG/Potassium Carbonate/Pt	1	710.000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	910.000	.	.	.

Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	910.000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	910.000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	910.000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	525.000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	710.000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	910.000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample



Missing Rows

4Oneway Anova

Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 381.5
Observations (or Sum Wgts) 2
t Test
MFDS/Sodium Peroxide Fusion/Ni-MFVG/Sodium Peroxide Fusion/Ni
Assuming equal variances

Difference	0	t Ratio	.
Std Err Dif	.	DF	0
Upper CL Dif	.	Prob > |t|	1.0000
Lower CL Dif	.	Prob > t	0.5000
Confidence	0.95	Prob < t	0.5000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	0	0	.	.
Error	0	0	.		
C. Total	1	0			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	1	381.500	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	381.500	.	.	.

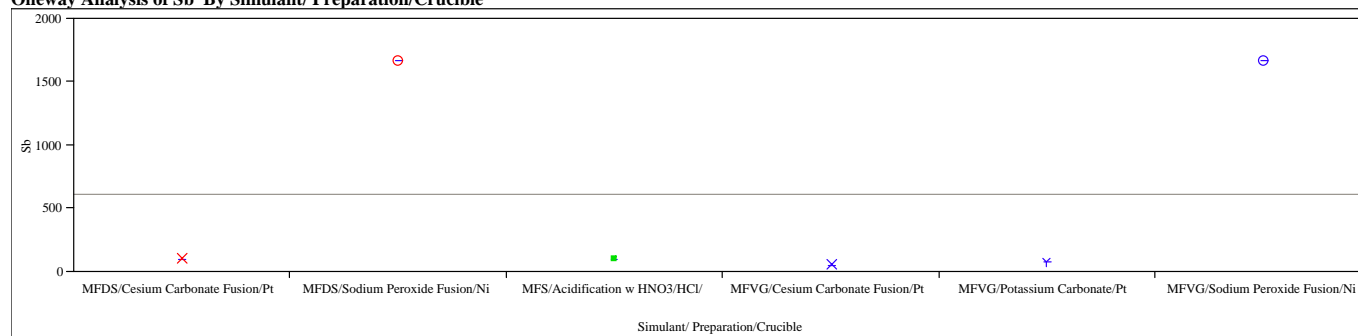
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	1	381.500	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	381.500	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Sb By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 611.5
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	3362459.0	672492	.	.
Error	0	0.0	.		
C. Total	5	3362459.0			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	98.00	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	1670.00	.	.	.
MFS/Acidification w HNO3/HCl/	1	98.00	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	56.50	.	.	.
MFVG/Potassium Carbonate/Pt	1	76.50	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	1670.00	.	.	.

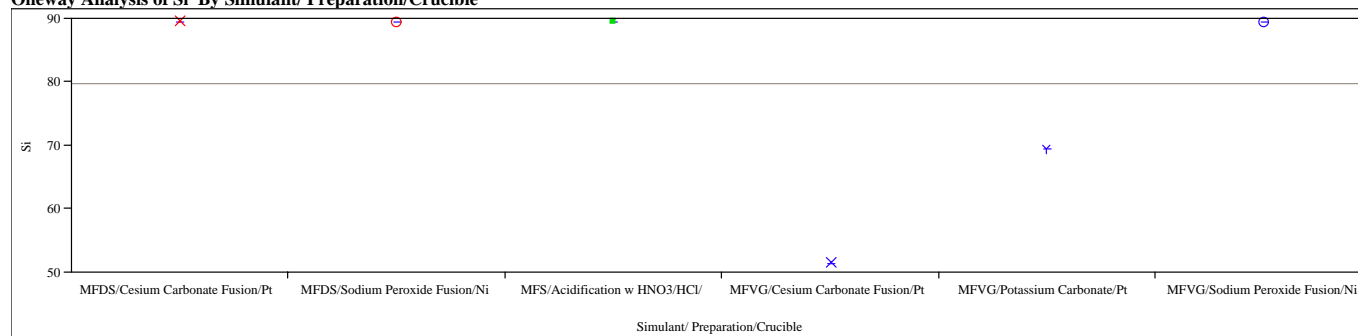
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	98.00	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	1670.00	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	98.00	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	56.50	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	76.50	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	1670.00	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Si By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 79.83333
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	1283.3333	256.667	.	.
Error	0	0.0000	.		
C. Total	5	1283.3333			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	89.5000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	89.5000	.	.	.
MFS/Acidification w HNO3/HCl/	1	89.5000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	51.5000	.	.	.
MFVG/Potassium Carbonate/Pt	1	69.5000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	89.5000	.	.	.

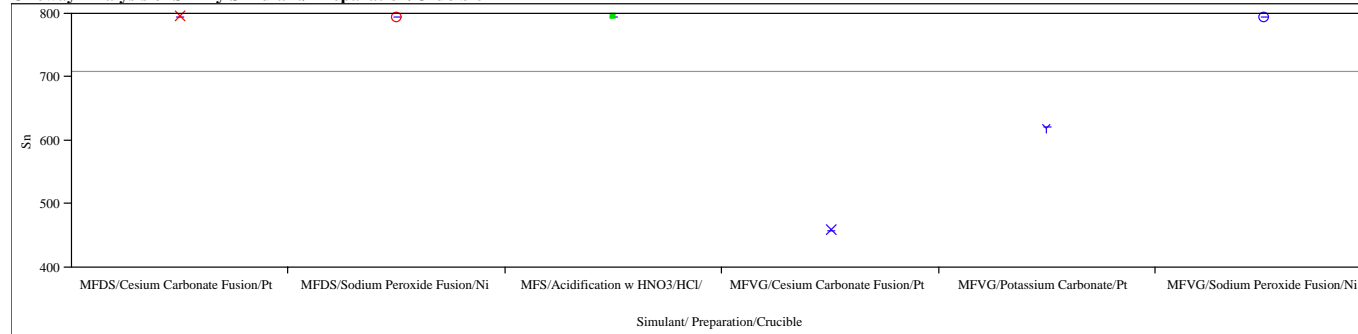
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	89.5000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	89.5000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	89.5000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	51.5000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	69.5000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	89.5000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Sn By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 709.75
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	100251.88	20050.4	.	.
Error	0	0.00	.		
C. Total	5	100251.88			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	795.000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	795.000	.	.	.
MFS/Acidification w HNO3/HCl/	1	795.000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	458.500	.	.	.
MFVG/Potassium Carbonate/Pt	1	620.000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	795.000	.	.	.

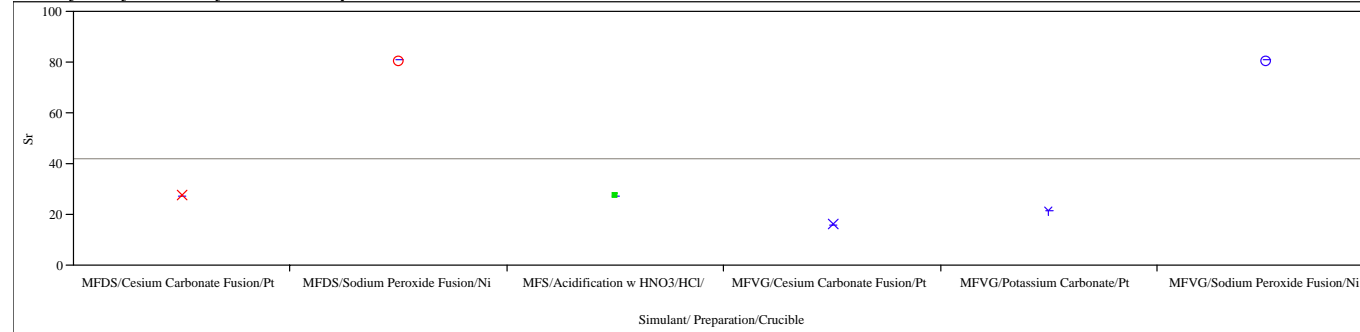
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	795.000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	795.000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	795.000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	458.500	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	620.000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	795.000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Sr By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 42.35
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	4552.3100	910.462	.	.
Error	0	0.0000	.		
C. Total	5	4552.3100			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	27.5000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	80.9000	.	.	.
MFS/Acidification w HNO3/HCl/	1	27.5000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	15.8500	.	.	.
MFVG/Potassium Carbonate/Pt	1	21.4500	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	80.9000	.	.	.

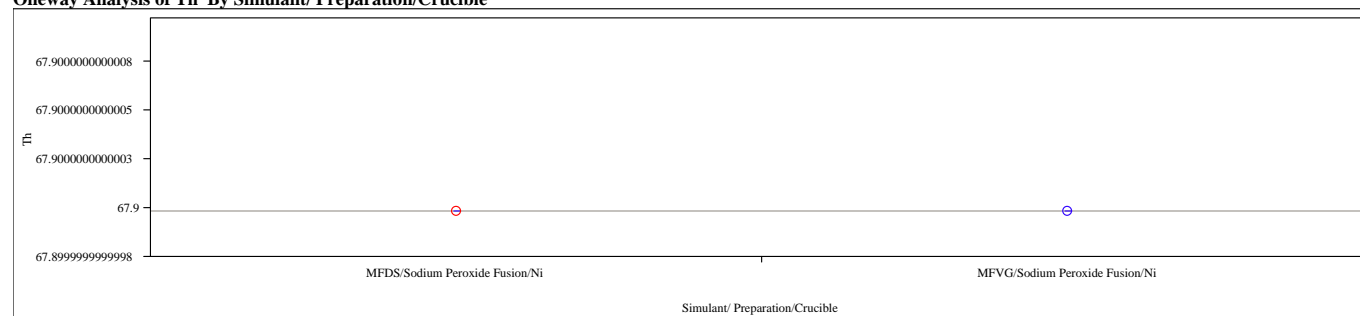
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	27.5000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	80.9000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	27.5000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	15.8500	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	21.4500	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	80.9000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Th By Simulant/ Preparation/Crucible



Missing Rows

4Oneway Anova

Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 67.9
Observations (or Sum Wgts) 2

t Test

MFDS/Sodium Peroxide Fusion/Ni-MFVG/Sodium Peroxide Fusion/Ni
Assuming equal variances

Difference	0	t Ratio	.
Std Err Dif	.	DF	0
Upper CL Dif	.	Prob > |t|	1.0000
Lower CL Dif	.	Prob > t	0.5000
Confidence	0.95	Prob < t	0.5000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	0	0	.	.
Error	0	0	.		
C. Total	1	0			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	1	67.9000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	67.9000	.	.	.

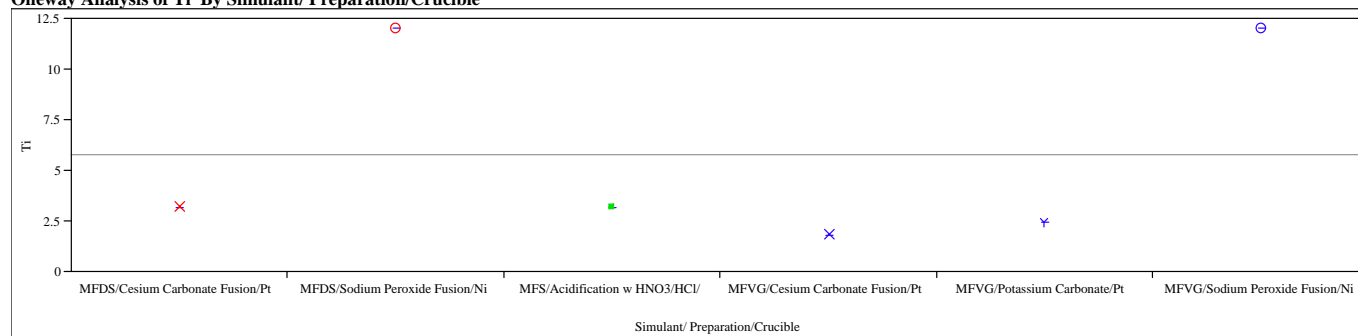
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	1	67.9000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	67.9000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ti By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 5.784167
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	119.02532	23.8051	.	.
Error	0	0.00000	.		
C. Total	5	119.02532			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	3.1600	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	12.0500	.	.	.
MFS/Acidification w HNO3/HCl/	1	3.1600	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	1.8200	.	.	.
MFVG/Potassium Carbonate/Pt	1	2.4650	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	12.0500	.	.	.

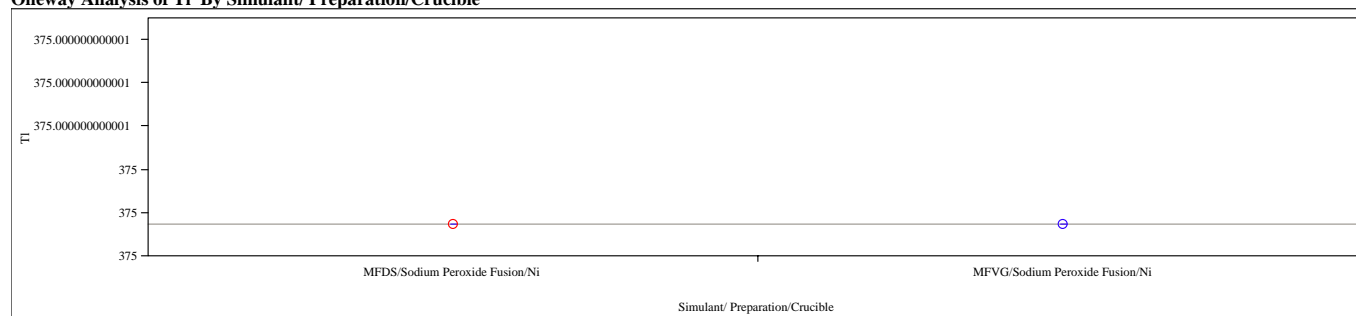
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	3.1600	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	12.0500	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	3.1600	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	1.8200	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	2.4650	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	12.0500	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Tl By Simulant/ Preparation/Crucible



Missing Rows

4 Oneway Anova

Summary of Fit

Rsquare	.
Adj Rsquare	.
Root Mean Square Error	.
Mean of Response	375
Observations (or Sum Wgts)	2

t Test

MFDS/Sodium Peroxide Fusion/Ni-MFVG/Sodium Peroxide Fusion/Ni

Assuming equal variances

Difference	0	t Ratio	.
Std Err Dif	.	DF	0
Upper CL Dif	.	Prob > |t|	1.0000
Lower CL Dif	.	Prob > t	0.5000
Confidence	0.95	Prob < t	0.5000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	0	0	.	.
Error	0	0	.		
C. Total	1	0			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	1	375.000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	375.000	.	.	.

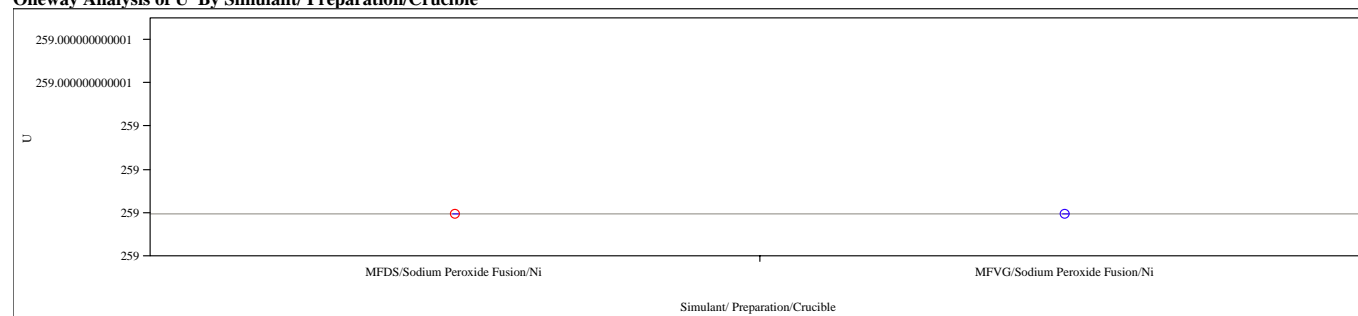
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	1	375.000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	375.000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of U By Simulant/ Preparation/Crucible



Missing Rows

4Oneway Anova

Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 259
Observations (or Sum Wgts) 2
t Test
MFDS/Sodium Peroxide Fusion/Ni-MFVG/Sodium Peroxide Fusion/Ni
Assuming equal variances

Difference	0	t Ratio	.
Std Err Dif	.	DF	0
Upper CL Dif	.	Prob > |t|	1.0000
Lower CL Dif	.	Prob > t	0.5000
Confidence	0.95	Prob < t	0.5000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	0	0	.	.
Error	0	0	.		
C. Total	1	0			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	1	259.000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	259.000	.	.	.

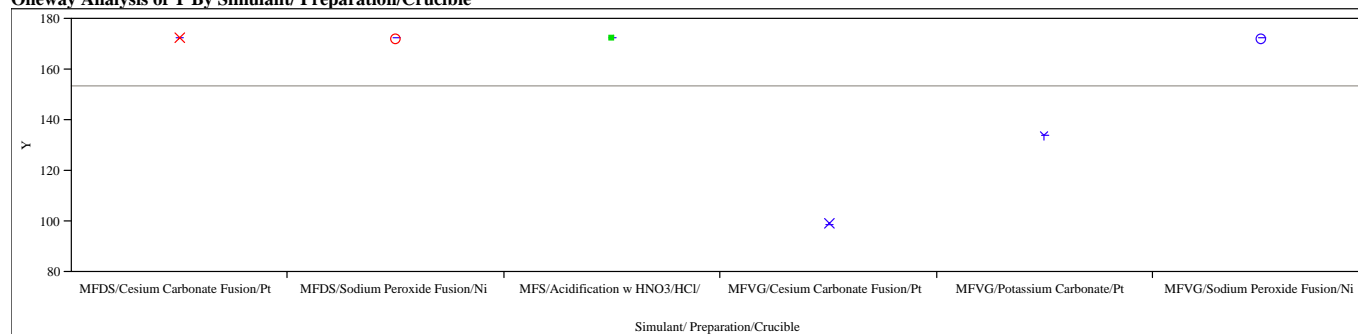
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	1	259.000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	259.000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Y By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 153.5
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	4719.5000	943.900	.	.
Error	0	0.0000	.		
C. Total	5	4719.5000			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	172.000	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	172.000	.	.	.
MFS/Acidification w HNO3/HCl/	1	172.000	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	99.000	.	.	.
MFVG/Potassium Carbonate/Pt	1	134.000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	172.000	.	.	.

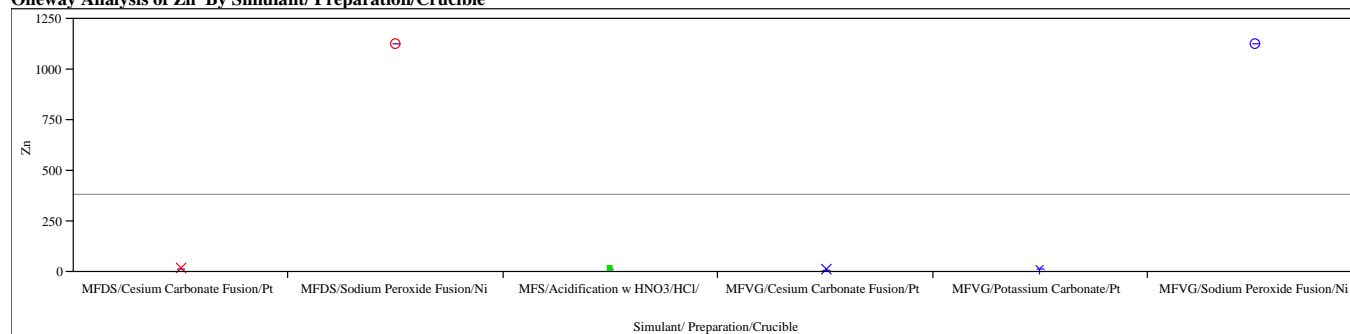
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	172.000	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	172.000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	172.000	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	99.000	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	134.000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	172.000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Zn By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 386.2833
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	1659380	331876	.	.
Error	0	-2.328e-10	.		
C. Total	5	1659380			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	17.20	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	1130.00	.	.	.
MFS/Acidification w HNO3/HCl/	1	17.20	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	9.90	.	.	.
MFVG/Potassium Carbonate/Pt	1	13.40	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	1130.00	.	.	.

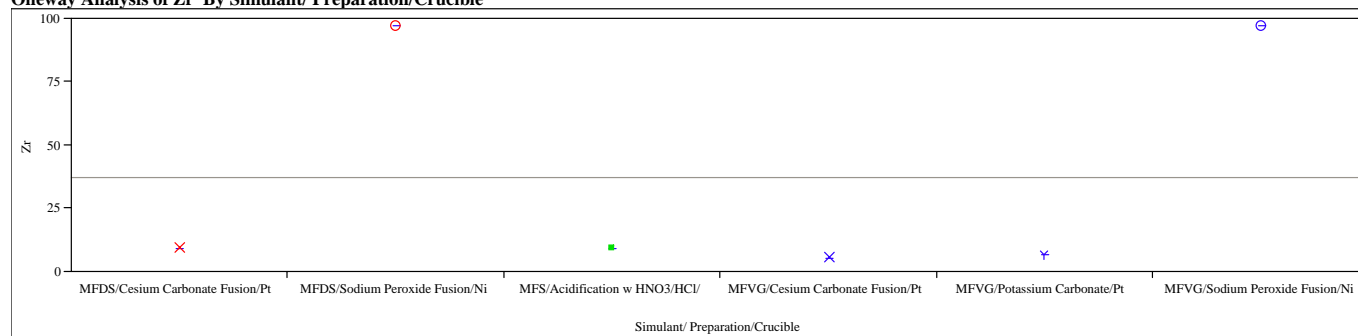
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	17.20	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	1130.00	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	17.20	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	9.90	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	13.40	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	1130.00	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Zr By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare .
Adj Rsquare .
Root Mean Square Error .
Mean of Response 37.50833
Observations (or Sum Wgts) 6

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	10699.847	2139.97	.	.
Error	0	0.000	.		
C. Total	5	10699.847			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	9.1500	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	97.2000	.	.	.
MFS/Acidification w HNO3/HCl/	1	9.1500	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	5.2500	.	.	.
MFVG/Potassium Carbonate/Pt	1	7.1000	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	97.2000	.	.	.

Std Error uses a pooled estimate of error variance

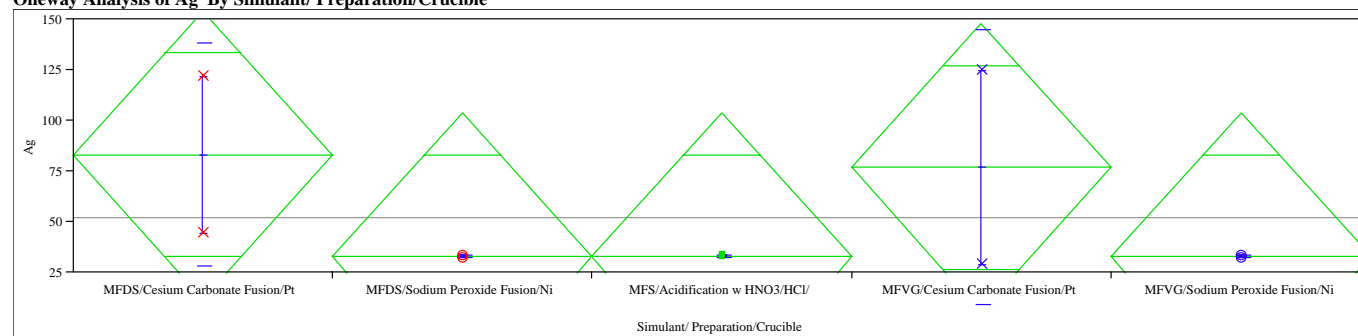
Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	1	9.1500	.	.	.	.
MFDS/Sodium Peroxide Fusion/Ni	1	97.2000	.	.	.	.
MFS/Acidification w HNO3/HCl/	1	9.1500	.	.	.	.
MFVG/Cesium Carbonate Fusion/Pt	1	5.2500	.	.	.	.
MFVG/Potassium Carbonate/Pt	1	7.1000	.	.	.	.
MFVG/Sodium Peroxide Fusion/Ni	1	97.2000	.	.	.	.

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Type of Sample=LCS

Oneway Analysis of Ag By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.411743
Adj Rsquare -0.05886
Root Mean Square Error 39.08518
Mean of Response 51.835
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	5346.304	1336.58	0.8749	0.5386
Error	5	7638.256	1527.65		
C. Total	9	12984.560			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	83.1750	27.637	12.13	154.22
MFDS/Sodium Peroxide Fusion/Ni	2	33.0250	27.637	-38.02	104.07
MFS/Acidification w HNO3/HCl/	2	33.0250	27.637	-38.02	104.07
MFVG/Cesium Carbonate Fusion/Pt	2	76.9250	27.637	5.88	147.97
MFVG/Sodium Peroxide Fusion/Ni	2	33.0250	27.637	-38.02	104.07

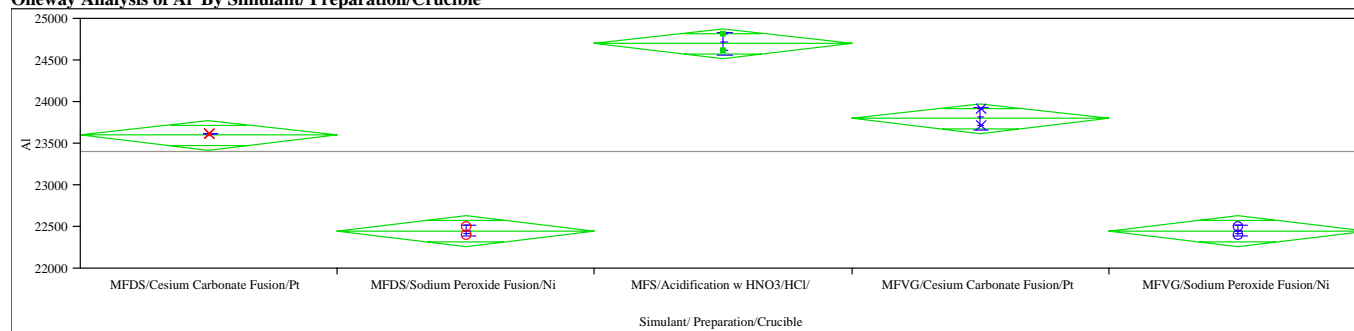
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	83.1750	54.9068	38.825	-410.1	576.49
MFDS/Sodium Peroxide Fusion/Ni	2	33.0250	0.6010	0.425	27.6	38.43
MFS/Acidification w HNO3/HCl/	2	33.0250	0.6010	0.425	27.6	38.43
MFVG/Cesium Carbonate Fusion/Pt	2	76.9250	67.9883	48.075	-533.9	687.78
MFVG/Sodium Peroxide Fusion/Ni	2	33.0250	0.6010	0.425	27.6	38.43

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Al By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.99328
Adj Rsquare 0.987903
Root Mean Square Error 100
Mean of Response 23400
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	7390000.0	1847500	184.7500	<.0001
Error	5	50000.0	10000		
C. Total	9	7440000.0			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	23600.0	70.711	23418	23782
MFDS/Sodium Peroxide Fusion/Ni	2	22450.0	70.711	22268	22632
MFS/Acidification w HNO3/HCl/	2	24700.0	70.711	24518	24882
MFVG/Cesium Carbonate Fusion/Pt	2	23800.0	70.711	23618	23982
MFVG/Sodium Peroxide Fusion/Ni	2	22450.0	70.711	22268	22632

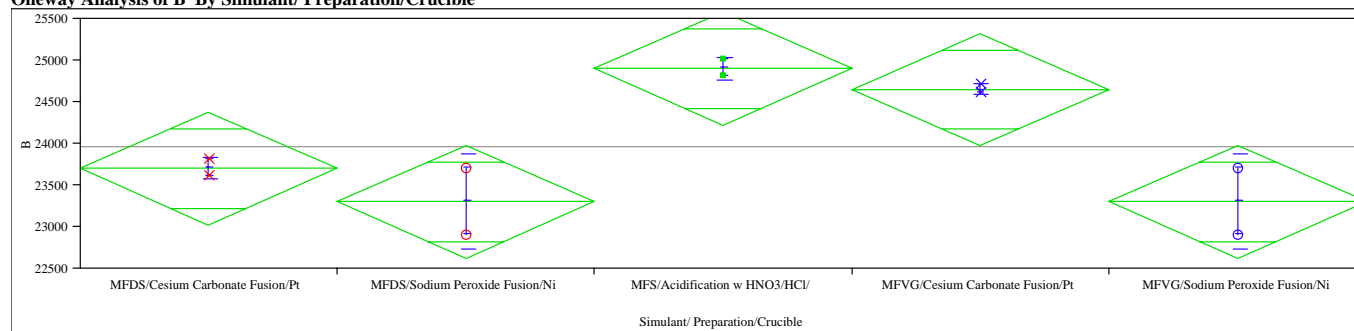
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	23600.0	0.000	0.00	23600	23600
MFDS/Sodium Peroxide Fusion/Ni	2	22450.0	70.711	50.00	21815	23085
MFS/Acidification w HNO3/HCl/	2	24700.0	141.421	100.00	23429	25971
MFVG/Cesium Carbonate Fusion/Pt	2	23800.0	141.421	100.00	22529	25071
MFVG/Sodium Peroxide Fusion/Ni	2	22450.0	70.711	50.00	21815	23085

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of B By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.87029
Adj Rsquare 0.766521
Root Mean Square Error 370.1351
Mean of Response 23970
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	4596000.0	1149000	8.3869	0.0192
Error	5	685000.0	137000		
C. Total	9	5281000.0			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	23700.0	261.73	23027	24373
MFDS/Sodium Peroxide Fusion/Ni	2	23300.0	261.73	22627	23973
MFS/Acidification w HNO3/HCl/	2	24900.0	261.73	24227	25573
MFVG/Cesium Carbonate Fusion/Pt	2	24650.0	261.73	23977	25323
MFVG/Sodium Peroxide Fusion/Ni	2	23300.0	261.73	22627	23973

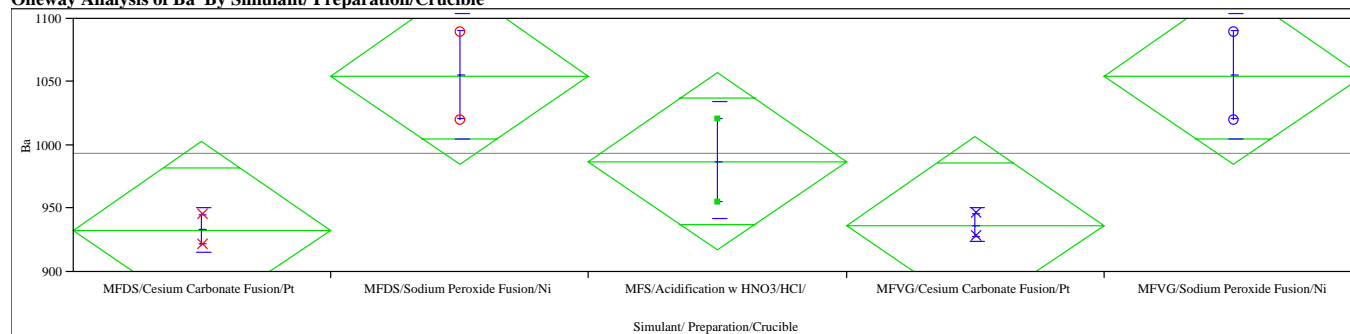
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	23700.0	141.421	100.00	22429	24971
MFDS/Sodium Peroxide Fusion/Ni	2	23300.0	565.685	400.00	18218	28382
MFS/Acidification w HNO3/HCl/	2	24900.0	141.421	100.00	23629	26171
MFVG/Cesium Carbonate Fusion/Pt	2	24650.0	70.711	50.00	24015	25285
MFVG/Sodium Peroxide Fusion/Ni	2	23300.0	565.685	400.00	18218	28382

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ba By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.794809
Adj Rsquare 0.630656
Root Mean Square Error 38.63289
Mean of Response 993.5
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	28906.000	7226.50	4.8419	0.0570
Error	5	7462.500	1492.50		
C. Total	9	36368.500			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	933.00	27.318	862.78	1003.2
MFDS/Sodium Peroxide Fusion/Ni	2	1055.00	27.318	984.78	1125.2
MFS/Acidification w HNO3/HCl/	2	987.50	27.318	917.28	1057.7
MFVG/Cesium Carbonate Fusion/Pt	2	937.00	27.318	866.78	1007.2
MFVG/Sodium Peroxide Fusion/Ni	2	1055.00	27.318	984.78	1125.2

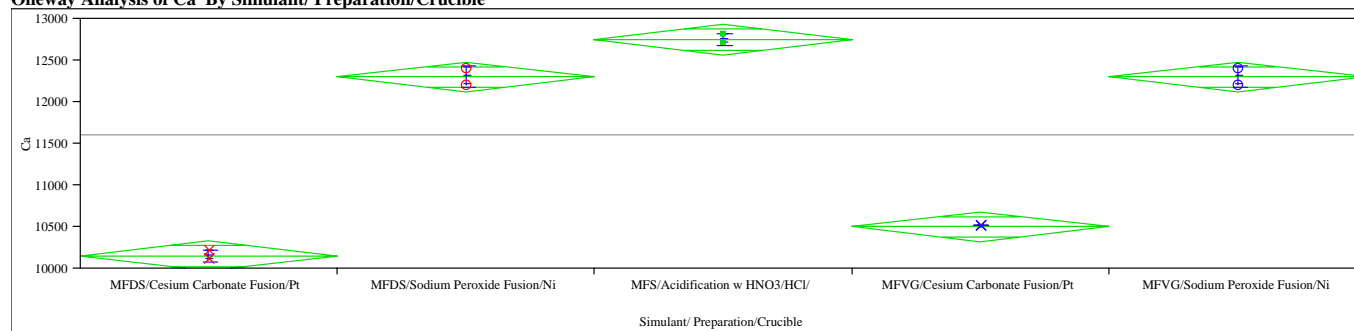
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	933.00	16.9706	12.000	780.53	1085.5
MFDS/Sodium Peroxide Fusion/Ni	2	1055.00	49.4975	35.000	610.28	1499.7
MFS/Acidification w HNO3/HCl/	2	987.50	45.9619	32.500	574.55	1400.5
MFVG/Cesium Carbonate Fusion/Pt	2	937.00	12.7279	9.000	822.64	1051.4
MFVG/Sodium Peroxide Fusion/Ni	2	1055.00	49.4975	35.000	610.28	1499.7

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ca By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.995567
Adj Rsquare 0.992021
Root Mean Square Error 100
Mean of Response 11600
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	11230000	2807500	280.7500	<.0001
Error	5	50000	10000		
C. Total	9	11280000			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	10150.0	70.711	9968	10332
MFDS/Sodium Peroxide Fusion/Ni	2	12300.0	70.711	12118	12482
MFS/Acidification w HNO3/HCl/	2	12750.0	70.711	12568	12932
MFVG/Cesium Carbonate Fusion/Pt	2	10500.0	70.711	10318	10682
MFVG/Sodium Peroxide Fusion/Ni	2	12300.0	70.711	12118	12482

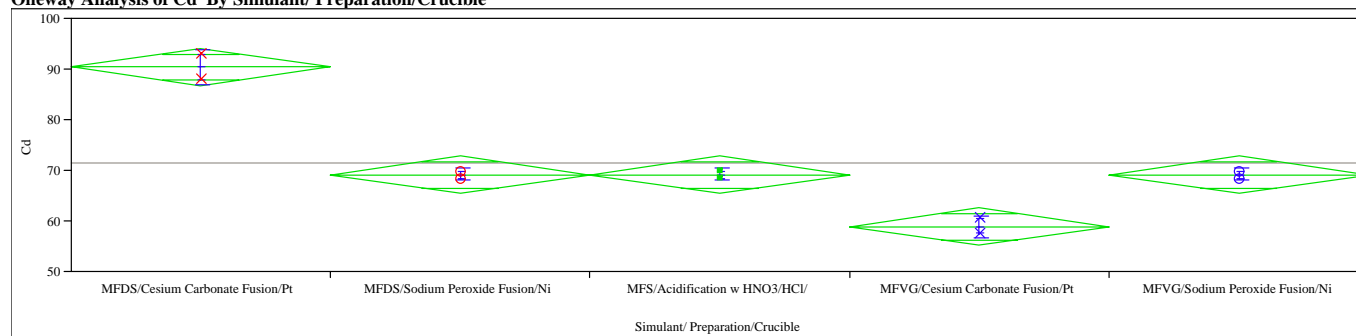
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	10150.0	70.711	50.00	9515	10785
MFDS/Sodium Peroxide Fusion/Ni	2	12300.0	141.421	100.00	11029	13571
MFS/Acidification w HNO3/HCl/	2	12750.0	70.711	50.00	12115	13385
MFVG/Cesium Carbonate Fusion/Pt	2	10500.0	0.000	0.00	10500	10500
MFVG/Sodium Peroxide Fusion/Ni	2	12300.0	141.421	100.00	11029	13571

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Cd By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.981225
Adj Rsquare 0.966205
Root Mean Square Error 2.018663
Mean of Response 71.45
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	1064.8500	266.213	65.3282	0.0002
Error	5	20.3750	4.075		
C. Total	9	1085.2250			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	90.5000	1.4274	86.831	94.169
MFDS/Sodium Peroxide Fusion/Ni	2	69.2500	1.4274	65.581	72.919
MFS/Acidification w HNO3/HCl/	2	69.2500	1.4274	65.581	72.919
MFVG/Cesium Carbonate Fusion/Pt	2	59.0000	1.4274	55.331	62.669
MFVG/Sodium Peroxide Fusion/Ni	2	69.2500	1.4274	65.581	72.919

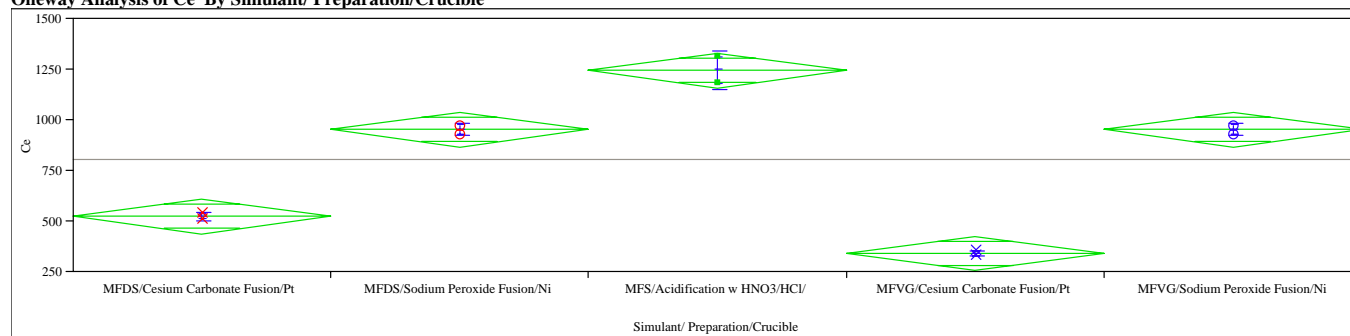
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	90.5000	3.53553	2.5000	58.734	122.27
MFDS/Sodium Peroxide Fusion/Ni	2	69.2500	1.06066	0.7500	59.720	78.78
MFS/Acidification w HNO3/HCl/	2	69.2500	1.06066	0.7500	59.720	78.78
MFVG/Cesium Carbonate Fusion/Pt	2	59.0000	2.12132	1.5000	39.941	78.06
MFVG/Sodium Peroxide Fusion/Ni	2	69.2500	1.06066	0.7500	59.720	78.78

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ce By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.98988
Adj Rsquare 0.981785
Root Mean Square Error 46.55132
Mean of Response 803.65
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	1059872.9	264968	122.2728	<.0001
Error	5	10835.1	2167		
C. Total	9	1070708.0			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	525.00	32.917	440.4	609.6
MFDS/Sodium Peroxide Fusion/Ni	2	953.00	32.917	868.4	1037.6
MFS/Acidification w HNO3/HCl/	2	1245.00	32.917	1160.4	1329.6
MFVG/Cesium Carbonate Fusion/Pt	2	342.25	32.917	257.6	426.9
MFVG/Sodium Peroxide Fusion/Ni	2	953.00	32.917	868.4	1037.6

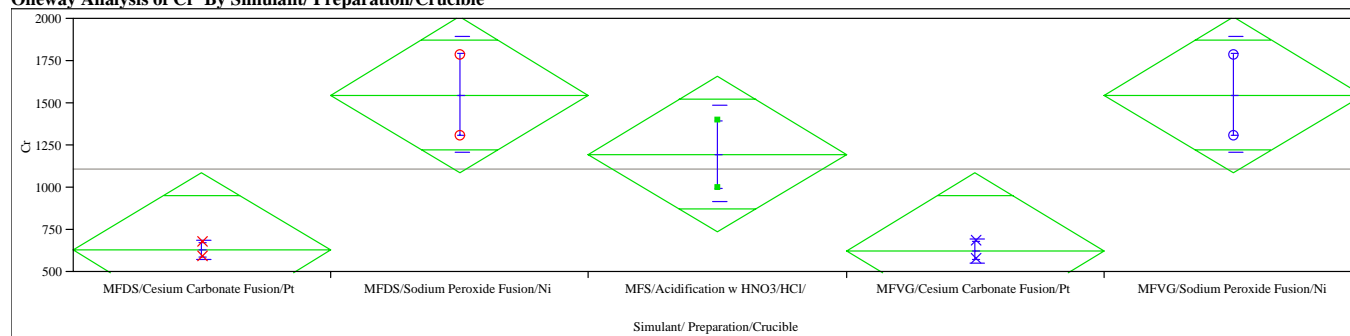
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	525.00	21.2132	15.000	334.41	715.6
MFDS/Sodium Peroxide Fusion/Ni	2	953.00	29.6985	21.000	686.17	1219.8
MFS/Acidification w HNO3/HCl/	2	1245.00	91.9239	65.000	419.10	2070.9
MFVG/Cesium Carbonate Fusion/Pt	2	342.25	13.0815	9.250	224.72	459.8
MFVG/Sodium Peroxide Fusion/Ni	2	953.00	29.6985	21.000	686.17	1219.8

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Cr By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.84289
Adj Rsquare 0.717202
Root Mean Square Error 252.4999
Mean of Response 1112.2
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	1710248.6	427562	6.7062	0.0304
Error	5	318781.0	63756		
C. Total	9	2029029.6			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	632.50	178.54	173.5	1091.5
MFDS/Sodium Peroxide Fusion/Ni	2	1550.00	178.54	1091.0	2009.0
MFS/Acidification w HNO3/HCl/	2	1200.00	178.54	741.0	1659.0
MFVG/Cesium Carbonate Fusion/Pt	2	628.50	178.54	169.5	1087.5
MFVG/Sodium Peroxide Fusion/Ni	2	1550.00	178.54	1091.0	2009.0

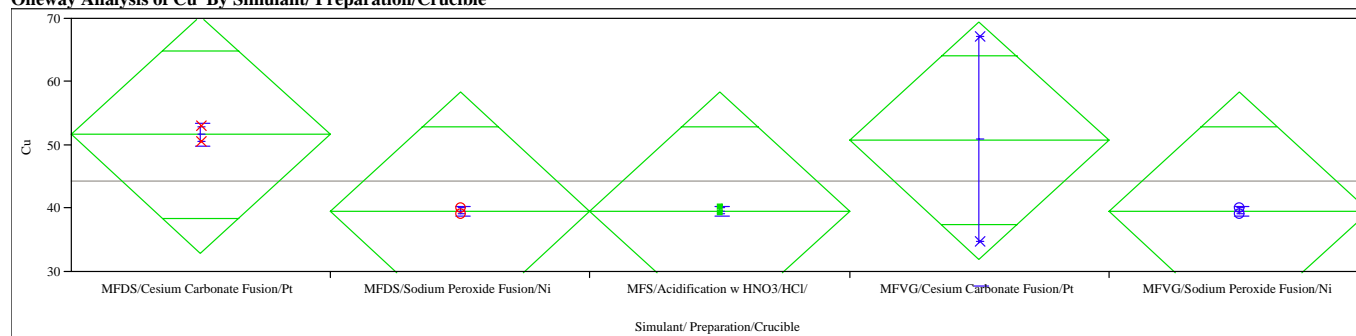
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	632.50	57.276	40.50	118	1147.1
MFDS/Sodium Peroxide Fusion/Ni	2	1550.00	339.411	240.00	-1499	4599.5
MFS/Acidification w HNO3/HCl/	2	1200.00	282.843	200.00	-1341	3741.2
MFVG/Cesium Carbonate Fusion/Pt	2	628.50	71.418	50.50	-13	1270.2
MFVG/Sodium Peroxide Fusion/Ni	2	1550.00	339.411	240.00	-1499	4599.5

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Cu By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.380014
Adj Rsquare -0.11597
Root Mean Square Error 10.32231
Mean of Response 44.31
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	326.54400	81.636	0.7662	0.5902
Error	5	532.75000	106.550		
C. Total	9	859.29400			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	51.7500	7.2990	32.987	70.513
MFDS/Sodium Peroxide Fusion/Ni	2	39.6500	7.2990	20.887	58.413
MFS/Acidification w HNO3/HCl/	2	39.6500	7.2990	20.887	58.413
MFVG/Cesium Carbonate Fusion/Pt	2	50.8500	7.2990	32.087	69.613
MFVG/Sodium Peroxide Fusion/Ni	2	39.6500	7.2990	20.887	58.413

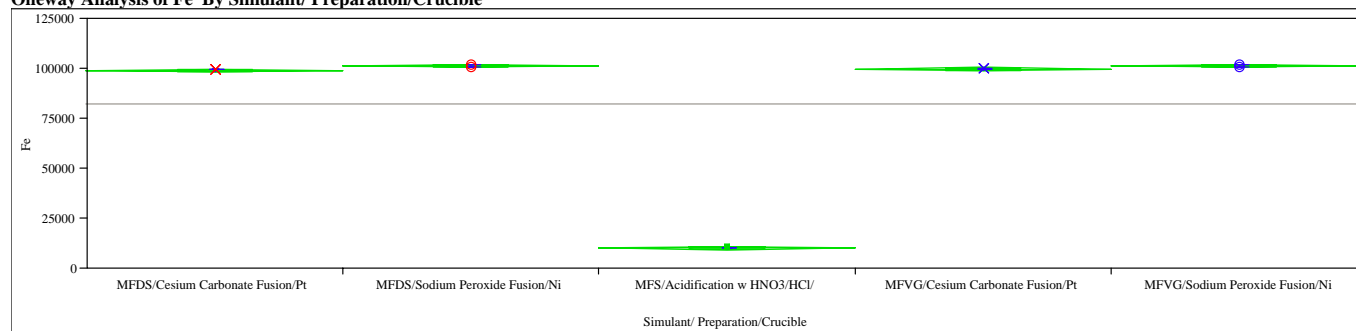
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	51.7500	1.7678	1.250	35.9	67.63
MFDS/Sodium Peroxide Fusion/Ni	2	39.6500	0.7071	0.500	33.3	46.00
MFS/Acidification w HNO3/HCl/	2	39.6500	0.7071	0.500	33.3	46.00
MFVG/Cesium Carbonate Fusion/Pt	2	50.8500	22.9810	16.250	-155.6	257.33
MFVG/Sodium Peroxide Fusion/Ni	2	39.6500	0.7071	0.500	33.3	46.00

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Fe By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.999921
Adj Rsquare 0.999858
Root Mean Square Error 452.7693
Mean of Response 82470
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	1.30298e10	3.25745e9	15890	<.0001
Error	5	1025000	205000		
C. Total	9	1.30308e10			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	99100	320.16	98277	99923
MFDS/Sodium Peroxide Fusion/Ni	2	101500	320.16	100677	102323
MFS/Acidification w HNO3/HCl/	2	10300	320.16	9477	11123
MFVG/Cesium Carbonate Fusion/Pt	2	99950	320.16	99127	100773
MFVG/Sodium Peroxide Fusion/Ni	2	101500	320.16	100677	102323

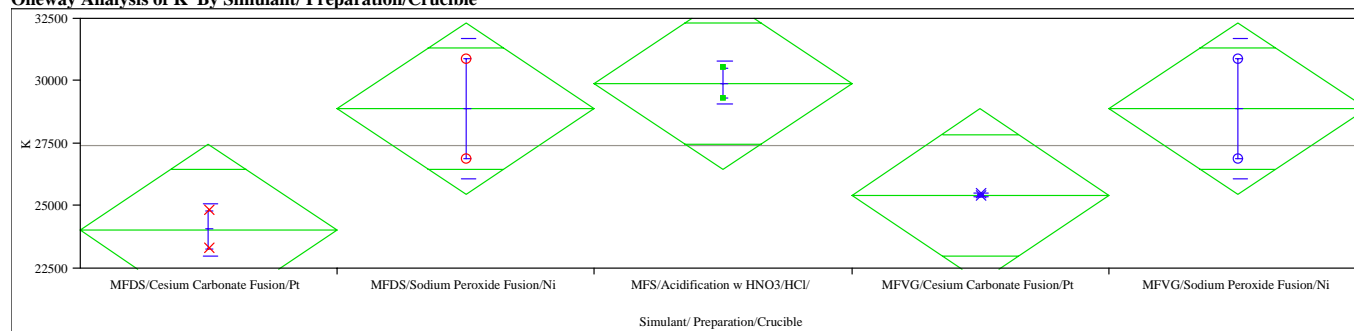
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	99100	141.421	100.00	97829	100371
MFDS/Sodium Peroxide Fusion/Ni	2	101500	707.107	500.00	95147	107853
MFS/Acidification w HNO3/HCl/	2	10300	0.000	0.00	10300	10300
MFVG/Cesium Carbonate Fusion/Pt	2	99950	70.711	50.00	99315	100585
MFVG/Sodium Peroxide Fusion/Ni	2	101500	707.107	500.00	95147	107853

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of K By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.742736
Adj Rsquare 0.536925
Root Mean Square Error 1889.444
Mean of Response 27440
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	51534000	12883500	3.6088	0.0959
Error	5	17850000	3570000		
C. Total	9	69384000			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	24050.0	1336.0	20616	27484
MFDS/Sodium Peroxide Fusion/Ni	2	28900.0	1336.0	25466	32334
MFS/Acidification w HNO3/HCl/	2	29900.0	1336.0	26466	33334
MFVG/Cesium Carbonate Fusion/Pt	2	25450.0	1336.0	22016	28884
MFVG/Sodium Peroxide Fusion/Ni	2	28900.0	1336.0	25466	32334

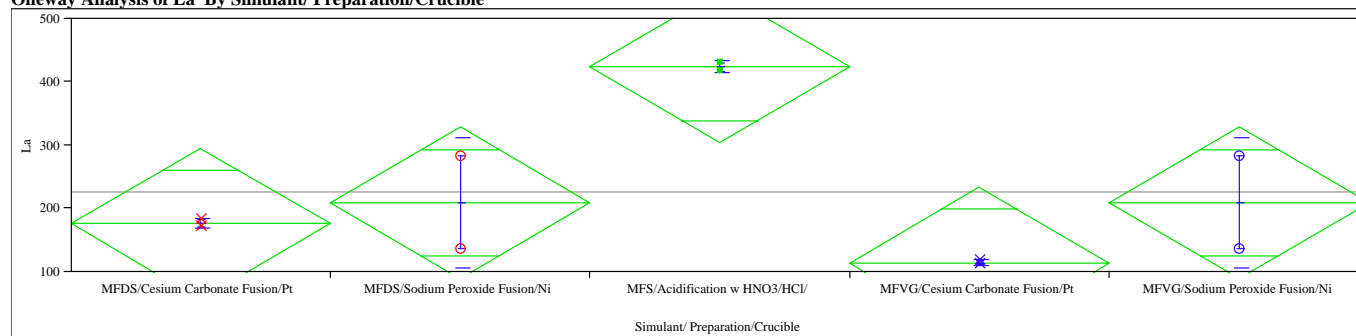
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	24050.0	1060.66	750.0	14520	33580
MFDS/Sodium Peroxide Fusion/Ni	2	28900.0	2828.43	2000.0	3488	54312
MFS/Acidification w HNO3/HCl/	2	29900.0	848.53	600.0	22276	37524
MFVG/Cesium Carbonate Fusion/Pt	2	25450.0	70.71	50.0	24815	26085
MFVG/Sodium Peroxide Fusion/Ni	2	28900.0	2828.43	2000.0	3488	54312

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of La By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.835356
Adj Rsquare 0.703641
Root Mean Square Error 65.50725
Mean of Response 227.2
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	108861.60	27215.4	6.3421	0.0340
Error	5	21456.00	4291.2		
C. Total	9	130317.60			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	177.000	46.321	57.9	296.07
MFDS/Sodium Peroxide Fusion/Ni	2	210.000	46.321	90.9	329.07
MFS/Acidification w HNO3/HCl/	2	424.000	46.321	304.9	543.07
MFVG/Cesium Carbonate Fusion/Pt	2	115.000	46.321	-4.1	234.07
MFVG/Sodium Peroxide Fusion/Ni	2	210.000	46.321	90.9	329.07

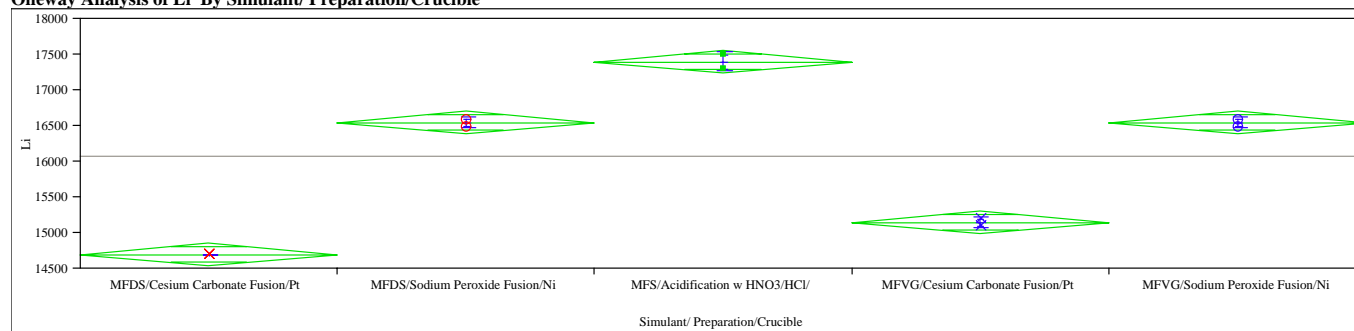
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	177.000	7.071	5.000	113.5	240.5
MFDS/Sodium Peroxide Fusion/Ni	2	210.000	103.238	73.000	-717.6	1137.6
MFS/Acidification w HNO3/HCl/	2	424.000	8.485	6.000	347.8	500.2
MFVG/Cesium Carbonate Fusion/Pt	2	115.000	4.243	3.000	76.9	153.1
MFVG/Sodium Peroxide Fusion/Ni	2	210.000	103.238	73.000	-717.6	1137.6

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Li By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.996479
Adj Rsquare 0.993663
Root Mean Square Error 83.666
Mean of Response 16070
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	9906000.0	2476500	353.7857	<.0001
Error	5	35000.0	7000		
C. Total	9	9941000.0			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	14700.0	59.161	14548	14852
MFDS/Sodium Peroxide Fusion/Ni	2	16550.0	59.161	16398	16702
MFS/Acidification w HNO3/HCl/	2	17400.0	59.161	17248	17552
MFVG/Cesium Carbonate Fusion/Pt	2	15150.0	59.161	14998	15302
MFVG/Sodium Peroxide Fusion/Ni	2	16550.0	59.161	16398	16702

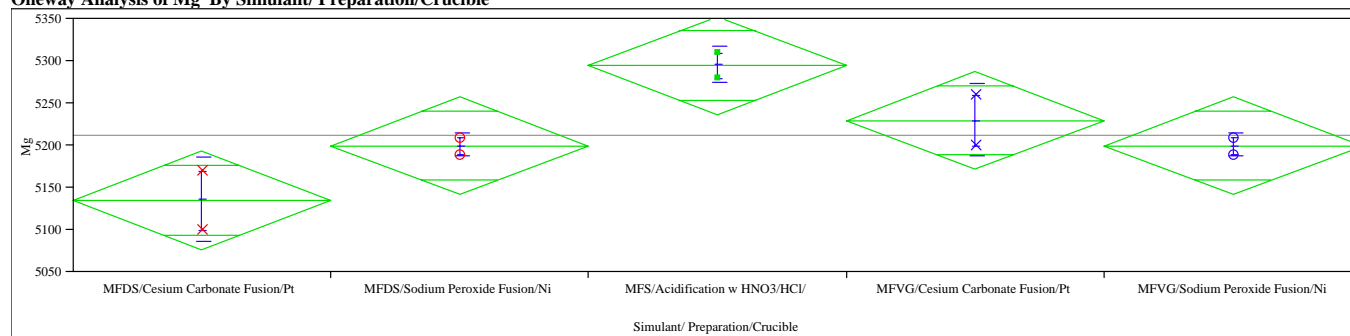
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	14700.0	0.000	0.00	14700	14700
MFDS/Sodium Peroxide Fusion/Ni	2	16550.0	70.711	50.00	15915	17185
MFS/Acidification w HNO3/HCl/	2	17400.0	141.421	100.00	16129	18671
MFVG/Cesium Carbonate Fusion/Pt	2	15150.0	70.711	50.00	14515	15785
MFVG/Sodium Peroxide Fusion/Ni	2	16550.0	70.711	50.00	15915	17185

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Mg By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.840426
Adj Rsquare 0.712766
Root Mean Square Error 31.93744
Mean of Response 5212
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	26860.000	6715.00	6.5833	0.0315
Error	5	5100.000	1020.00		
C. Total	9	31960.000			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	5135.00	22.583	5076.9	5193.1
MFDS/Sodium Peroxide Fusion/Ni	2	5200.00	22.583	5141.9	5258.1
MFS/Acidification w HNO3/HCl/	2	5295.00	22.583	5236.9	5353.1
MFVG/Cesium Carbonate Fusion/Pt	2	5230.00	22.583	5171.9	5288.1
MFVG/Sodium Peroxide Fusion/Ni	2	5200.00	22.583	5141.9	5258.1

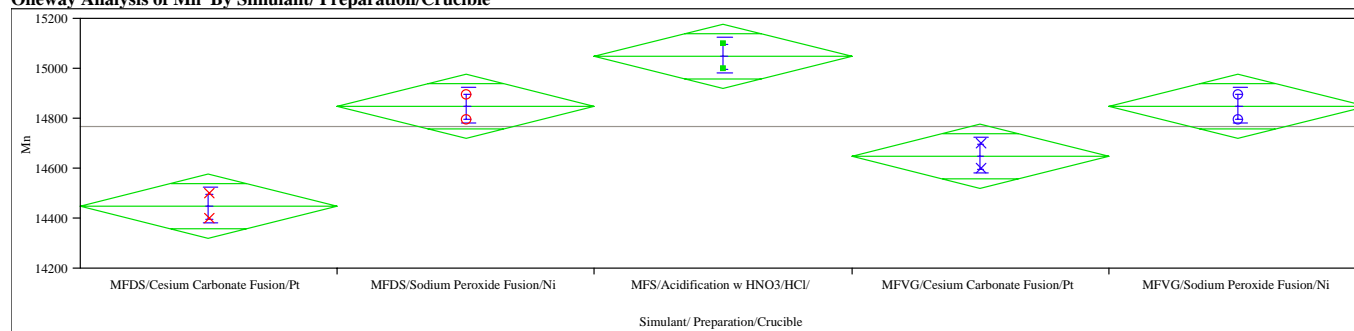
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	5135.00	49.4975	35.000	4690.3	5579.7
MFDS/Sodium Peroxide Fusion/Ni	2	5200.00	14.1421	10.000	5072.9	5327.1
MFS/Acidification w HNO3/HCl/	2	5295.00	21.2132	15.000	5104.4	5485.6
MFVG/Cesium Carbonate Fusion/Pt	2	5230.00	42.4264	30.000	4848.8	5611.2
MFVG/Sodium Peroxide Fusion/Ni	2	5200.00	14.1421	10.000	5072.9	5327.1

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Mn By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.943311
Adj Rsquare 0.897959
Root Mean Square Error 70.71068
Mean of Response 14770
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	416000.00	104000	20.8000	0.0026
Error	5	25000.00	5000		
C. Total	9	441000.00			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	14450.0	50.000	14321	14579
MFDS/Sodium Peroxide Fusion/Ni	2	14850.0	50.000	14721	14979
MFS/Acidification w HNO3/HCl/	2	15050.0	50.000	14921	15179
MFVG/Cesium Carbonate Fusion/Pt	2	14650.0	50.000	14521	14779
MFVG/Sodium Peroxide Fusion/Ni	2	14850.0	50.000	14721	14979

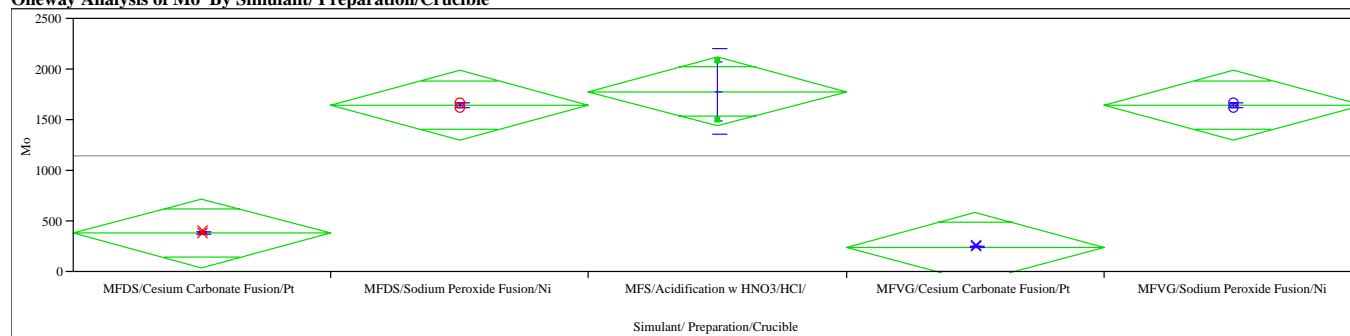
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	14450.0	70.7107	50.000	13815	15085
MFDS/Sodium Peroxide Fusion/Ni	2	14850.0	70.7107	50.000	14215	15485
MFS/Acidification w HNO3/HCl/	2	15050.0	70.7107	50.000	14415	15685
MFVG/Cesium Carbonate Fusion/Pt	2	14650.0	70.7107	50.000	14015	15285
MFVG/Sodium Peroxide Fusion/Ni	2	14850.0	70.7107	50.000	14215	15485

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Mo By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.963132
Adj Rsquare 0.933638
Root Mean Square Error 187.6055
Mean of Response 1143.95
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	4597299.1	1149325	32.6551	0.0009
Error	5	175979.1	35196		
C. Total	9	4773278.2			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	384.75	132.66	44	725.8
MFDS/Sodium Peroxide Fusion/Ni	2	1650.00	132.66	1309	1991.0
MFS/Acidification w HNO3/HCl/	2	1785.00	132.66	1444	2126.0
MFVG/Cesium Carbonate Fusion/Pt	2	250.00	132.66	-91	591.0
MFVG/Sodium Peroxide Fusion/Ni	2	1650.00	132.66	1309	1991.0

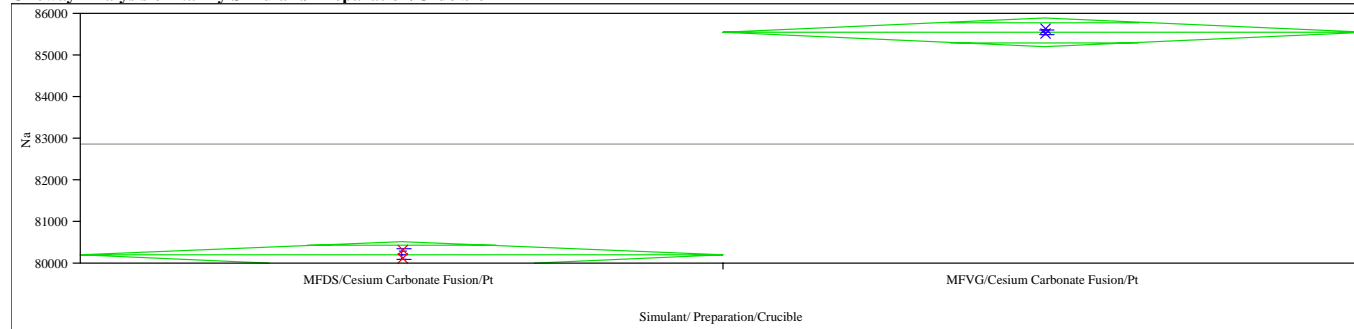
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	384.75	15.203	10.75	248	521.3
MFDS/Sodium Peroxide Fusion/Ni	2	1650.00	28.284	20.00	1396	1904.1
MFS/Acidification w HNO3/HCl/	2	1785.00	417.193	295.00	-1963	5533.3
MFVG/Cesium Carbonate Fusion/Pt	2	250.00	9.899	7.00	161	338.9
MFVG/Sodium Peroxide Fusion/Ni	2	1650.00	28.284	20.00	1396	1904.1

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Na By Simulant/ Preparation/Crucible



Missing Rows

6 Oneway Anova

Summary of Fit

Rsquare	0.999127
Adj Rsquare	0.998691
Root Mean Square Error	111.8034
Mean of Response	82875
Observations (or Sum Wgts)	4

t Test

MFDS/Cesium Carbonate Fusion/Pt-MFVG/Cesium Carbonate Fusion/Pt

Assuming equal variances

Difference	-5350.0	t Ratio	-47.8519
Std Err Dif	111.8	DF	2
Upper CL Dif	-4868.9	Prob > |t|	0.0004
Lower CL Dif	-5831.1	Prob > t	0.9998
Confidence	0.95	Prob < t	0.0002

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	28622500	28622500	2289.8	0.0004
Error	2	25000	12500		
C. Total	3	28647500			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	80200.0	79.057	79860	80540
MFVG/Cesium Carbonate Fusion/Pt	2	85550.0	79.057	85210	85890

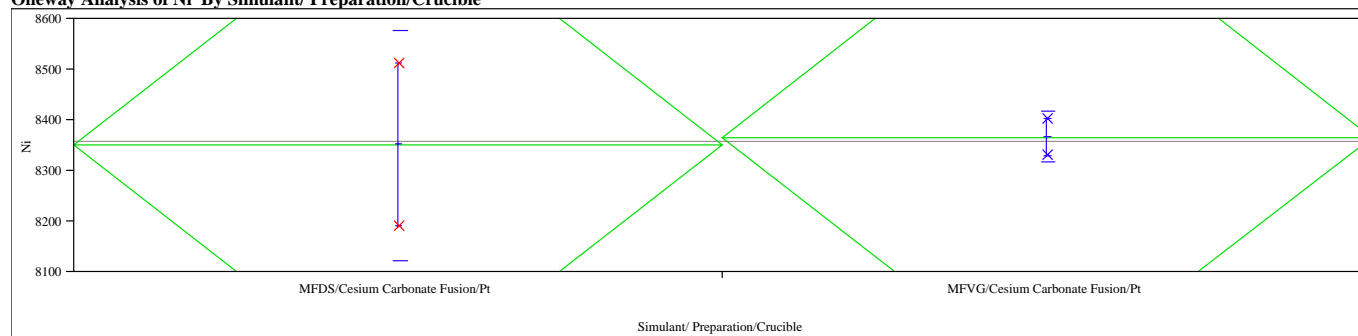
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	80200.0	141.421	100.00	78929	81471
MFVG/Cesium Carbonate Fusion/Pt	2	85550.0	70.711	50.00	84915	86185

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ni By Simulant/ Preparation/Crucible



Missing Rows

6Oneway Anova

Summary of Fit

Rsquare	0.004176
Adj Rsquare	-0.49374
Root Mean Square Error	163.7834
Mean of Response	8357.5
Observations (or Sum Wgts)	4

t Test

MFDS/Cesium Carbonate Fusion/Pt-MFVG/Cesium Carbonate Fusion/Pt

Assuming equal variances

Difference	-15.00	t Ratio	-0.09158
Std Err Dif	163.78	DF	2
Upper CL Dif	689.70	Prob > |t|	0.9354
Lower CL Dif	-719.70	Prob > t	0.5323
Confidence	0.95	Prob < t	0.4677

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	225.000	225.0	0.0084	0.9354
Error	2	53650.000	26825.0		
C. Total	3	53875.000			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	8350.00	115.81	7851.7	8848.3
MFVG/Cesium Carbonate Fusion/Pt	2	8365.00	115.81	7866.7	8863.3

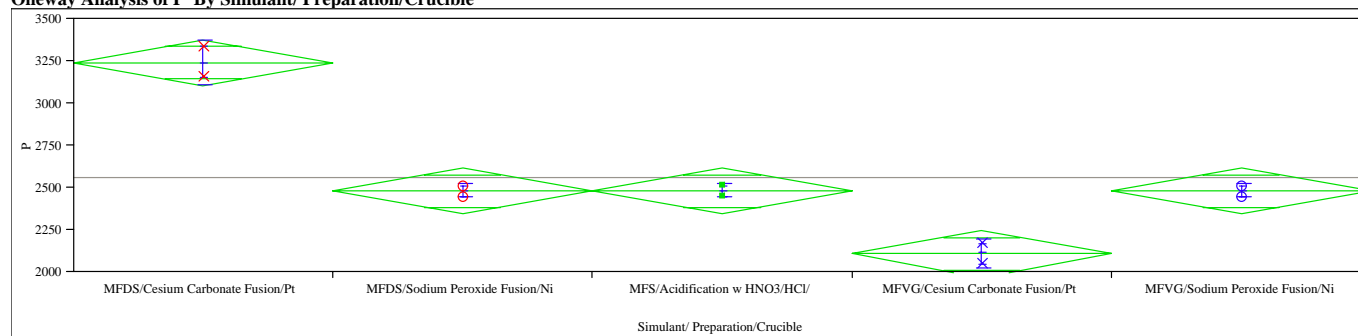
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	8350.00	226.274	160.00	6317.0	10383
MFVG/Cesium Carbonate Fusion/Pt	2	8365.00	49.497	35.00	7920.3	8810

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of P By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.979861
Adj Rsquare 0.963749
Root Mean Square Error 75.11658
Mean of Response 2557.5
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	1372650.0	343163	60.8175	0.0002
Error	5	28212.5	5643		
C. Total	9	1400862.5			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	3240.00	53.115	3103.5	3376.5
MFDS/Sodium Peroxide Fusion/Ni	2	2480.00	53.115	2343.5	2616.5
MFS/Acidification w HNO3/HCl/	2	2480.00	53.115	2343.5	2616.5
MFVG/Cesium Carbonate Fusion/Pt	2	2107.50	53.115	1971.0	2244.0
MFVG/Sodium Peroxide Fusion/Ni	2	2480.00	53.115	2343.5	2616.5

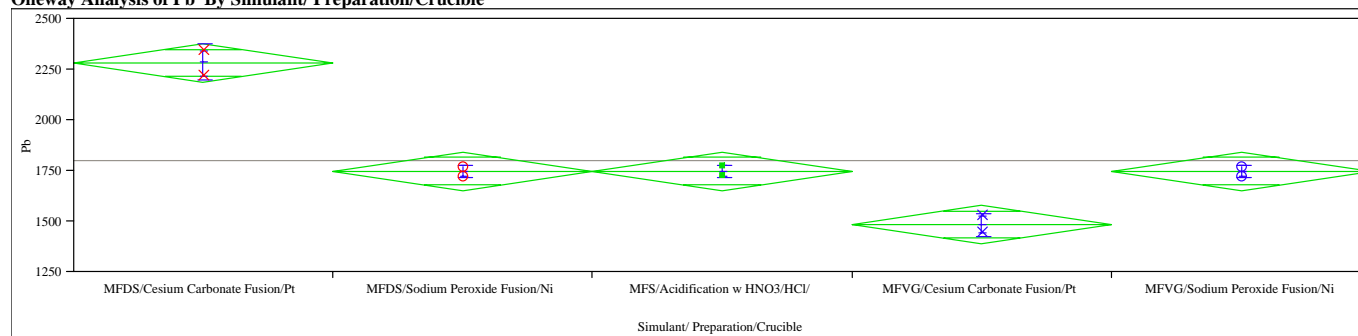
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	3240.00	127.279	90.000	2096.4	4383.6
MFDS/Sodium Peroxide Fusion/Ni	2	2480.00	42.426	30.000	2098.8	2861.2
MFS/Acidification w HNO3/HCl/	2	2480.00	42.426	30.000	2098.8	2861.2
MFVG/Cesium Carbonate Fusion/Pt	2	2107.50	81.317	57.500	1376.9	2838.1
MFVG/Sodium Peroxide Fusion/Ni	2	2480.00	42.426	30.000	2098.8	2861.2

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Pb By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.979773
Adj Rsquare 0.963591
Root Mean Square Error 53.00943
Mean of Response 1802
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	680560.00	170140	60.5480	0.0002
Error	5	14050.00	2810		
C. Total	9	694610.00			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	2282.50	37.483	2186.1	2378.9
MFDS/Sodium Peroxide Fusion/Ni	2	1747.50	37.483	1651.1	1843.9
MFS/Acidification w HNO3/HCl/	2	1747.50	37.483	1651.1	1843.9
MFVG/Cesium Carbonate Fusion/Pt	2	1485.00	37.483	1388.6	1581.4
MFVG/Sodium Peroxide Fusion/Ni	2	1747.50	37.483	1651.1	1843.9

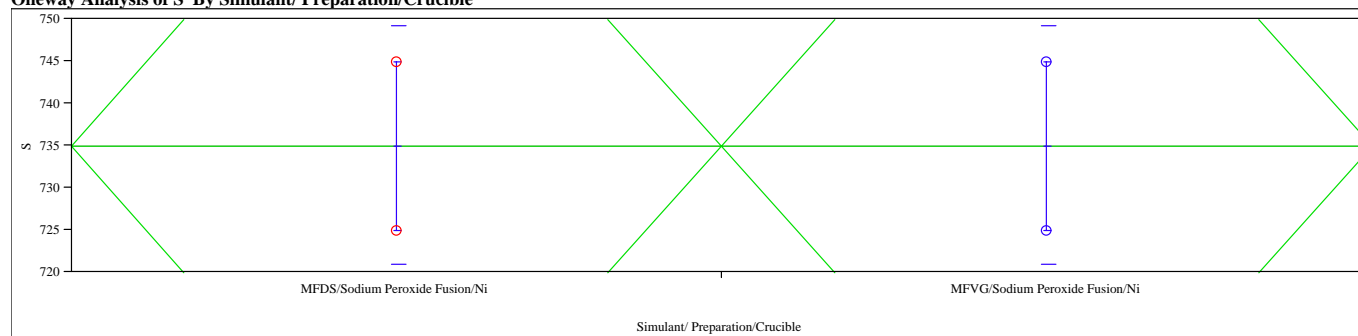
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	2282.50	88.3883	62.500	1488.4	3076.6
MFDS/Sodium Peroxide Fusion/Ni	2	1747.50	31.8198	22.500	1461.6	2033.4
MFS/Acidification w HNO3/HCl/	2	1747.50	31.8198	22.500	1461.6	2033.4
MFVG/Cesium Carbonate Fusion/Pt	2	1485.00	56.5685	40.000	976.8	1993.2
MFVG/Sodium Peroxide Fusion/Ni	2	1747.50	31.8198	22.500	1461.6	2033.4

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of S By Simulant/ Preparation/Crucible



Missing Rows

6Oneway Anova

Summary of Fit

Rsquare 0
Adj Rsquare -0.5
Root Mean Square Error 14.14214
Mean of Response 735
Observations (or Sum Wgts) 4
t Test
MFDS/Sodium Peroxide Fusion/Ni-MFVG/Sodium Peroxide Fusion/Ni
Assuming equal variances

Difference	0.000	t Ratio	0
Std Err Dif	14.142	DF	2
Upper CL Dif	60.849	Prob > |t|	1.0000
Lower CL Dif	-60.849	Prob > t	0.5000
Confidence	0.95	Prob < t	0.5000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	0.00000	0.000	0.0000	1.0000
Error	2	400.00000	200.000		
C. Total	3	400.00000			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	2	735.000	10.000	691.97	778.03
MFVG/Sodium Peroxide Fusion/Ni	2	735.000	10.000	691.97	778.03

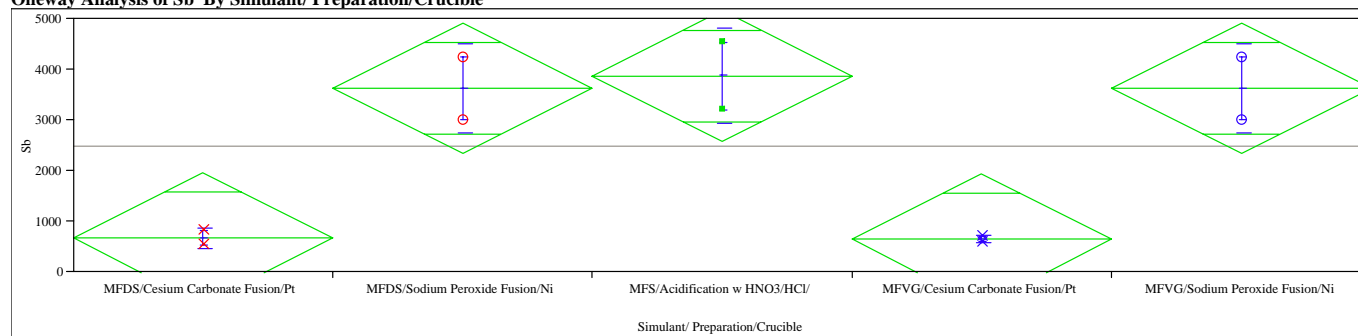
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	2	735.000	14.1421	10.000	607.94	862.06
MFVG/Sodium Peroxide Fusion/Ni	2	735.000	14.1421	10.000	607.94	862.06

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Sb By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.899419
Adj Rsquare 0.818954
Root Mean Square Error 707.9819
Mean of Response 2489.8
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	22410962	5602740	11.1778	0.0104
Error	5	2506192	501238		
C. Total	9	24917154			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	674.00	500.62	-613	1960.9
MFDS/Sodium Peroxide Fusion/Ni	2	3630.00	500.62	2343	4916.9
MFS/Acidification w HNO3/HCl/	2	3870.00	500.62	2583	5156.9
MFVG/Cesium Carbonate Fusion/Pt	2	645.00	500.62	-642	1931.9
MFVG/Sodium Peroxide Fusion/Ni	2	3630.00	500.62	2343	4916.9

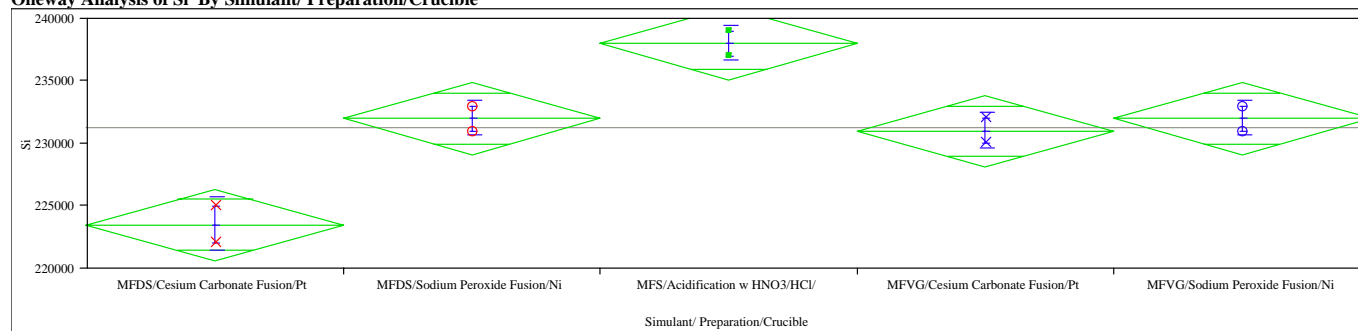
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	674.00	197.990	140.00	-1105	2453
MFDS/Sodium Peroxide Fusion/Ni	2	3630.00	890.955	630.00	-4375	11635
MFS/Acidification w HNO3/HCl/	2	3870.00	933.381	660.00	-4516	12256
MFVG/Cesium Carbonate Fusion/Pt	2	645.00	90.510	64.00	-168	1458
MFVG/Sodium Peroxide Fusion/Ni	2	3630.00	890.955	630.00	-4375	11635

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Si By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.944715
Adj Rsquare 0.900487
Root Mean Square Error 1581.139
Mean of Response 231300
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	213600000	53400000	21.3600	0.0024
Error	5	12500000	2500000		
C. Total	9	226100000			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	223500	1118.0	220626	226374
MFDS/Sodium Peroxide Fusion/Ni	2	232000	1118.0	229126	234874
MFS/Acidification w HNO3/HCl/	2	238000	1118.0	235126	240874
MFVG/Cesium Carbonate Fusion/Pt	2	231000	1118.0	228126	233874
MFVG/Sodium Peroxide Fusion/Ni	2	232000	1118.0	229126	234874

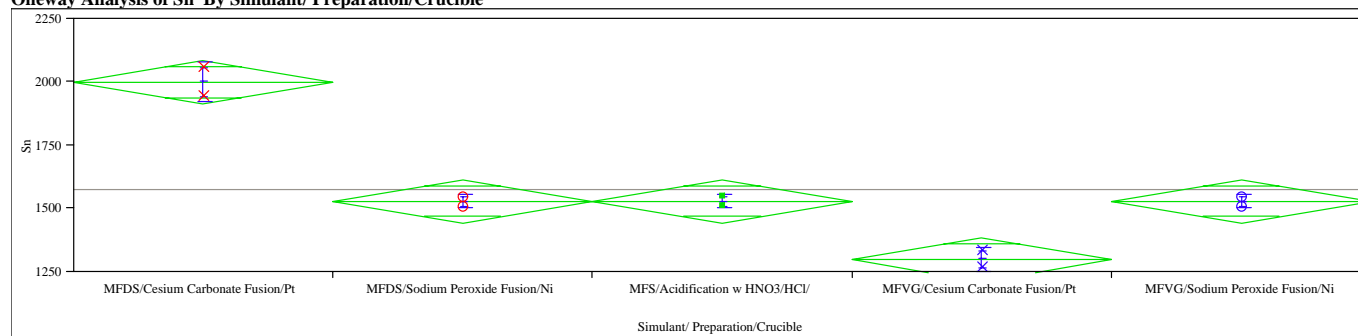
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	223500	2121.32	1500.0	204441	242559
MFDS/Sodium Peroxide Fusion/Ni	2	232000	1414.21	1000.0	219294	244706
MFS/Acidification w HNO3/HCl/	2	238000	1414.21	1000.0	225294	250706
MFVG/Cesium Carbonate Fusion/Pt	2	231000	1414.21	1000.0	218294	243706
MFVG/Sodium Peroxide Fusion/Ni	2	232000	1414.21	1000.0	219294	244706

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Sn By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.979644
Adj Rsquare 0.963359
Root Mean Square Error 46.69047
Mean of Response 1578
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	524560.00	131140	60.1560	0.0002
Error	5	10900.00	2180		
C. Total	9	535460.00			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	2000.00	33.015	1915.1	2084.9
MFDS/Sodium Peroxide Fusion/Ni	2	1530.00	33.015	1445.1	1614.9
MFS/Acidification w HNO3/HCl/	2	1530.00	33.015	1445.1	1614.9
MFVG/Cesium Carbonate Fusion/Pt	2	1300.00	33.015	1215.1	1384.9
MFVG/Sodium Peroxide Fusion/Ni	2	1530.00	33.015	1445.1	1614.9

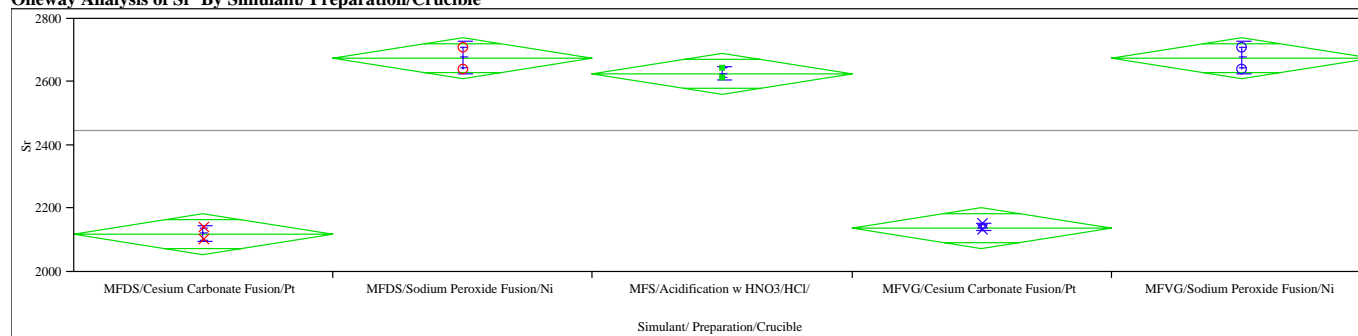
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	2000.00	77.7817	55.000	1301.2	2698.8
MFDS/Sodium Peroxide Fusion/Ni	2	1530.00	28.2843	20.000	1275.9	1784.1
MFS/Acidification w HNO3/HCl/	2	1530.00	28.2843	20.000	1275.9	1784.1
MFVG/Cesium Carbonate Fusion/Pt	2	1300.00	49.4975	35.000	855.3	1744.7
MFVG/Sodium Peroxide Fusion/Ni	2	1530.00	28.2843	20.000	1275.9	1784.1

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Sr By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.990662
Adj Rsquare 0.983191
Root Mean Square Error 35.63706
Mean of Response 2447
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	673660.00	168415	132.6102	<.0001
Error	5	6350.00	1270		
C. Total	9	680010.00			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	2120.00	25.199	2055.2	2184.8
MFDS/Sodium Peroxide Fusion/Ni	2	2675.00	25.199	2610.2	2739.8
MFS/Acidification w HNO3/HCl/	2	2625.00	25.199	2560.2	2689.8
MFVG/Cesium Carbonate Fusion/Pt	2	2140.00	25.199	2075.2	2204.8
MFVG/Sodium Peroxide Fusion/Ni	2	2675.00	25.199	2610.2	2739.8

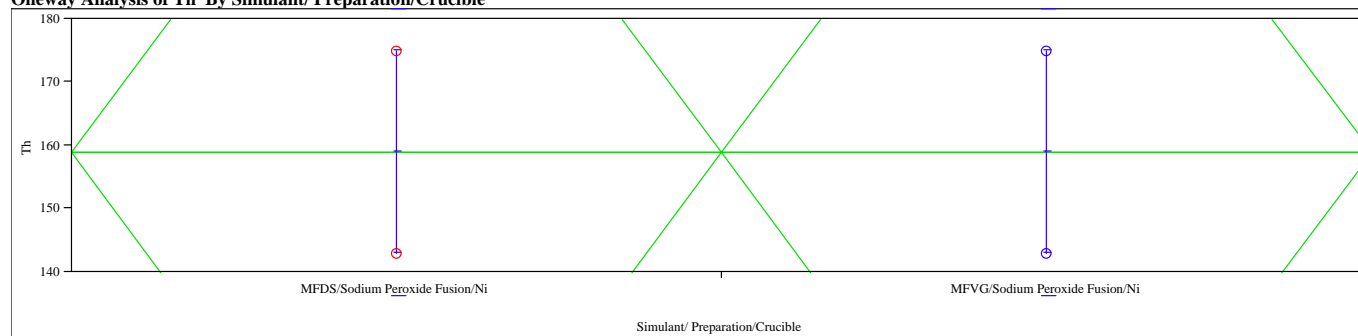
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	2120.00	28.2843	20.000	1865.9	2374.1
MFDS/Sodium Peroxide Fusion/Ni	2	2675.00	49.4975	35.000	2230.3	3119.7
MFS/Acidification w HNO3/HCl/	2	2625.00	21.2132	15.000	2434.4	2815.6
MFVG/Cesium Carbonate Fusion/Pt	2	2140.00	14.1421	10.000	2012.9	2267.1
MFVG/Sodium Peroxide Fusion/Ni	2	2675.00	49.4975	35.000	2230.3	3119.7

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Th By Simulant/ Preparation/Crucible



Missing Rows

6 Oneway Anova

Summary of Fit

Rsquare 0
Adj Rsquare -0.5
Root Mean Square Error 22.62742
Mean of Response 159
Observations (or Sum Wgts) 4

t Test

MFDS/Sodium Peroxide Fusion/Ni-MFVG/Sodium Peroxide Fusion/Ni
Assuming equal variances

Difference	0.000	t Ratio	0
Std Err Dif	22.627	DF	2
Upper CL Dif	97.358	Prob > |t|	1.0000
Lower CL Dif	-97.358	Prob > t	0.5000
Confidence	0.95	Prob < t	0.5000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	0.0000	0.000	0.0000	1.0000
Error	2	1024.0000	512.000		
C. Total	3	1024.0000			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	2	159.000	16.000	90.158	227.84
MFVG/Sodium Peroxide Fusion/Ni	2	159.000	16.000	90.158	227.84

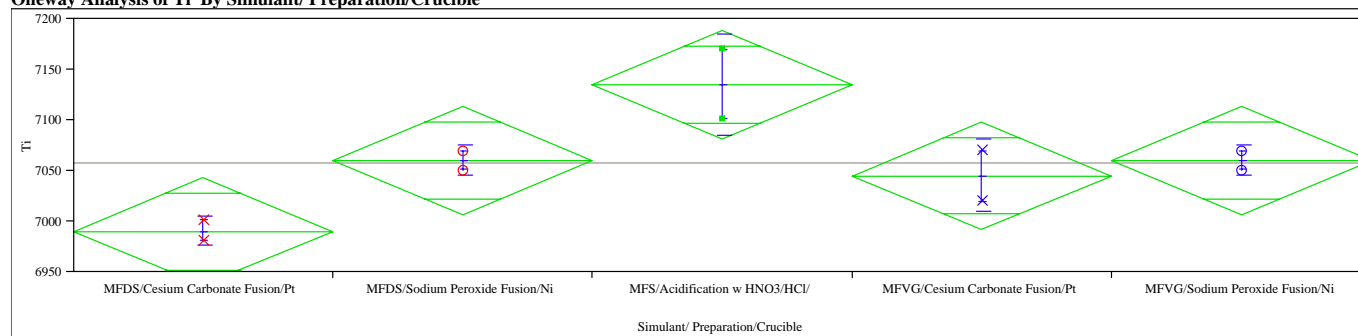
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	2	159.000	22.6274	16.000	-44.30	362.30
MFVG/Sodium Peroxide Fusion/Ni	2	159.000	22.6274	16.000	-44.30	362.30

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ti By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.833075
Adj Rsquare 0.699534
Root Mean Square Error 29.32576
Mean of Response 7058
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	21460.000	5365.00	6.2384	0.0351
Error	5	4300.000	860.00		
C. Total	9	25760.000			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	6990.00	20.736	6936.7	7043.3
MFDS/Sodium Peroxide Fusion/Ni	2	7060.00	20.736	7006.7	7113.3
MFS/Acidification w HNO3/HCl/	2	7135.00	20.736	7081.7	7188.3
MFVG/Cesium Carbonate Fusion/Pt	2	7045.00	20.736	6991.7	7098.3
MFVG/Sodium Peroxide Fusion/Ni	2	7060.00	20.736	7006.7	7113.3

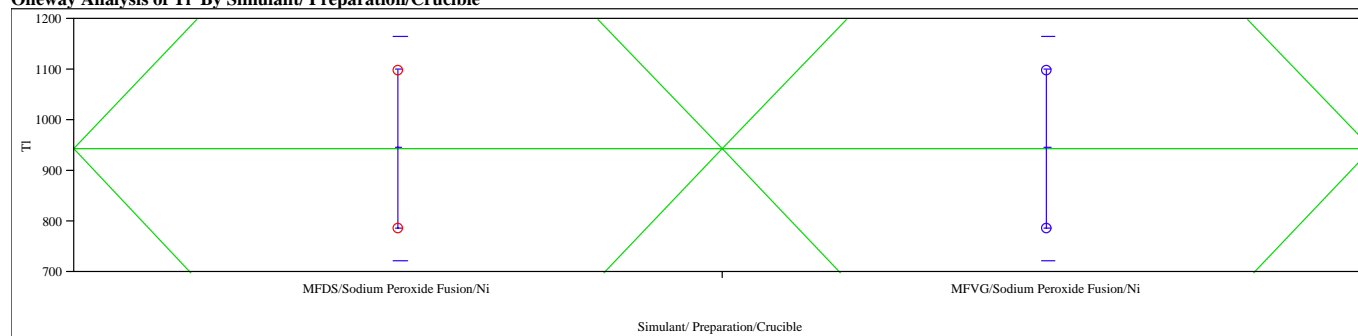
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	6990.00	14.1421	10.000	6862.9	7117.1
MFDS/Sodium Peroxide Fusion/Ni	2	7060.00	14.1421	10.000	6932.9	7187.1
MFS/Acidification w HNO3/HCl/	2	7135.00	49.4975	35.000	6690.3	7579.7
MFVG/Cesium Carbonate Fusion/Pt	2	7045.00	35.3553	25.000	6727.3	7362.7
MFVG/Sodium Peroxide Fusion/Ni	2	7060.00	14.1421	10.000	6932.9	7187.1

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Tl By Simulant/ Preparation/Crucible



Missing Rows

6 Oneway Anova

Summary of Fit

Rsquare 0
Adj Rsquare -0.5
Root Mean Square Error 220.6173
Mean of Response 944
Observations (or Sum Wgts) 4

t Test

MFDS/Sodium Peroxide Fusion/Ni-MFVG/Sodium Peroxide Fusion/Ni
Assuming equal variances

Difference	0.00	t Ratio	0
Std Err Dif	220.62	DF	2
Upper CL Dif	949.24	Prob > |t|	1.0000
Lower CL Dif	-949.24	Prob > t	0.5000
Confidence	0.95	Prob < t	0.5000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	0.000	0.0	0.0000	1.0000
Error	2	97344.000	48672.0		
C. Total	3	97344.000			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	2	944.000	156.00	272.79	1615.2
MFVG/Sodium Peroxide Fusion/Ni	2	944.000	156.00	272.79	1615.2

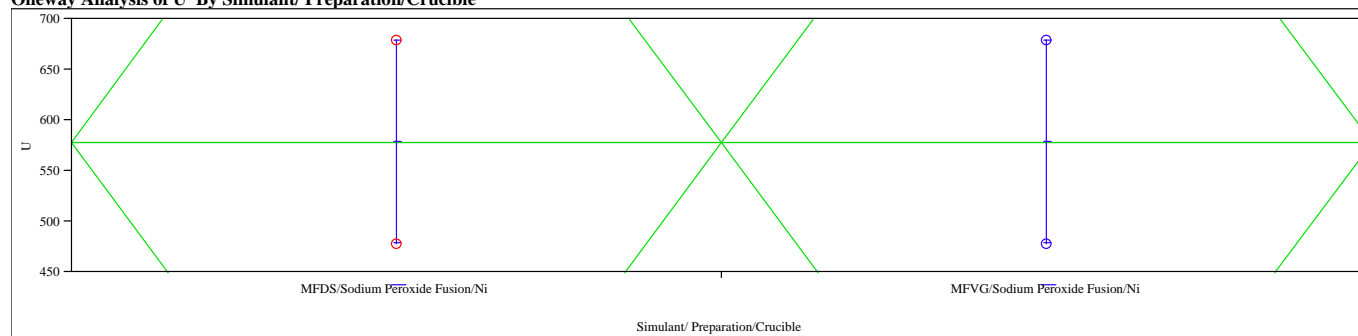
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	2	944.000	220.617	156.00	-1038	2926.2
MFVG/Sodium Peroxide Fusion/Ni	2	944.000	220.617	156.00	-1038	2926.2

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of U By Simulant/ Preparation/Crucible



Missing Rows

6 Oneway Anova

Summary of Fit

Rsquare 0
Adj Rsquare -0.5
Root Mean Square Error 142.1285
Mean of Response 578.5
Observations (or Sum Wgts) 4

t Test

MFDS/Sodium Peroxide Fusion/Ni-MFVG/Sodium Peroxide Fusion/Ni
Assuming equal variances

Difference	0.00	t Ratio	0
Std Err Dif	142.13	DF	2
Upper CL Dif	611.53	Prob > |t|	1.0000
Lower CL Dif	-611.53	Prob > t	0.5000
Confidence	0.95	Prob < t	0.5000

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	0.000	0.0	0.0000	1.0000
Error	2	40401.000	20200.5		
C. Total	3	40401.000			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	2	578.500	100.50	146.08	1010.9
MFVG/Sodium Peroxide Fusion/Ni	2	578.500	100.50	146.08	1010.9

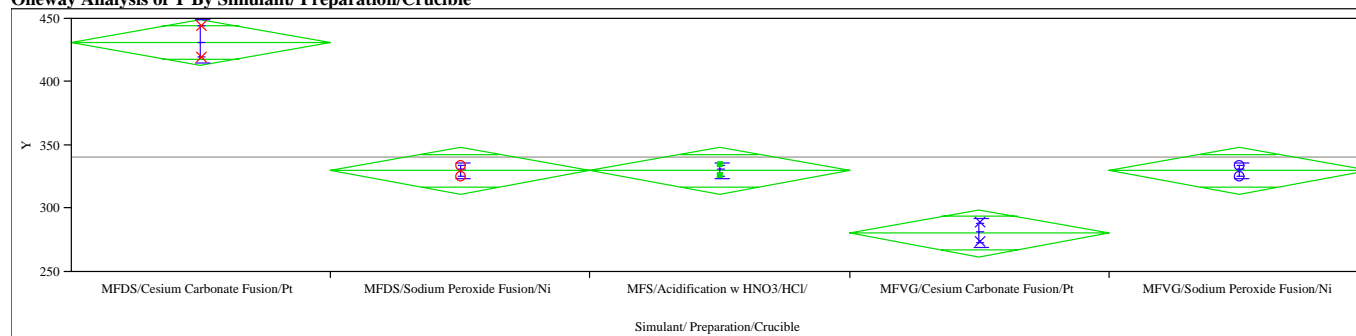
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	2	578.500	142.128	100.50	-698.5	1855.5
MFVG/Sodium Peroxide Fusion/Ni	2	578.500	142.128	100.50	-698.5	1855.5

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Y By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.979214
Adj Rsquare 0.962586
Root Mean Square Error 10.16366
Mean of Response 340.6
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	24332.400	6083.10	58.8877	0.0002
Error	5	516.500	103.30		
C. Total	9	24848.900			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	431.500	7.1868	413.03	449.97
MFDS/Sodium Peroxide Fusion/Ni	2	330.250	7.1868	311.78	348.72
MFS/Acidification w HNO3/HCl/	2	330.250	7.1868	311.78	348.72
MFVG/Cesium Carbonate Fusion/Pt	2	280.750	7.1868	262.28	299.22
MFVG/Sodium Peroxide Fusion/Ni	2	330.250	7.1868	311.78	348.72

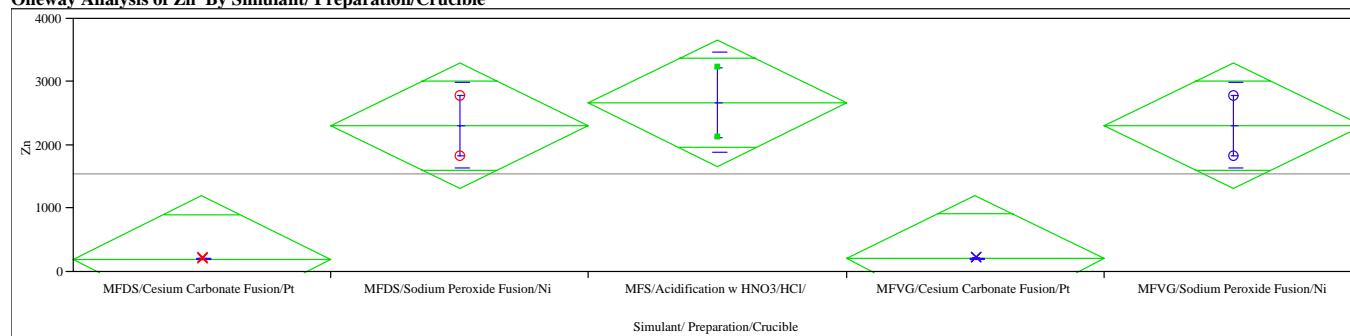
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	431.500	16.9706	12.000	279.03	583.97
MFDS/Sodium Peroxide Fusion/Ni	2	330.250	6.0104	4.250	276.25	384.25
MFS/Acidification w HNO3/HCl/	2	330.250	6.0104	4.250	276.25	384.25
MFVG/Cesium Carbonate Fusion/Pt	2	280.750	10.9602	7.750	182.28	379.22
MFVG/Sodium Peroxide Fusion/Ni	2	330.250	6.0104	4.250	276.25	384.25

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Zn By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.888651
Adj Rsquare 0.799572
Root Mean Square Error 549.1086
Mean of Response 1544
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	12031861	3007965	9.9760	0.0133
Error	5	1507601	301520		
C. Total	9	13539462			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	204.50	388.28	-794	1202.6
MFDS/Sodium Peroxide Fusion/Ni	2	2315.00	388.28	1317	3313.1
MFS/Acidification w HNO3/HCl/	2	2670.00	388.28	1672	3668.1
MFVG/Cesium Carbonate Fusion/Pt	2	215.50	388.28	-783	1213.6
MFVG/Sodium Peroxide Fusion/Ni	2	2315.00	388.28	1317	3313.1

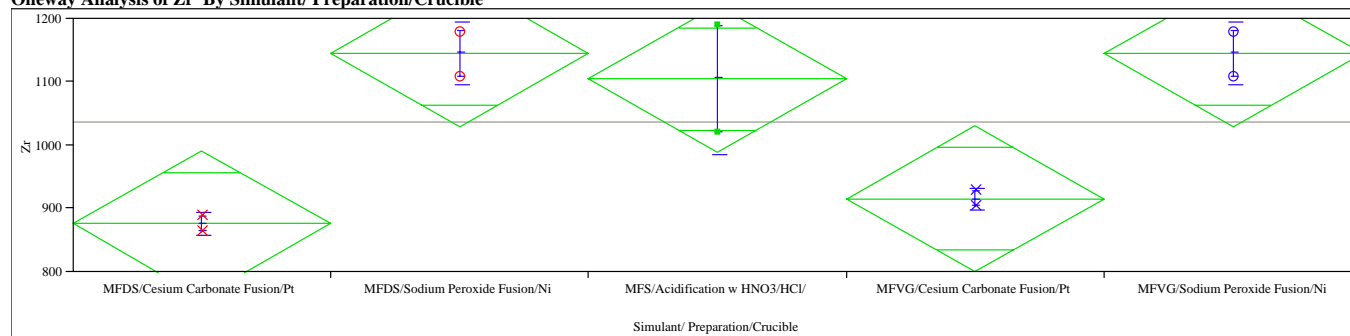
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	204.50	7.778	5.50	135	274.4
MFDS/Sodium Peroxide Fusion/Ni	2	2315.00	671.751	475.00	-3720	8350.4
MFS/Acidification w HNO3/HCl/	2	2670.00	777.817	550.00	-4318	9658.4
MFVG/Cesium Carbonate Fusion/Pt	2	215.50	6.364	4.50	158	272.7
MFVG/Sodium Peroxide Fusion/Ni	2	2315.00	671.751	475.00	-3720	8350.4

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Zr By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.872646
Adj Rsquare 0.770764
Root Mean Square Error 63.16724
Mean of Response 1037.5
Observations (or Sum Wgts) 10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	136704.00	34176.0	8.5652	0.0184
Error	5	19950.50	3990.1		
C. Total	9	156654.50			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	876.50	44.666	761.7	991.3
MFDS/Sodium Peroxide Fusion/Ni	2	1145.00	44.666	1030.2	1259.8
MFS/Acidification w HNO3/HCl/	2	1105.00	44.666	990.2	1219.8
MFVG/Cesium Carbonate Fusion/Pt	2	916.00	44.666	801.2	1030.8
MFVG/Sodium Peroxide Fusion/Ni	2	1145.00	44.666	1030.2	1259.8

Std Error uses a pooled estimate of error variance

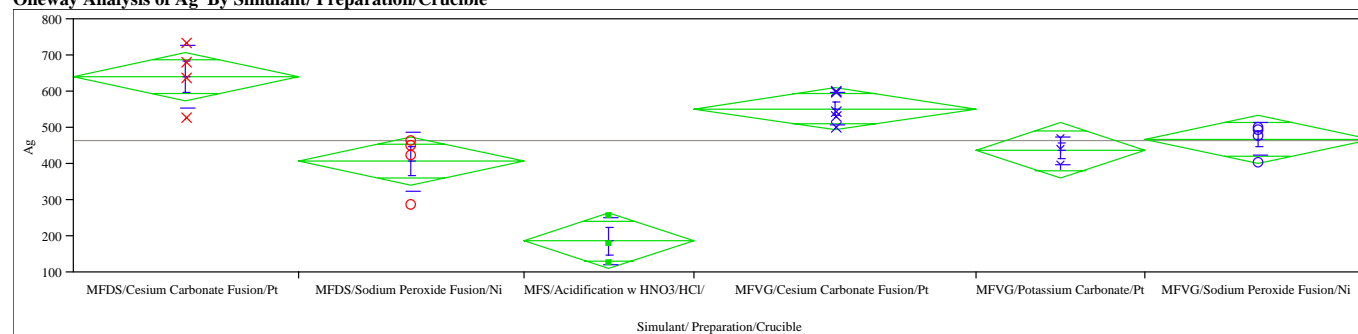
Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	2	876.50	17.678	12.500	717.67	1035.3
MFDS/Sodium Peroxide Fusion/Ni	2	1145.00	49.497	35.000	700.28	1589.7
MFS/Acidification w HNO3/HCl/	2	1105.00	120.208	85.000	24.97	2185.0
MFVG/Cesium Carbonate Fusion/Pt	2	916.00	16.971	12.000	763.53	1068.5
MFVG/Sodium Peroxide Fusion/Ni	2	1145.00	49.497	35.000	700.28	1589.7

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Type of Sample=Trials

Oneway Analysis of Ag By Simulant/ Preparation/Crucible



Oneway Anova

Summary of Fit

Rsquare 0.858704
Adj Rsquare 0.817147
Root Mean Square Error 63.19436
Mean of Response 466.0435
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	412590.99	82518.2	20.6630	<.0001
Error	17	67889.97	3993.5		
C. Total	22	480480.96			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	642.750	31.597	576.09	709.41
MFDS/Sodium Peroxide Fusion/Ni	4	407.750	31.597	341.09	474.41
MFS/Acidification w HNO3/HCl/	3	187.000	36.485	110.02	263.98
MFVG/Cesium Carbonate Fusion/Pt	5	553.200	28.261	493.57	612.83
MFVG/Potassium Carbonate/Pt	3	437.333	36.485	360.36	514.31
MFVG/Sodium Peroxide Fusion/Ni	4	469.500	31.597	402.84	536.16

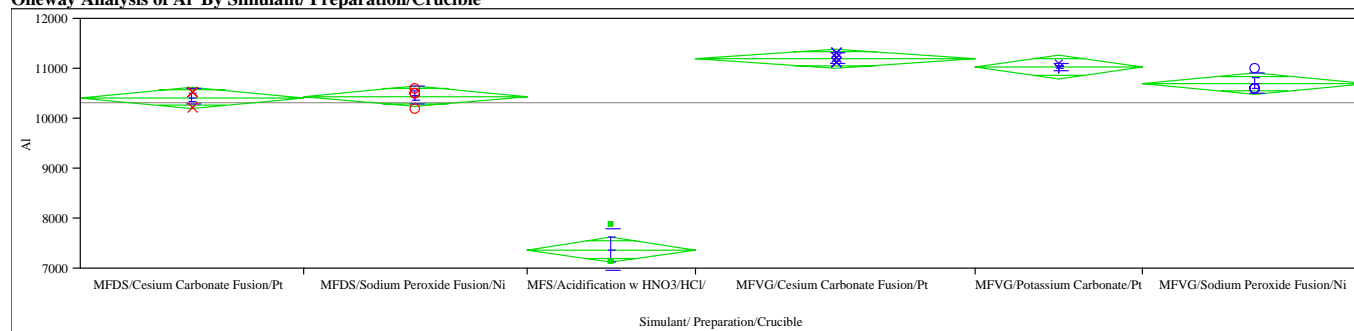
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	642.750	87.2062	43.603	503.99	781.51
MFDS/Sodium Peroxide Fusion/Ni	4	407.750	81.6267	40.813	277.86	537.64
MFS/Acidification w HNO3/HCl/	3	187.000	65.7799	37.978	23.59	350.41
MFVG/Cesium Carbonate Fusion/Pt	5	553.200	43.8714	19.620	498.73	607.67
MFVG/Potassium Carbonate/Pt	3	437.333	37.8197	21.835	343.38	531.28
MFVG/Sodium Peroxide Fusion/Ni	4	469.500	44.2455	22.123	399.10	539.90

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Al By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.979072
Adj Rsquare 0.972917
Root Mean Square Error 200.6411
Mean of Response 10327.83
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	32017225	6403445	159.0647	<.0001
Error	17	684367	40257		
C. Total	22	32701591			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	10425.0	100.32	10213	10637
MFDS/Sodium Peroxide Fusion/Ni	4	10450.0	100.32	10238	10662
MFS/Acidification w HNO3/HCl/	3	7380.0	115.84	7136	7624
MFVG/Cesium Carbonate Fusion/Pt	5	11200.0	89.73	11011	11389
MFVG/Potassium Carbonate/Pt	3	11033.3	115.84	10789	11278
MFVG/Sodium Peroxide Fusion/Ni	4	10700.0	100.32	10488	10912

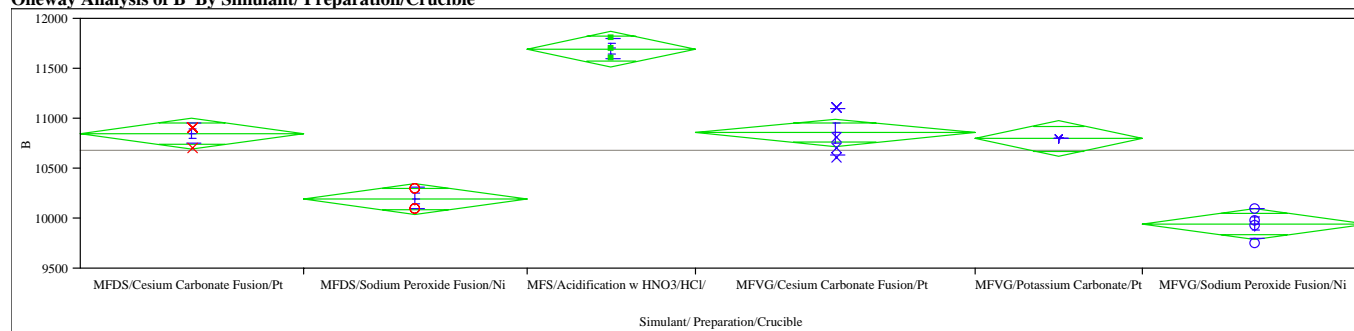
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	10425.0	150.000	75.00	10186	10664
MFDS/Sodium Peroxide Fusion/Ni	4	10450.0	173.205	86.60	10174	10726
MFS/Acidification w HNO3/HCl/	3	7380.0	424.382	245.02	6326	8434
MFVG/Cesium Carbonate Fusion/Pt	5	11200.0	100.000	44.72	11076	11324
MFVG/Potassium Carbonate/Pt	3	11033.3	57.735	33.33	10890	11177
MFVG/Sodium Peroxide Fusion/Ni	4	10700.0	200.000	100.00	10382	11018

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of B By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.947585
Adj Rsquare 0.932168
Root Mean Square Error 145.8595
Mean of Response 10685.65
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	6538490.2	1307698	61.4664	<.0001
Error	17	361675.0	21275		
C. Total	22	6900165.2			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	10850.0	72.930	10696	11004
MFDS/Sodium Peroxide Fusion/Ni	4	10200.0	72.930	10046	10354
MFS/Acidification w HNO3/HCl/	3	11700.0	84.212	11522	11878
MFVG/Cesium Carbonate Fusion/Pt	5	10860.0	65.230	10722	10998
MFVG/Potassium Carbonate/Pt	3	10800.0	84.212	10622	10978
MFVG/Sodium Peroxide Fusion/Ni	4	9942.5	72.930	9789	10096

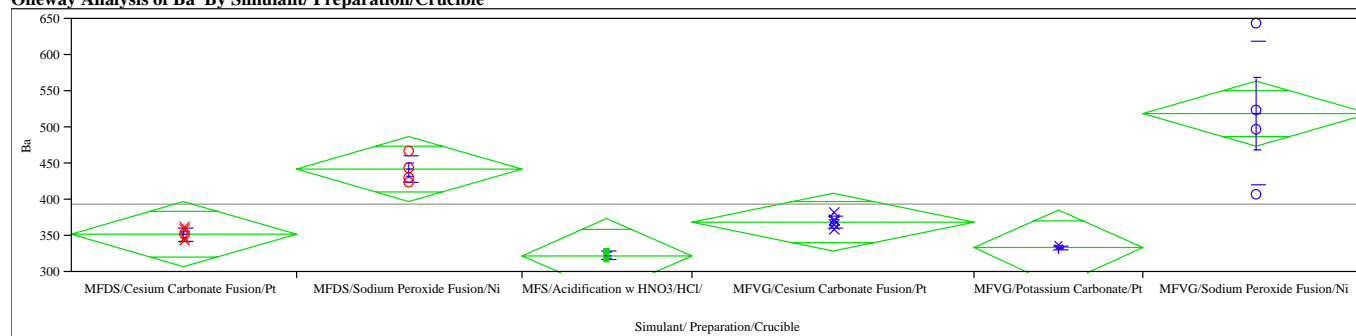
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	10850.0	100.000	50.00	10691	11009
MFDS/Sodium Peroxide Fusion/Ni	4	10200.0	115.470	57.74	10016	10384
MFS/Acidification w HNO3/HCl/	3	11700.0	100.000	57.74	11452	11948
MFVG/Cesium Carbonate Fusion/Pt	5	10860.0	230.217	102.96	10574	11146
MFVG/Potassium Carbonate/Pt	3	10800.0	0.000	0.00	10800	10800
MFVG/Sodium Peroxide Fusion/Ni	4	9942.5	141.038	70.52	9718	10167

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ba By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.778845
Adj Rsquare 0.7138
Root Mean Square Error 42.40372
Mean of Response 394.1304
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	107649.33	21529.9	11.9738	<.0001
Error	17	30567.28	1798.1		
C. Total	22	138216.61			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	352.000	21.202	307.27	396.73
MFDS/Sodium Peroxide Fusion/Ni	4	442.000	21.202	397.27	486.73
MFS/Acidification w HNO3/HCl/	3	323.333	24.482	271.68	374.99
MFVG/Cesium Carbonate Fusion/Pt	5	368.600	18.964	328.59	408.61
MFVG/Potassium Carbonate/Pt	3	333.667	24.482	282.01	385.32
MFVG/Sodium Peroxide Fusion/Ni	4	518.750	21.202	474.02	563.48

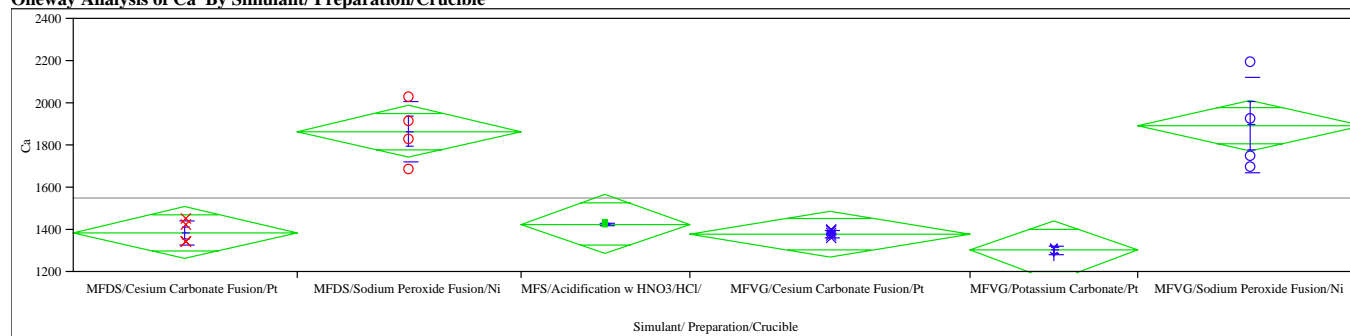
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	352.000	8.8318	4.416	337.95	366.05
MFDS/Sodium Peroxide Fusion/Ni	4	442.000	18.6548	9.327	412.32	471.68
MFS/Acidification w HNO3/HCl/	3	323.333	6.4291	3.712	307.36	339.30
MFVG/Cesium Carbonate Fusion/Pt	5	368.600	8.5615	3.829	357.97	379.23
MFVG/Potassium Carbonate/Pt	3	333.667	2.8868	1.667	326.50	340.84
MFVG/Sodium Peroxide Fusion/Ni	4	518.750	98.1440	49.072	362.58	674.92

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ca By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.856859
Adj Rsquare 0.814758
Root Mean Square Error 115.4998
Mean of Response 1551.739
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	1357547.1	271509	20.3527	<.0001
Error	17	226783.3	13340		
C. Total	22	1584330.4			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	1387.50	57.750	1265.7	1509.3
MFDS/Sodium Peroxide Fusion/Ni	4	1867.50	57.750	1745.7	1989.3
MFS/Acidification w HNO3/HCl/	3	1426.67	66.684	1286.0	1567.4
MFVG/Cesium Carbonate Fusion/Pt	5	1380.00	51.653	1271.0	1489.0
MFVG/Potassium Carbonate/Pt	3	1303.33	66.684	1162.6	1444.0
MFVG/Sodium Peroxide Fusion/Ni	4	1895.00	57.750	1773.2	2016.8

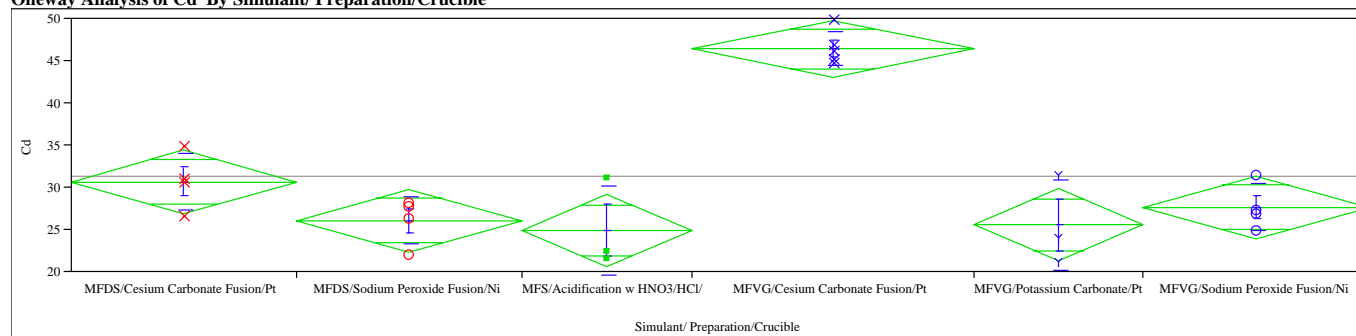
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	1387.50	56.199	28.10	1298.1	1476.9
MFDS/Sodium Peroxide Fusion/Ni	4	1867.50	143.846	71.92	1638.6	2096.4
MFS/Acidification w HNO3/HCl/	3	1426.67	5.774	3.33	1412.3	1441.0
MFVG/Cesium Carbonate Fusion/Pt	5	1380.00	15.811	7.07	1360.4	1399.6
MFVG/Potassium Carbonate/Pt	3	1303.33	20.817	12.02	1251.6	1355.0
MFVG/Sodium Peroxide Fusion/Ni	4	1895.00	226.053	113.03	1535.3	2254.7

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Cd By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.878762
Adj Rsquare 0.843103
Root Mean Square Error 3.523596
Mean of Response 31.38696
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	1529.8637	305.973	24.6440	<.0001
Error	17	211.0674	12.416		
C. Total	22	1740.9311			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	30.7125	1.7618	26.995	34.430
MFDS/Sodium Peroxide Fusion/Ni	4	26.0875	1.7618	22.370	29.805
MFS/Acidification w HNO3/HCl/	3	24.9500	2.0343	20.658	29.242
MFVG/Cesium Carbonate Fusion/Pt	5	46.4600	1.5758	43.135	49.785
MFVG/Potassium Carbonate/Pt	3	25.5833	2.0343	21.291	29.875
MFVG/Sodium Peroxide Fusion/Ni	4	27.7000	1.7618	23.983	31.417

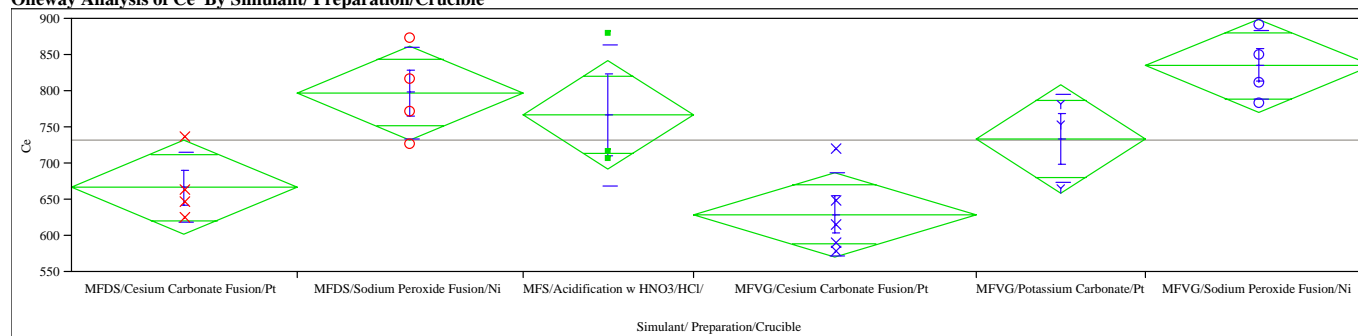
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	30.7125	3.39347	1.6967	25.313	36.112
MFDS/Sodium Peroxide Fusion/Ni	4	26.0875	2.77920	1.3896	21.665	30.510
MFS/Acidification w HNO3/HCl/	3	24.9500	5.30189	3.0610	11.779	38.121
MFVG/Cesium Carbonate Fusion/Pt	5	46.4600	2.06107	0.9217	43.901	49.019
MFVG/Potassium Carbonate/Pt	3	25.5833	5.33206	3.0785	12.338	38.829
MFVG/Sodium Peroxide Fusion/Ni	4	27.7000	2.78538	1.3927	23.268	32.132

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ce By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.671787
Adj Rsquare 0.575253
Root Mean Square Error 61.76472
Mean of Response 732.7826
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	132740.95	26548.2	6.9591	0.0010
Error	17	64852.97	3814.9		
C. Total	22	197593.91			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	667.000	30.882	601.84	732.16
MFDS/Sodium Peroxide Fusion/Ni	4	797.750	30.882	732.59	862.91
MFS/Acidification w HNO3/HCl/	3	767.000	35.660	691.76	842.24
MFVG/Cesium Carbonate Fusion/Pt	5	629.800	27.622	571.52	688.08
MFVG/Potassium Carbonate/Pt	3	734.667	35.660	659.43	809.90
MFVG/Sodium Peroxide Fusion/Ni	4	835.250	30.882	770.09	900.41

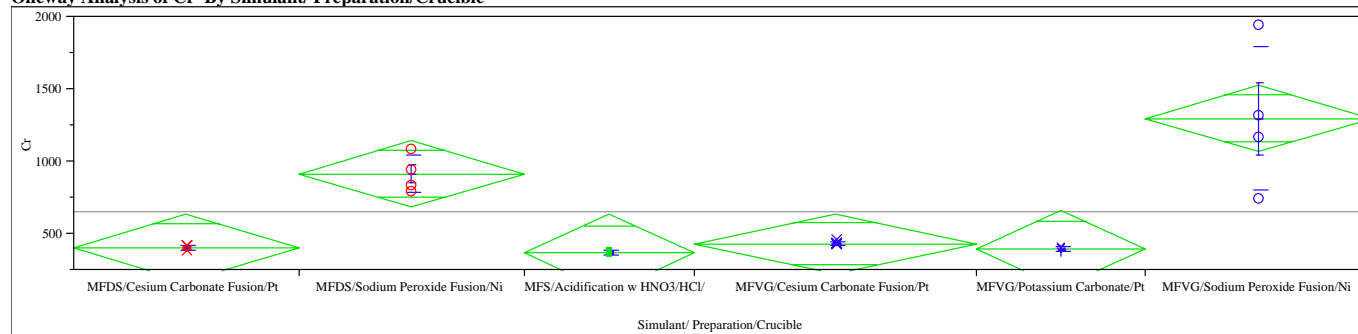
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	667.000	48.5661	24.283	589.72	744.3
MFDS/Sodium Peroxide Fusion/Ni	4	797.750	62.9623	31.481	697.56	897.9
MFS/Acidification w HNO3/HCl/	3	767.000	97.1236	56.074	525.73	1008.3
MFVG/Cesium Carbonate Fusion/Pt	5	629.800	57.1507	25.559	558.84	700.8
MFVG/Potassium Carbonate/Pt	3	734.667	61.0928	35.272	582.90	886.4
MFVG/Sodium Peroxide Fusion/Ni	4	835.250	46.5072	23.254	761.25	909.3

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Cr By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.782147
Adj Rsquare 0.718073
Root Mean Square Error 216.4298
Mean of Response 650.087
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	2858960.3	571792	12.2069	<.0001
Error	17	796311.5	46842		
C. Total	22	3655271.8			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	405.75	108.21	177.4	634.1
MFDS/Sodium Peroxide Fusion/Ni	4	916.50	108.21	688.2	1144.8
MFS/Acidification w HNO3/HCl/	3	370.00	124.96	106.4	633.6
MFVG/Cesium Carbonate Fusion/Pt	5	433.20	96.79	229.0	637.4
MFVG/Potassium Carbonate/Pt	3	399.00	124.96	135.4	662.6
MFVG/Sodium Peroxide Fusion/Ni	4	1297.50	108.21	1069.2	1525.8

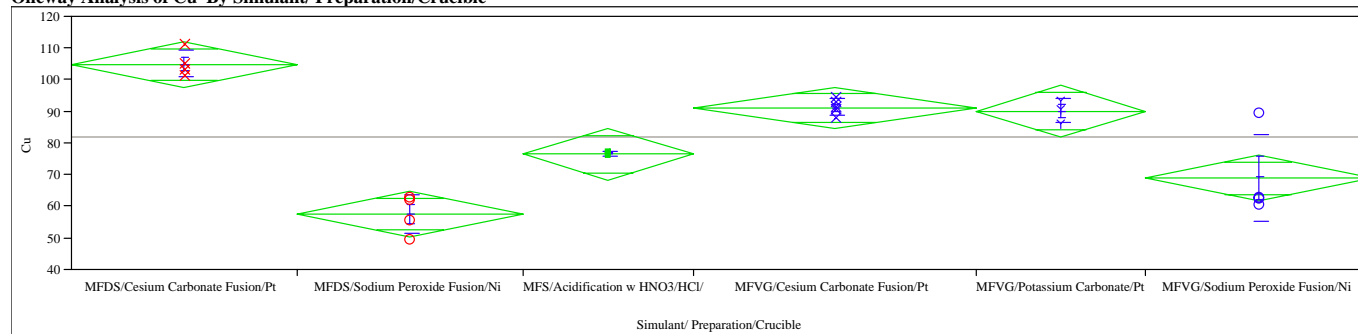
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	405.75	16.049	8.02	380.21	431.3
MFDS/Sodium Peroxide Fusion/Ni	4	916.50	131.285	65.64	707.60	1125.4
MFS/Acidification w HNO3/HCl/	3	370.00	16.643	9.61	328.66	411.3
MFVG/Cesium Carbonate Fusion/Pt	5	433.20	10.592	4.74	420.05	446.4
MFVG/Potassium Carbonate/Pt	3	399.00	16.643	9.61	357.66	440.3
MFVG/Sodium Peroxide Fusion/Ni	4	1297.50	497.418	248.71	506.00	2089.0

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Cu By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.881202
Adj Rsquare 0.846261
Root Mean Square Error 6.824446
Mean of Response 81.92609
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	5872.8622	1174.57	25.2200	<.0001
Error	17	791.7422	46.57		
C. Total	22	6664.6043			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	105.000	3.4122	97.801	112.20
MFDS/Sodium Peroxide Fusion/Ni	4	57.700	3.4122	50.501	64.90
MFS/Acidification w HNO3/HCl/	3	76.600	3.9401	68.287	84.91
MFVG/Cesium Carbonate Fusion/Pt	5	91.320	3.0520	84.881	97.76
MFVG/Potassium Carbonate/Pt	3	90.267	3.9401	81.954	98.58
MFVG/Sodium Peroxide Fusion/Ni	4	69.075	3.4122	61.876	76.27

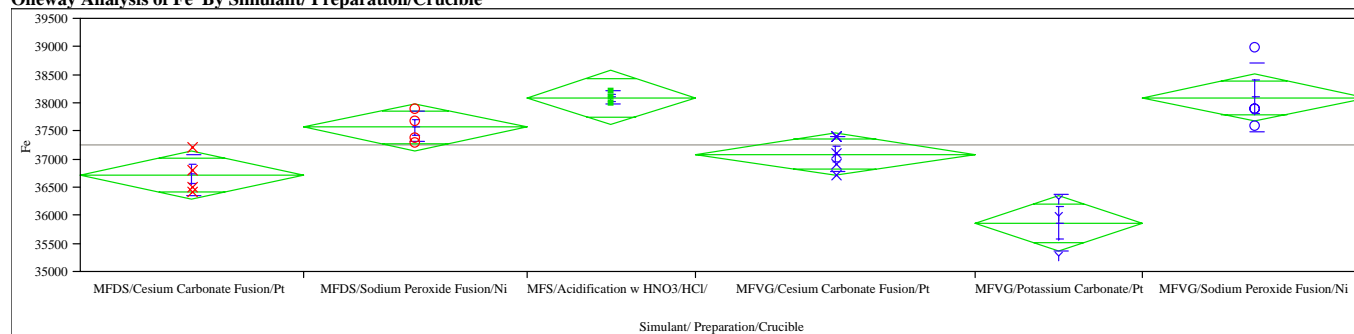
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	105.000	4.3205	2.1602	98.125	111.87
MFDS/Sodium Peroxide Fusion/Ni	4	57.700	6.2059	3.1030	47.825	67.57
MFS/Acidification w HNO3/HCl/	3	76.600	0.5292	0.3055	75.286	77.91
MFVG/Cesium Carbonate Fusion/Pt	5	91.320	2.4509	1.0961	88.277	94.36
MFVG/Potassium Carbonate/Pt	3	90.267	3.5572	2.0537	81.430	99.10
MFVG/Sodium Peroxide Fusion/Ni	4	69.075	13.7878	6.8939	47.136	91.01

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Fe By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.82258
Adj Rsquare 0.770397
Root Mean Square Error 397.1714
Mean of Response 37260.87
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	12433116	2486623	15.7636	<.0001
Error	17	2681667	157745		
C. Total	22	15114783			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	36725.0	198.59	36306	37144
MFDS/Sodium Peroxide Fusion/Ni	4	37575.0	198.59	37156	37994
MFS/Acidification w HNO3/HCl/	3	38100.0	229.31	37616	38584
MFVG/Cesium Carbonate Fusion/Pt	5	37100.0	177.62	36725	37475
MFVG/Potassium Carbonate/Pt	3	35866.7	229.31	35383	36350
MFVG/Sodium Peroxide Fusion/Ni	4	38100.0	198.59	37681	38519

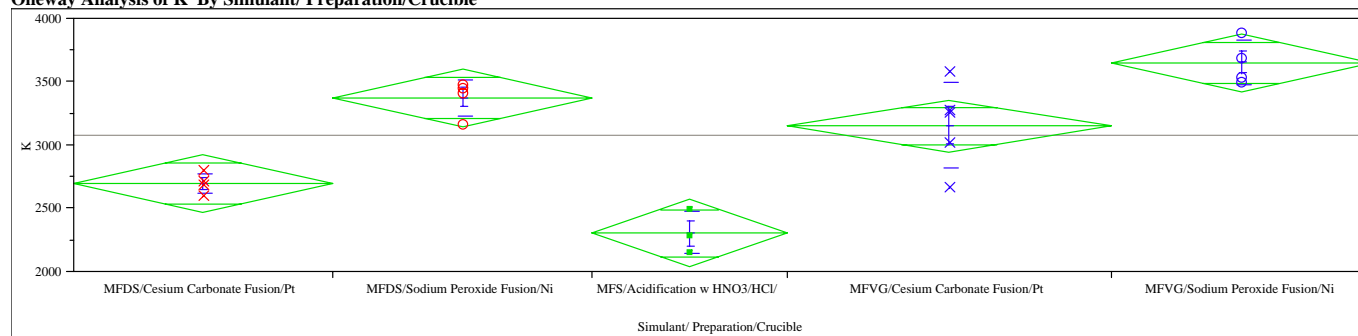
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	36725.0	359.398	179.70	36153	37297
MFDS/Sodium Peroxide Fusion/Ni	4	37575.0	275.379	137.69	37137	38013
MFS/Acidification w HNO3/HCl/	3	38100.0	100.000	57.74	37852	38348
MFVG/Cesium Carbonate Fusion/Pt	5	37100.0	308.221	137.84	36717	37483
MFVG/Potassium Carbonate/Pt	3	35866.7	513.160	296.27	34592	37141
MFVG/Sodium Peroxide Fusion/Ni	4	38100.0	616.441	308.22	37119	39081

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of K By Simulant/ Preparation/Crucible



Missing Rows

3 Oneway Anova

Summary of Fit

Rsquare 0.853329
Adj Rsquare 0.814216
Root Mean Square Error 216.3079
Mean of Response 3080.5
Observations (or Sum Wgts) 20

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	4	4083258.3	1020815	21.8174	<.0001
Error	15	701836.7	46789		
C. Total	19	4785095.0			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	2697.50	108.15	2467.0	2928.0
MFDS/Sodium Peroxide Fusion/Ni	4	3377.50	108.15	3147.0	3608.0
MFS/Acidification w HNO3/HCl/	3	2306.67	124.89	2040.5	2572.9
MFVG/Cesium Carbonate Fusion/Pt	5	3154.00	96.74	2947.8	3360.2
MFVG/Sodium Peroxide Fusion/Ni	4	3655.00	108.15	3424.5	3885.5

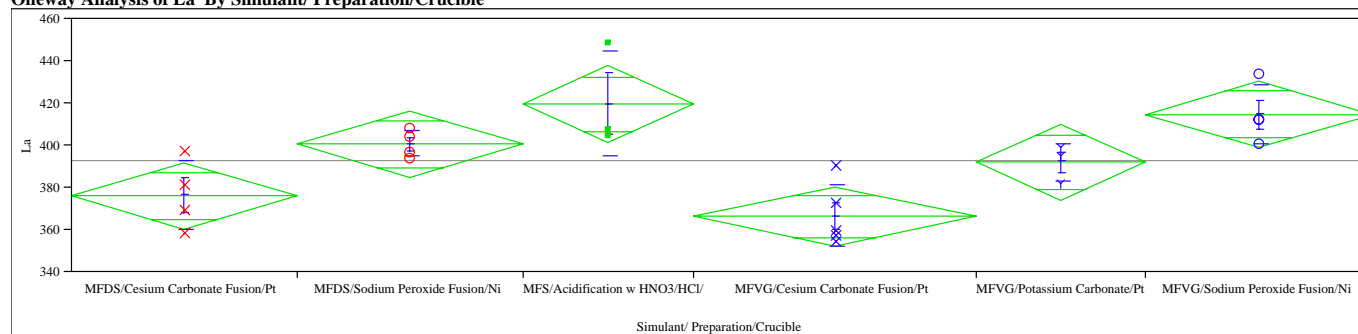
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	2697.50	82.614	41.31	2566.0	2829.0
MFDS/Sodium Peroxide Fusion/Ni	4	3377.50	141.274	70.64	3152.7	3602.3
MFS/Acidification w HNO3/HCl/	3	2306.67	171.561	99.05	1880.5	2732.8
MFVG/Cesium Carbonate Fusion/Pt	5	3154.00	342.389	153.12	2728.9	3579.1
MFVG/Sodium Peroxide Fusion/Ni	4	3655.00	176.730	88.36	3373.8	3936.2

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of La By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.702096
Adj Rsquare 0.614478
Root Mean Square Error 14.9275
Mean of Response 392.7826
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	8927.796	1785.56	8.0131	0.0005
Error	17	3788.117	222.83		
C. Total	22	12715.913			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	376.250	7.4638	360.50	392.00
MFDS/Sodium Peroxide Fusion/Ni	4	400.750	7.4638	385.00	416.50
MFS/Acidification w HNO3/HCl/	3	419.667	8.6184	401.48	437.85
MFVG/Cesium Carbonate Fusion/Pt	5	366.400	6.6758	352.32	380.48
MFVG/Potassium Carbonate/Pt	3	392.000	8.6184	373.82	410.18
MFVG/Sodium Peroxide Fusion/Ni	4	414.750	7.4638	399.00	430.50

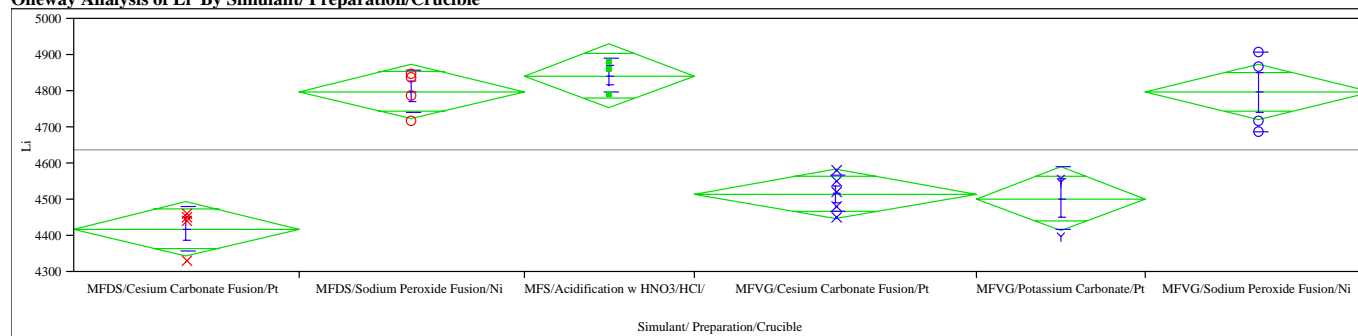
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	376.250	16.7207	8.360	349.64	402.86
MFDS/Sodium Peroxide Fusion/Ni	4	400.750	6.3966	3.198	390.57	410.93
MFS/Acidification w HNO3/HCl/	3	419.667	24.5832	14.193	358.60	480.73
MFVG/Cesium Carbonate Fusion/Pt	5	366.400	14.8762	6.653	347.93	384.87
MFVG/Potassium Carbonate/Pt	3	392.000	8.8882	5.132	369.92	414.08
MFVG/Sodium Peroxide Fusion/Ni	4	414.750	13.8414	6.921	392.73	436.77

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Li By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.880474
Adj Rsquare 0.845319
Root Mean Square Error 72.16335
Mean of Response 4638.696
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	652132.54	130427	25.0457	<.0001
Error	17	88528.33	5208		
C. Total	22	740660.87			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	4420.00	36.082	4343.9	4496.1
MFDS/Sodium Peroxide Fusion/Ni	4	4800.00	36.082	4723.9	4876.1
MFS/Acidification w HNO3/HCl/	3	4843.33	41.664	4755.4	4931.2
MFVG/Cesium Carbonate Fusion/Pt	5	4516.00	32.272	4447.9	4584.1
MFVG/Potassium Carbonate/Pt	3	4503.33	41.664	4415.4	4591.2
MFVG/Sodium Peroxide Fusion/Ni	4	4797.50	36.082	4721.4	4873.6

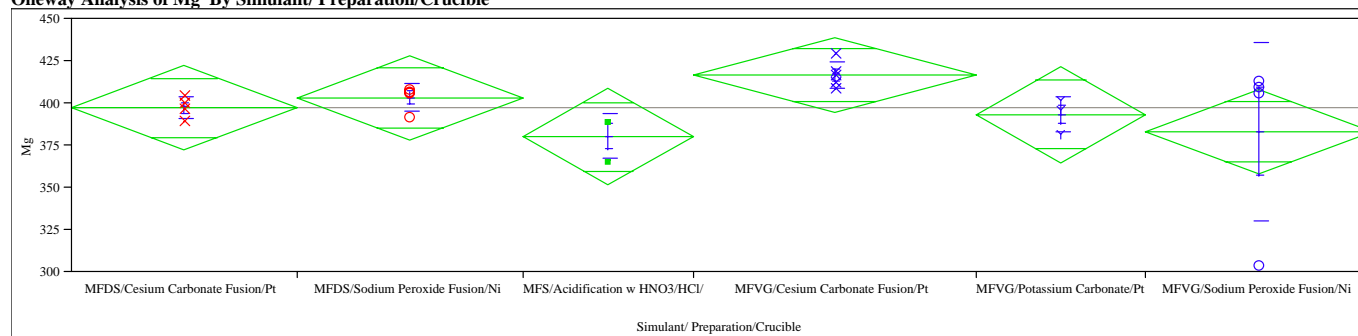
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	4420.00	60.553	30.277	4323.6	4516.4
MFDS/Sodium Peroxide Fusion/Ni	4	4800.00	59.442	29.721	4705.4	4894.6
MFS/Acidification w HNO3/HCl/	3	4843.33	47.258	27.285	4725.9	4960.7
MFVG/Cesium Carbonate Fusion/Pt	5	4516.00	52.249	23.367	4451.1	4580.9
MFVG/Potassium Carbonate/Pt	3	4503.33	89.629	51.747	4280.7	4726.0
MFVG/Sodium Peroxide Fusion/Ni	4	4797.50	108.743	54.371	4624.5	4970.5

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Mg By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.280401
Adj Rsquare 0.068754
Root Mean Square Error 23.64789
Mean of Response 397.3478
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	3704.434	740.887	1.3249	0.3006
Error	17	9506.783	559.223		
C. Total	22	13211.217			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	397.250	11.824	372.30	422.20
MFDS/Sodium Peroxide Fusion/Ni	4	403.250	11.824	378.30	428.20
MFS/Acidification w HNO3/HCl/	3	380.333	13.653	351.53	409.14
MFVG/Cesium Carbonate Fusion/Pt	5	416.600	10.576	394.29	438.91
MFVG/Potassium Carbonate/Pt	3	393.333	13.653	364.53	422.14
MFVG/Sodium Peroxide Fusion/Ni	4	383.250	11.824	358.30	408.20

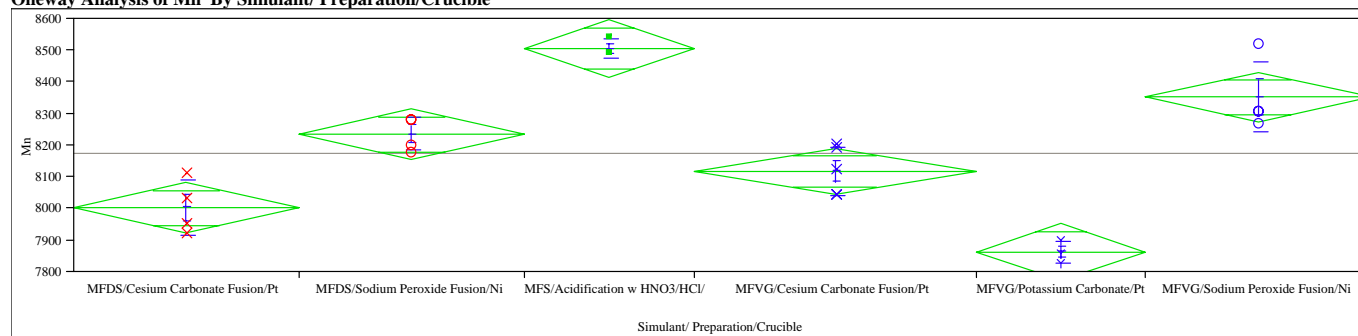
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	397.250	6.3966	3.198	387.07	407.43
MFDS/Sodium Peroxide Fusion/Ni	4	403.250	7.5443	3.772	391.25	415.25
MFS/Acidification w HNO3/HCl/	3	380.333	13.2791	7.667	347.35	413.32
MFVG/Cesium Carbonate Fusion/Pt	5	416.600	7.9246	3.544	406.76	426.44
MFVG/Potassium Carbonate/Pt	3	393.333	10.2632	5.925	367.84	418.83
MFVG/Sodium Peroxide Fusion/Ni	4	383.250	52.9111	26.456	299.06	467.44

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Mn By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.902544
Adj Rsquare 0.873881
Root Mean Square Error 75.48406
Mean of Response 8176.522
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	897058.41	179412	31.4876	<.0001
Error	17	96863.33	5698		
C. Total	22	993921.74			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	8002.50	37.742	7922.9	8082.1
MFDS/Sodium Peroxide Fusion/Ni	4	8235.00	37.742	8155.4	8314.6
MFS/Acidification w HNO3/HCl/	3	8506.67	43.581	8414.7	8598.6
MFVG/Cesium Carbonate Fusion/Pt	5	8118.00	33.757	8046.8	8189.2
MFVG/Potassium Carbonate/Pt	3	7863.33	43.581	7771.4	7955.3
MFVG/Sodium Peroxide Fusion/Ni	4	8352.50	37.742	8272.9	8432.1

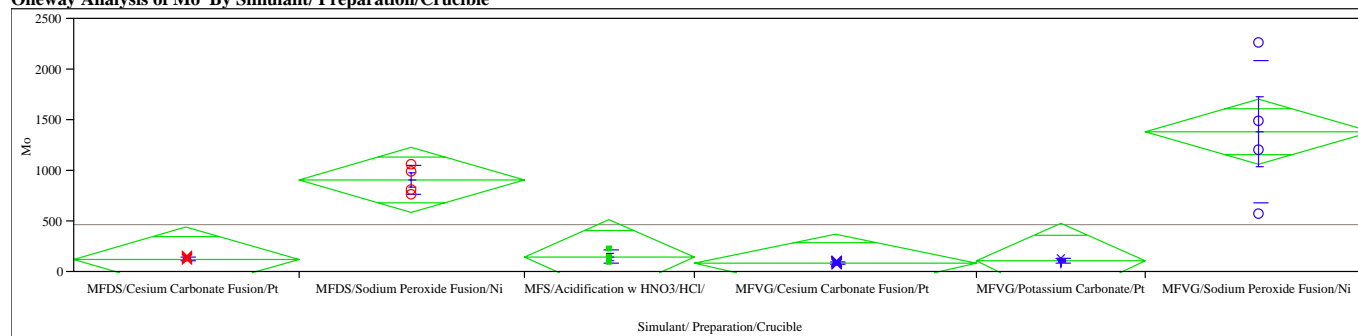
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	8002.50	85.391	42.696	7866.6	8138.4
MFDS/Sodium Peroxide Fusion/Ni	4	8235.00	52.599	26.300	8151.3	8318.7
MFS/Acidification w HNO3/HCl/	3	8506.67	28.868	16.667	8435.0	8578.4
MFVG/Cesium Carbonate Fusion/Pt	5	8118.00	77.589	34.699	8021.7	8214.3
MFVG/Potassium Carbonate/Pt	3	7863.33	35.119	20.276	7776.1	7950.6
MFVG/Sodium Peroxide Fusion/Ni	4	8352.50	113.248	56.624	8172.3	8532.7

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Mo By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.795899
Adj Rsquare 0.73587
Root Mean Square Error 301.9213
Mean of Response 474.5652
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	6042959.1	1208592	13.2584	<.0001
Error	17	1549659.6	91156		
C. Total	22	7592618.7			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	130.38	150.96	-188	448.9
MFDS/Sodium Peroxide Fusion/Ni	4	910.75	150.96	592	1229.2
MFS/Acidification w HNO3/HCl/	3	150.00	174.31	-218	517.8
MFVG/Cesium Carbonate Fusion/Pt	5	85.10	135.02	-200	370.0
MFVG/Potassium Carbonate/Pt	3	108.67	174.31	-259	476.4
MFVG/Sodium Peroxide Fusion/Ni	4	1387.25	150.96	1069	1705.7

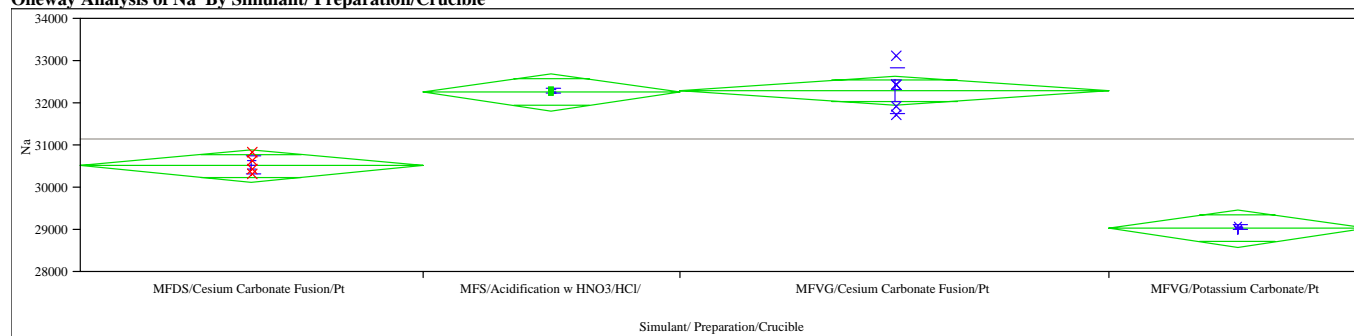
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	130.38	13.294	6.65	109.2	151.5
MFDS/Sodium Peroxide Fusion/Ni	4	910.75	146.582	73.29	677.5	1144.0
MFS/Acidification w HNO3/HCl/	3	150.00	65.871	38.03	-13.6	313.6
MFVG/Cesium Carbonate Fusion/Pt	5	85.10	11.166	4.99	71.2	99.0
MFVG/Potassium Carbonate/Pt	3	108.67	22.396	12.93	53.0	164.3
MFVG/Sodium Peroxide Fusion/Ni	4	1387.25	701.068	350.53	271.7	2502.8

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Na By Simulant/ Preparation/Crucible



Missing Rows

8 Oneway Anova

Summary of Fit

Rsquare 0.949769
Adj Rsquare 0.93607
Root Mean Square Error 349.1331
Mean of Response 31166.67
Observations (or Sum Wgts) 15

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	3	25352500	8450833	69.3294	<.0001
Error	11	1340833	121894		
C. Total	14	26693333			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	30525.0	174.57	30141	30909
MFS/Acidification w HNO3/HCl/	3	32266.7	201.57	31823	32710
MFVG/Cesium Carbonate Fusion/Pt	5	32300.0	156.14	31956	32644
MFVG/Potassium Carbonate/Pt	3	29033.3	201.57	28590	29477

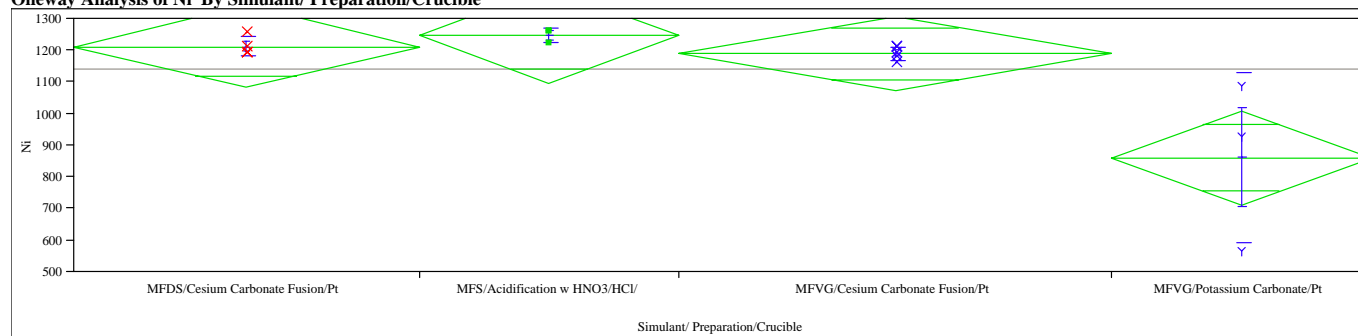
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	30525.0	221.736	110.87	30172	30878
MFS/Acidification w HNO3/HCl/	3	32266.7	57.735	33.33	32123	32410
MFVG/Cesium Carbonate Fusion/Pt	5	32300.0	543.139	242.90	31626	32974
MFVG/Potassium Carbonate/Pt	3	29033.3	57.735	33.33	28890	29177

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ni By Simulant/ Preparation/Crucible



Missing Rows

8 Oneway Anova

Summary of Fit

Rsquare 0.665951
Adj Rsquare 0.574847
Root Mean Square Error 117.0219
Mean of Response 1141.467
Observations (or Sum Wgts) 15

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	3	300302.40	100101	7.3098	0.0057
Error	11	150635.33	13694		
C. Total	14	450937.73			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	1212.00	58.511	1083.2	1340.8
MFS/Acidification w HNO3/HCl/	3	1246.67	67.563	1098.0	1395.4
MFVG/Cesium Carbonate Fusion/Pt	5	1190.00	52.334	1074.8	1305.2
MFVG/Potassium Carbonate/Pt	3	861.33	67.563	712.6	1010.0

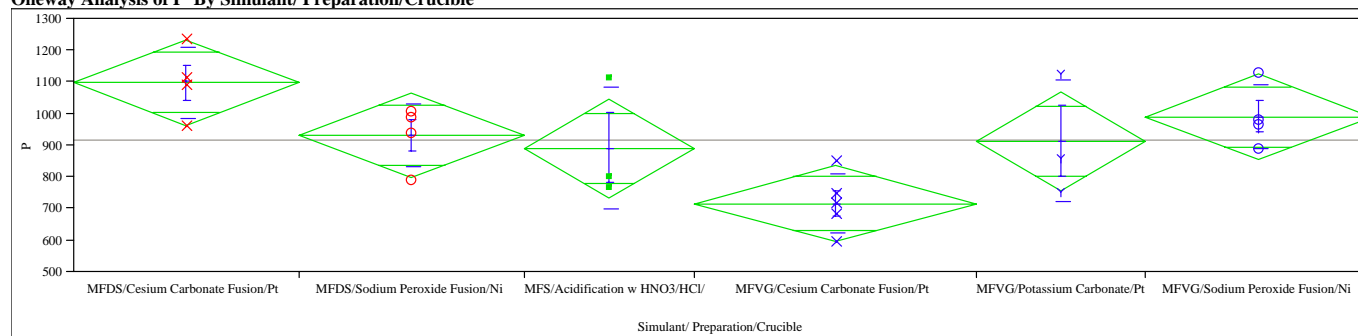
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	1212.00	32.083	16.04	1160.9	1263.1
MFS/Acidification w HNO3/HCl/	3	1246.67	23.094	13.33	1189.3	1304.0
MFVG/Cesium Carbonate Fusion/Pt	5	1190.00	21.213	9.49	1163.7	1216.3
MFVG/Potassium Carbonate/Pt	3	861.33	268.962	155.29	193.2	1529.5

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of P By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.562657
Adj Rsquare 0.434027
Root Mean Square Error 127.781
Mean of Response 916.9565
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	357111.12	71422.2	4.3742	0.0096
Error	17	277575.83	16328.0		
C. Total	22	634686.96			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	1098.75	63.891	963.95	1233.5
MFDS/Sodium Peroxide Fusion/Ni	4	932.50	63.891	797.70	1067.3
MFS/Acidification w HNO3/HCl/	3	891.67	73.774	736.02	1047.3
MFVG/Cesium Carbonate Fusion/Pt	5	717.00	57.145	596.43	837.6
MFVG/Potassium Carbonate/Pt	3	913.33	73.774	757.68	1069.0
MFVG/Sodium Peroxide Fusion/Ni	4	991.25	63.891	856.45	1126.0

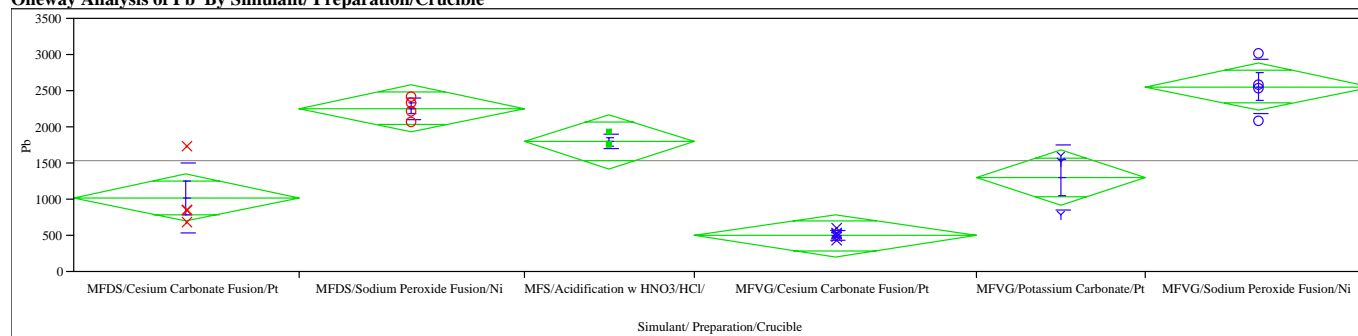
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	1098.75	112.574	56.29	919.62	1277.9
MFDS/Sodium Peroxide Fusion/Ni	4	932.50	99.457	49.73	774.24	1090.8
MFS/Acidification w HNO3/HCl/	3	891.67	189.890	109.63	419.95	1363.4
MFVG/Cesium Carbonate Fusion/Pt	5	717.00	93.180	41.67	601.30	832.7
MFVG/Potassium Carbonate/Pt	3	913.33	190.679	110.09	439.66	1387.0
MFVG/Sodium Peroxide Fusion/Ni	4	991.25	100.530	50.26	831.28	1151.2

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Pb By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.889848
Adj Rsquare 0.85745
Root Mean Square Error 308.6556
Mean of Response 1534.717
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	13083339	2616668	27.4663	<.0001
Error	17	1619561	95268		
C. Total	22	14702899			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	1026.25	154.33	700.6	1351.9
MFDS/Sodium Peroxide Fusion/Ni	4	2265.00	154.33	1939.4	2590.6
MFS/Acidification w HNO3/HCl/	3	1806.67	178.20	1430.7	2182.6
MFVG/Cesium Carbonate Fusion/Pt	5	505.70	138.03	214.5	796.9
MFVG/Potassium Carbonate/Pt	3	1308.33	178.20	932.4	1684.3
MFVG/Sodium Peroxide Fusion/Ni	4	2565.00	154.33	2239.4	2890.6

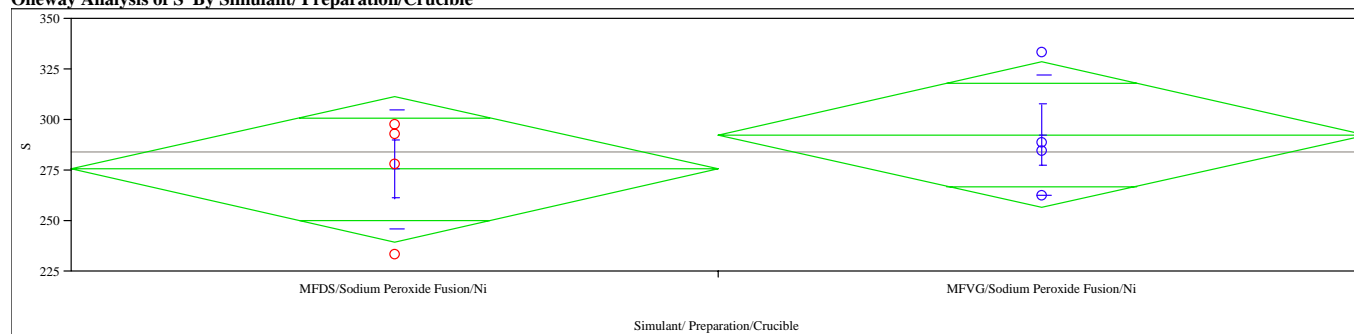
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	1026.25	476.364	238.18	268.2	1784.3
MFDS/Sodium Peroxide Fusion/Ni	4	2265.00	151.548	75.77	2023.9	2506.1
MFS/Acidification w HNO3/HCl/	3	1806.67	98.658	56.96	1561.6	2051.7
MFVG/Cesium Carbonate Fusion/Pt	5	505.70	65.971	29.50	423.8	587.6
MFVG/Potassium Carbonate/Pt	3	1308.33	446.831	257.98	198.3	2418.3
MFVG/Sodium Peroxide Fusion/Ni	4	2565.00	380.219	190.11	1960.0	3170.0

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of S By Simulant/ Preparation/Crucible



Missing Rows

15 Oneway Anova
Summary of Fit

Rsquare 0.099994
Adj Rsquare -0.05001
Root Mean Square Error 29.44593
Mean of Response 284.125
Observations (or Sum Wgts) 8

t Test

MFDS/Sodium Peroxide Fusion/Ni-MFVG/Sodium Peroxide Fusion/Ni
Assuming equal variances

Difference	-17.000	t Ratio	-0.81647
Std Err Dif	20.821	DF	6
Upper CL Dif	33.948	Prob > |t|	0.4454
Lower CL Dif	-67.948	Prob > t	0.7773
Confidence	0.95	Prob < t	0.2227

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	578.0000	578.000	0.6666	0.4454
Error	6	5202.3750	867.063		
C. Total	7	5780.3750			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	4	275.625	14.723	239.60	311.65
MFVG/Sodium Peroxide Fusion/Ni	4	292.625	14.723	256.60	328.65

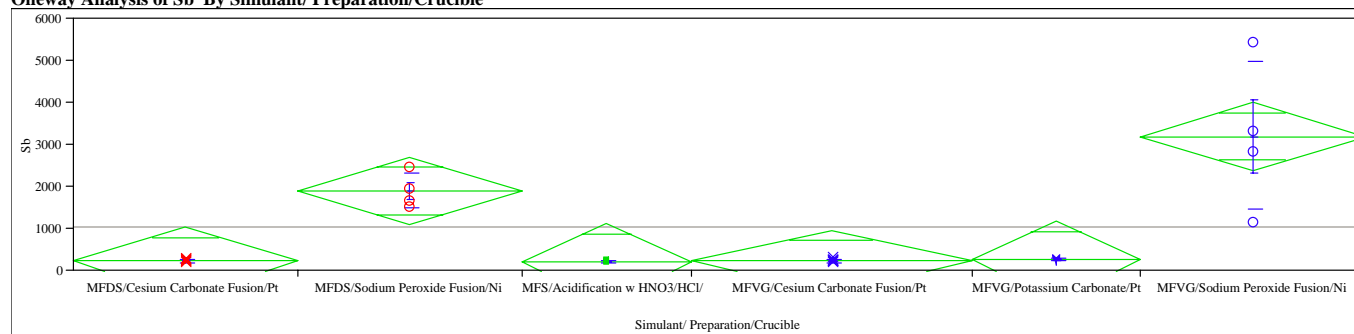
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	4	275.625	29.3410	14.671	228.94	322.31
MFVG/Sodium Peroxide Fusion/Ni	4	292.625	29.5505	14.775	245.60	339.65

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Sb By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.760769
Adj Rsquare 0.690407
Root Mean Square Error 761.4143
Mean of Response 1040.522
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	31341941	6268388	10.8122	<.0001
Error	17	9855779	579752		
C. Total	22	41197720			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	229.50	380.71	-574	1032.7
MFDS/Sodium Peroxide Fusion/Ni	4	1905.00	380.71	1102	2708.2
MFS/Acidification w HNO3/HCl/	3	212.33	439.60	-715	1139.8
MFVG/Cesium Carbonate Fusion/Pt	5	233.60	340.51	-485	952.0
MFVG/Potassium Carbonate/Pt	3	266.33	439.60	-661	1193.8
MFVG/Sodium Peroxide Fusion/Ni	4	3197.50	380.71	2394	4000.7

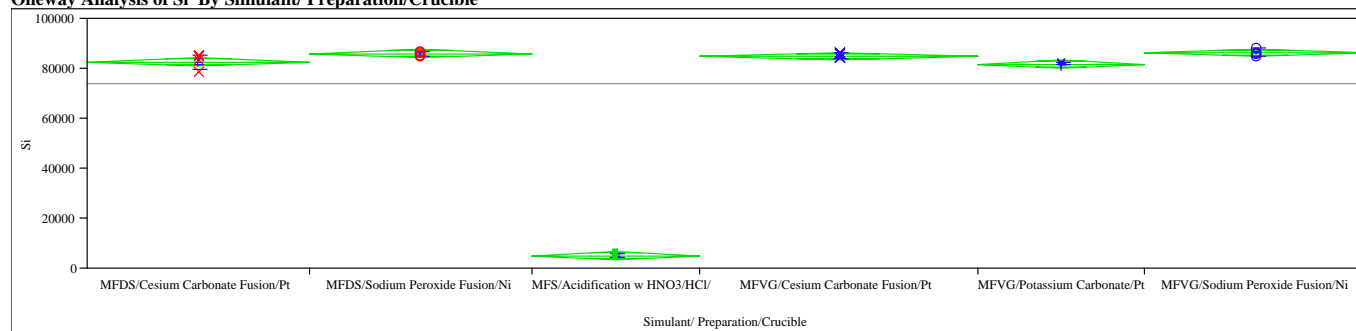
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	229.50	32.50	16.25	177.8	281.2
MFDS/Sodium Peroxide Fusion/Ni	4	1905.00	414.13	207.06	1246.0	2564.0
MFS/Acidification w HNO3/HCl/	3	212.33	19.50	11.26	163.9	260.8
MFVG/Cesium Carbonate Fusion/Pt	5	233.60	38.41	17.18	185.9	281.3
MFVG/Potassium Carbonate/Pt	3	266.33	28.04	16.19	196.7	336.0
MFVG/Sodium Peroxide Fusion/Ni	4	3197.50	1763.51	881.75	391.4	6003.6

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Si By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.997639
Adj Rsquare 0.996945
Root Mean Square Error 1515.282
Mean of Response 74226.96
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	1.6494e+10	3.2988e+9	1436.711	<.0001
Error	17	39033366.7	2296080.4		
C. Total	22	1.65331e10			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	82725.0	757.64	81127	84323
MFDS/Sodium Peroxide Fusion/Ni	4	86025.0	757.64	84427	87623
MFS/Acidification w HNO3/HCl/	3	5206.7	874.85	3361	7052
MFVG/Cesium Carbonate Fusion/Pt	5	85000.0	677.65	83570	86430
MFVG/Potassium Carbonate/Pt	3	81900.0	874.85	80054	83746
MFVG/Sodium Peroxide Fusion/Ni	4	86475.0	757.64	84877	88073

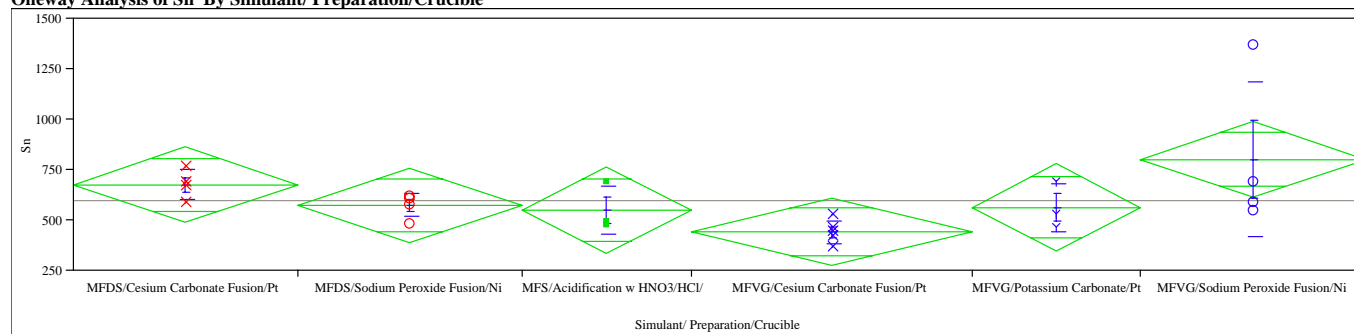
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	82725.0	2897.56	1448.8	78114	87336
MFDS/Sodium Peroxide Fusion/Ni	4	86025.0	853.91	427.0	84666	87384
MFS/Acidification w HNO3/HCl/	3	5206.7	908.53	524.5	2950	7464
MFVG/Cesium Carbonate Fusion/Pt	5	85000.0	1024.70	458.3	83728	86272
MFVG/Potassium Carbonate/Pt	3	81900.0	556.78	321.5	80517	83283
MFVG/Sodium Peroxide Fusion/Ni	4	86475.0	1314.98	657.5	84383	88567

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Sn By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.377872
Adj Rsquare 0.194894
Root Mean Square Error 177.6129
Mean of Response 598.5
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	325734.43	65146.9	2.0651	0.1203
Error	17	536288.07	31546.4		
C. Total	22	862022.50			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	676.250	88.81	488.88	863.62
MFDS/Sodium Peroxide Fusion/Ni	4	574.375	88.81	387.01	761.74
MFS/Acidification w HNO3/HCl/	3	550.167	102.54	333.82	766.52
MFVG/Cesium Carbonate Fusion/Pt	5	442.200	79.43	274.62	609.78
MFVG/Potassium Carbonate/Pt	3	563.833	102.54	347.48	780.18
MFVG/Sodium Peroxide Fusion/Ni	4	802.500	88.81	615.13	989.87

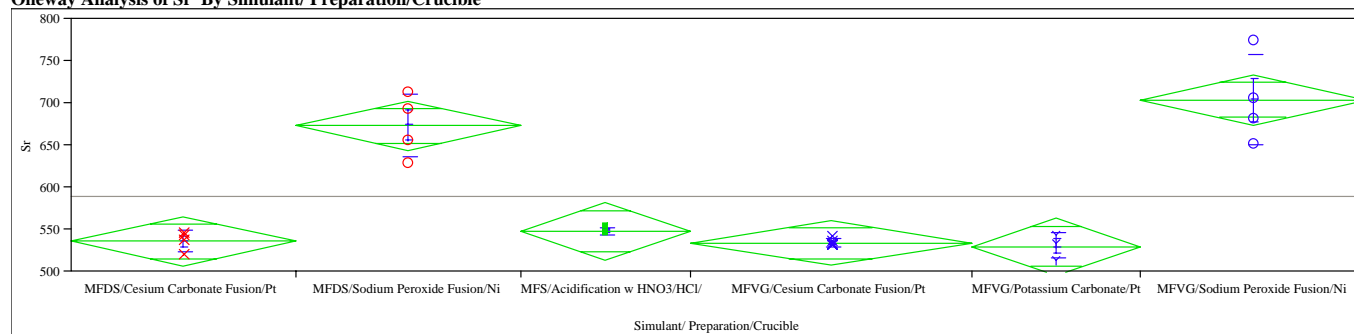
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	676.250	73.754	36.88	558.89	793.6
MFDS/Sodium Peroxide Fusion/Ni	4	574.375	60.359	30.18	478.33	670.4
MFS/Acidification w HNO3/HCl/	3	550.167	117.218	67.68	258.98	841.4
MFVG/Cesium Carbonate Fusion/Pt	5	442.200	57.687	25.80	370.57	513.8
MFVG/Potassium Carbonate/Pt	3	563.833	117.947	68.10	270.84	856.8
MFVG/Sodium Peroxide Fusion/Ni	4	802.500	383.156	191.58	192.81	1412.2

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Sr By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.902131
Adj Rsquare 0.873346
Root Mean Square Error 27.98967
Mean of Response 589.3478
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	122763.05	24552.6	31.3402	<.0001
Error	17	13318.17	783.4		
C. Total	22	136081.22			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	535.750	13.995	506.22	565.28
MFDS/Sodium Peroxide Fusion/Ni	4	673.000	13.995	643.47	702.53
MFS/Acidification w HNO3/HCl/	3	548.333	16.160	514.24	582.43
MFVG/Cesium Carbonate Fusion/Pt	5	534.000	12.517	507.59	560.41
MFVG/Potassium Carbonate/Pt	3	530.000	16.160	495.91	564.09
MFVG/Sodium Peroxide Fusion/Ni	4	703.750	13.995	674.22	733.28

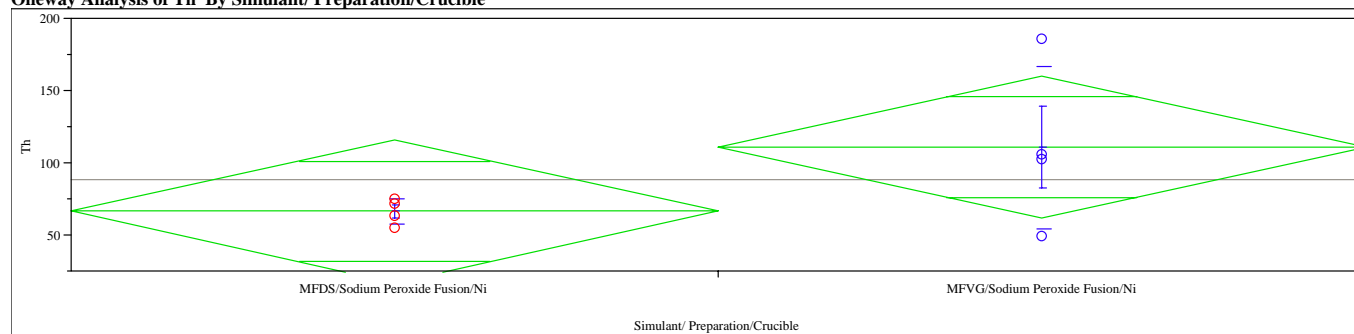
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	535.750	11.6440	5.822	517.22	554.28
MFDS/Sodium Peroxide Fusion/Ni	4	673.000	37.1394	18.570	613.90	732.10
MFS/Acidification w HNO3/HCl/	3	548.333	4.1633	2.404	537.99	558.68
MFVG/Cesium Carbonate Fusion/Pt	5	534.000	4.2426	1.897	528.73	539.27
MFVG/Potassium Carbonate/Pt	3	530.000	14.7309	8.505	493.41	566.59
MFVG/Sodium Peroxide Fusion/Ni	4	703.750	52.3856	26.193	620.39	787.11

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Th By Simulant/ Preparation/Crucible



Missing Rows

15 Oneway Anova
Summary of Fit

Rsquare	0.288733
Adj Rsquare	0.170189
Root Mean Square Error	40.23372
Mean of Response	88.975
Observations (or Sum Wgts)	8

t Test

MFDS/Sodium Peroxide Fusion/Ni-MFVG/Sodium Peroxide Fusion/Ni
Assuming equal variances

Difference	-44.40	t Ratio	-1.56066
Std Err Dif	28.45	DF	6
Upper CL Dif	25.21	Prob > |t|	0.1696
Lower CL Dif	-114.01	Prob > t	0.9152
Confidence	0.95	Prob < t	0.0848

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	3942.720	3942.72	2.4357	0.1696
Error	6	9712.515	1618.75		
C. Total	7	13655.235			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	4	66.775	20.117	17.551	116.00
MFVG/Sodium Peroxide Fusion/Ni	4	111.175	20.117	61.951	160.40

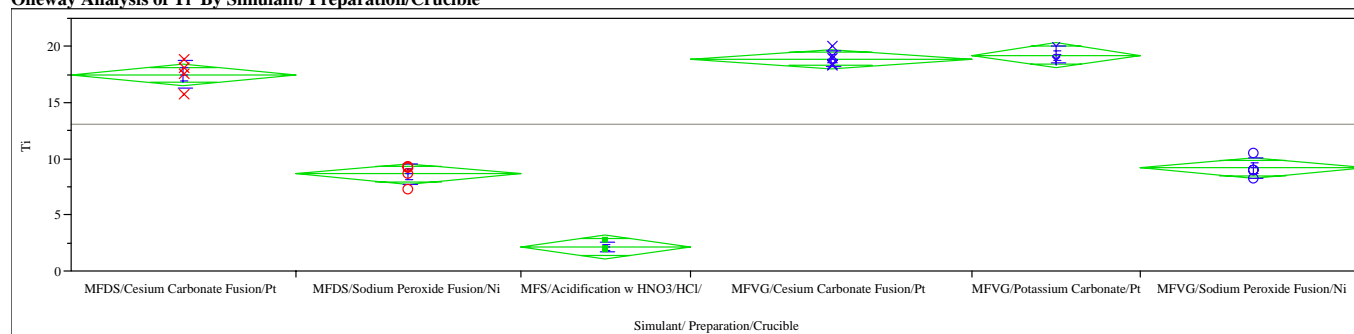
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	4	66.775	8.9619	4.481	52.515	81.04
MFVG/Sodium Peroxide Fusion/Ni	4	111.175	56.1889	28.094	21.766	200.58

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Ti By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.984307
Adj Rsquare 0.979692
Root Mean Square Error 0.896821
Mean of Response 13.0737
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	857.60855	171.522	213.2589	<.0001
Error	17	13.67291	0.804		
C. Total	22	871.28146			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	17.5000	0.44841	16.554	18.446
MFDS/Sodium Peroxide Fusion/Ni	4	8.6875	0.44841	7.741	9.634
MFS/Acidification w HNO3/HCl/	3	2.1817	0.51778	1.089	3.274
MFVG/Cesium Carbonate Fusion/Pt	5	18.9400	0.40107	18.094	19.786
MFVG/Potassium Carbonate/Pt	3	19.2667	0.51778	18.174	20.359
MFVG/Sodium Peroxide Fusion/Ni	4	9.2250	0.44841	8.279	10.171

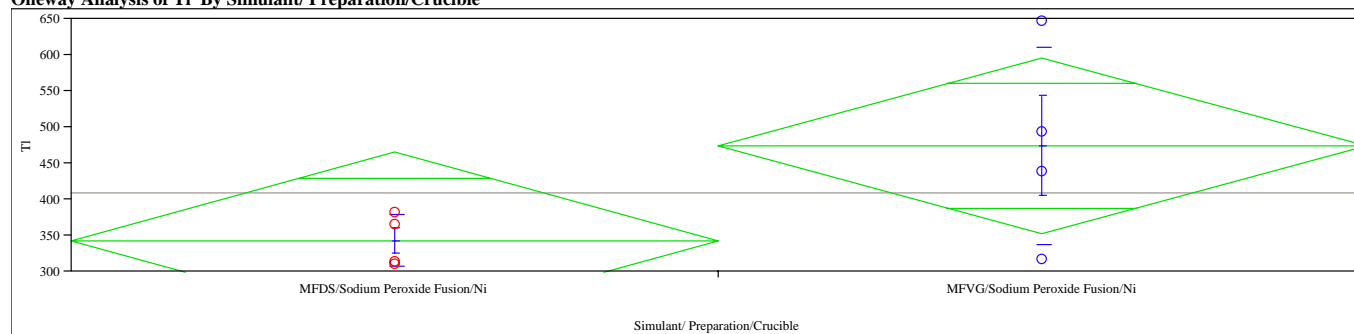
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	17.5000	1.31403	0.65701	15.409	19.591
MFDS/Sodium Peroxide Fusion/Ni	4	8.6875	0.93397	0.46698	7.201	10.174
MFS/Acidification w HNO3/HCl/	3	2.1817	0.46361	0.26766	1.030	3.333
MFVG/Cesium Carbonate Fusion/Pt	5	18.9400	0.68044	0.30430	18.095	19.785
MFVG/Potassium Carbonate/Pt	3	19.2667	0.72342	0.41767	17.470	21.064
MFVG/Sodium Peroxide Fusion/Ni	4	9.2250	0.92150	0.46075	7.759	10.691

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Tl By Simulant/ Preparation/Crucible



Missing Rows

15 Oneway Anova

Summary of Fit

Rsquare	0.365524
Adj Rsquare	0.259778
Root Mean Square Error	99.83632
Mean of Response	408.875
Observations (or Sum Wgts)	8

t Test

MFDS/Sodium Peroxide Fusion/Ni-MFVG/Sodium Peroxide Fusion/Ni

Assuming equal variances

Difference	-131.25	t Ratio	-1.8592
Std Err Dif	70.59	DF	6
Upper CL Dif	41.49	Prob > |t|	0.1123
Lower CL Dif	-303.99	Prob > t	0.9438
Confidence	0.95	Prob < t	0.0562

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	34453.125	34453.1	3.4566	0.1123
Error	6	59803.750	9967.3		
C. Total	7	94256.875			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	4	343.250	49.918	221.10	465.40
MFVG/Sodium Peroxide Fusion/Ni	4	474.500	49.918	352.35	596.65

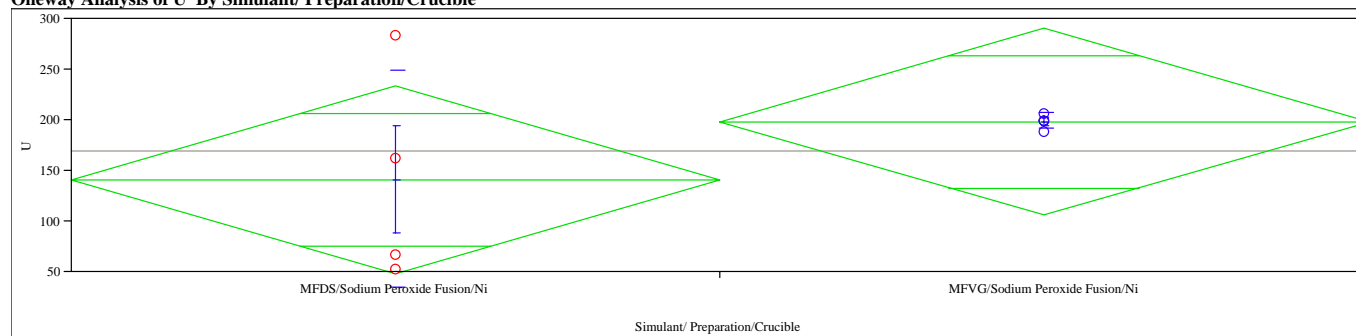
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	4	343.250	36.124	18.062	285.77	400.73
MFVG/Sodium Peroxide Fusion/Ni	4	474.500	136.491	68.245	257.31	691.69

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of U By Simulant/ Preparation/Crucible



Missing Rows

15 Oneway Anova

Summary of Fit

Rsquare 0.159452
Adj Rsquare 0.019361
Root Mean Square Error 75.72366
Mean of Response 170.1875
Observations (or Sum Wgts) 8

t Test

MFDS/Sodium Peroxide Fusion/Ni-MFVG/Sodium Peroxide Fusion/Ni
Assuming equal variances

Difference	-57.13	t Ratio	-1.06687
Std Err Dif	53.54	DF	6
Upper CL Dif	73.89	Prob > |t|	0.3271
Lower CL Dif	-188.14	Prob > t	0.8365
Confidence	0.95	Prob < t	0.1635

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	1	6526.531	6526.53	1.1382	0.3271
Error	6	34404.438	5734.07		
C. Total	7	40930.969			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	4	141.625	37.862	48.98	234.27
MFVG/Sodium Peroxide Fusion/Ni	4	198.750	37.862	106.11	291.39

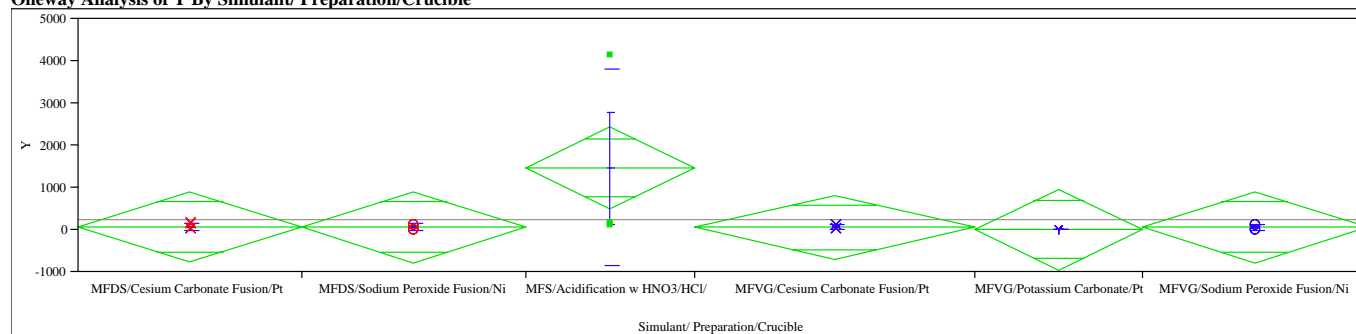
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Sodium Peroxide Fusion/Ni	4	141.625	106.833	53.416	-28.4	311.62
MFVG/Sodium Peroxide Fusion/Ni	4	198.750	7.411	3.705	187.0	210.54

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Y By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.32354
Adj Rsquare 0.124582
Root Mean Square Error 795.6106
Mean of Response 239.91
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	5146795	1029359	1.6262	0.2066
Error	17	10760935	632996		
C. Total	22	15907730			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	73.97	397.81	-765.3	913.3
MFDS/Sodium Peroxide Fusion/Ni	4	67.47	397.81	-771.8	906.8
MFS/Acidification w HNO3/HCl/	3	1460.00	459.35	490.9	2429.1
MFVG/Cesium Carbonate Fusion/Pt	5	60.80	355.81	-689.9	811.5
MFVG/Potassium Carbonate/Pt	3	1.93	459.35	-967.2	971.1
MFVG/Sodium Peroxide Fusion/Ni	4	65.59	397.81	-773.7	904.9

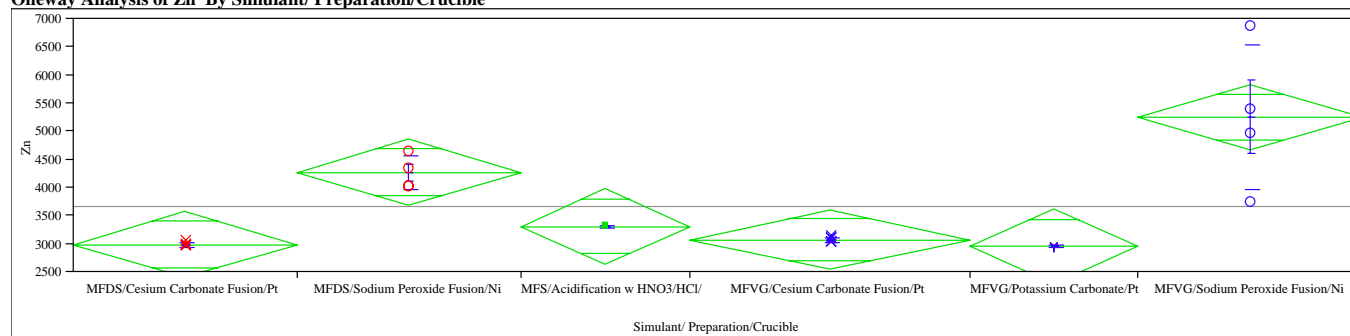
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	73.97	84.68	42.3	-61	208.7
MFDS/Sodium Peroxide Fusion/Ni	4	67.47	75.67	37.8	-53	187.9
MFS/Acidification w HNO3/HCl/	3	1460.00	2312.40	1335.1	-4284	7204.3
MFVG/Cesium Carbonate Fusion/Pt	5	60.80	53.91	24.1	-6.1321	127.7
MFVG/Potassium Carbonate/Pt	3	1.93	0.005774	0.00333	1.91232	1.9
MFVG/Sodium Peroxide Fusion/Ni	4	65.59	73.51	36.8	-51	182.6

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Zn By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.76307
Adj Rsquare 0.693385
Root Mean Square Error 557.5521
Mean of Response 3661
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	17020208	3404042	10.9502	<.0001
Error	17	5284694	310864		
C. Total	22	22304902			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	2988.25	278.78	2400.1	3576.4
MFDS/Sodium Peroxide Fusion/Ni	4	4270.00	278.78	3681.8	4858.2
MFS/Acidification w HNO3/HCl/	3	3310.00	321.90	2630.8	3989.2
MFVG/Cesium Carbonate Fusion/Pt	5	3074.00	249.34	2547.9	3600.1
MFVG/Potassium Carbonate/Pt	3	2953.33	321.90	2274.2	3632.5
MFVG/Sodium Peroxide Fusion/Ni	4	5252.50	278.78	4664.3	5840.7

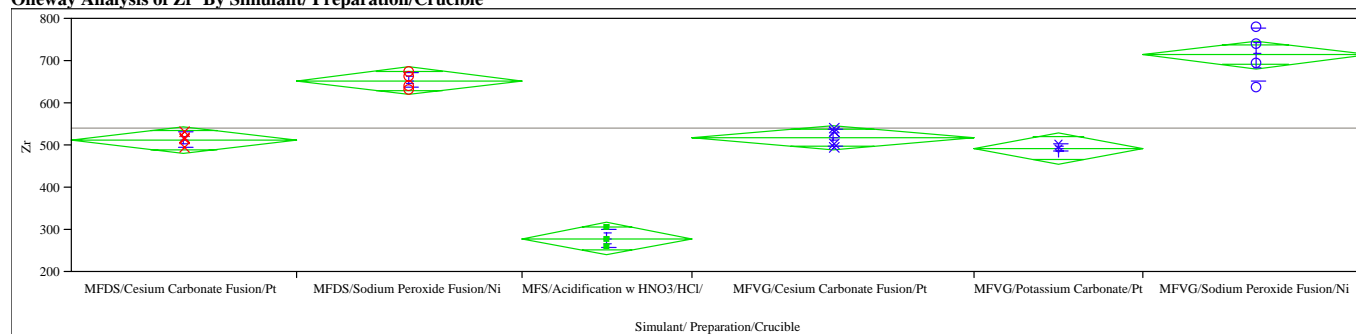
Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	2988.25	38.44	19.22	2927.1	3049.4
MFDS/Sodium Peroxide Fusion/Ni	4	4270.00	299.44	149.72	3793.5	4746.5
MFS/Acidification w HNO3/HCl/	3	3310.00	17.32	10.00	3267.0	3353.0
MFVG/Cesium Carbonate Fusion/Pt	5	3074.00	43.36	19.39	3020.2	3127.8
MFVG/Potassium Carbonate/Pt	3	2953.33	20.82	12.02	2901.6	3005.0
MFVG/Sodium Peroxide Fusion/Ni	4	5252.50	1291.29	645.64	3197.8	7307.2

Exhibit A2. Statistical Comparisons of Preparation/Crucible Measurements by Element by Type of Sample

Oneway Analysis of Zr By Simulant/ Preparation/Crucible



Oneway Anova Summary of Fit

Rsquare 0.960058
Adj Rsquare 0.94831
Root Mean Square Error 30.84223
Mean of Response 540.8696
Observations (or Sum Wgts) 23

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Simulant/ Preparation/Crucible	5	388691.48	77738.3	81.7228	<.0001
Error	17	16171.13	951.2		
C. Total	22	404862.61			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	513.000	15.421	480.46	545.54
MFDS/Sodium Peroxide Fusion/Ni	4	654.000	15.421	621.46	686.54
MFS/Acidification w HNO3/HCl/	3	279.667	17.807	242.10	317.24
MFVG/Cesium Carbonate Fusion/Pt	5	518.800	13.793	489.70	547.90
MFVG/Potassium Carbonate/Pt	3	493.667	17.807	456.10	531.24
MFVG/Sodium Peroxide Fusion/Ni	4	714.500	15.421	681.96	747.04

Std Error uses a pooled estimate of error variance

Means and Std Deviations

Level	Number	Mean	Std Dev	Std Err Mean	Lower 95%	Upper 95%
MFDS/Cesium Carbonate Fusion/Pt	4	513.000	16.0208	8.010	487.51	538.49
MFDS/Sodium Peroxide Fusion/Ni	4	654.000	19.3907	9.695	623.15	684.85
MFS/Acidification w HNO3/HCl/	3	279.667	23.1157	13.346	222.24	337.09
MFVG/Cesium Carbonate Fusion/Pt	5	518.800	19.9424	8.919	494.04	543.56
MFVG/Potassium Carbonate/Pt	3	493.667	10.5040	6.064	467.57	519.76
MFVG/Sodium Peroxide Fusion/Ni	4	714.500	61.6252	30.813	616.44	812.56

Exhibit A3. All-Pairs Comparisons Among the Preparation Methods for Samples of the Dried Solids Form of the Melter Feed Slurry Simulant

Type of Sample= Trial

Oneway Analysis of Ag By Simulant/ Preparation/ Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

q*	Alpha			
2.85742	0.05			
Abs(Dif)-LSD		MFDS/Cesium Carbonate Fusion/Pt	MFDS/Sodium Peroxide Fusion/Ni	MFS/Acidification w HNO3/HCl/
MFDS/Cesium Carbonate Fusion/Pt		-162.05	72.95	280.72
MFDS/Sodium Peroxide Fusion/Ni		72.95	-162.05	45.72
MFS/Acidification w HNO3/HCl/		280.72	45.72	-187.11

Positive values show pairs of means that are significantly different.

Oneway Analysis of Al By Simulant/ Preparation/ Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

q*	Alpha			
2.85742	0.05			
Abs(Dif)-LSD		MFDS/Sodium Peroxide Fusion/Ni	MFDS/Cesium Carbonate Fusion/Pt	MFS/Acidification w HNO3/HCl/
MFDS/Sodium Peroxide Fusion/Ni		-514.0	-489.0	2514.8
MFDS/Cesium Carbonate Fusion/Pt		-489.0	-514.0	2489.8
MFS/Acidification w HNO3/HCl/		2514.8	2489.8	-593.5

Positive values show pairs of means that are significantly different.

Oneway Analysis of B By Simulant/ Preparation/ Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

q*	Alpha			
2.85742	0.05			
Abs(Dif)-LSD		MFS/Acidification w HNO3/HCl/	MFDS/Cesium Carbonate Fusion/Pt	MFDS/Sodium Peroxide Fusion/Ni
MFS/Acidification w HNO3/HCl/		-247.5	618.5	1268.5
MFDS/Cesium Carbonate Fusion/Pt		618.5	-214.3	435.7
MFDS/Sodium Peroxide Fusion/Ni		1268.5	435.7	-214.3

Positive values show pairs of means that are significantly different.

Oneway Analysis of Ba By Simulant/ Preparation/ Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

q*	Alpha			
2.85742	0.05			
Abs(Dif)-LSD		MFDS/Sodium Peroxide Fusion/Ni	MFDS/Cesium Carbonate Fusion/Pt	MFS/Acidification w HNO3/HCl/
MFDS/Sodium Peroxide Fusion/Ni		-26.351	63.649	90.205
MFDS/Cesium Carbonate Fusion/Pt		63.649	-26.351	0.205
MFS/Acidification w HNO3/HCl/		90.205	0.205	-30.427

Positive values show pairs of means that are significantly different.

Exhibit A3. All-Pairs Comparisons Among the Preparation Methods for Samples of the Dried Solids Form of the Melter Feed Slurry Simulant

Oneway Analysis of Ca By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD				
		MFDS/Sodium	MFS/Acidification w	MFDS/Cesium
		Peroxide Fusion/Ni	HNO3/HCl/	Carbonate Fusion/Pt
MFDS/Sodium		-191.17	234.35	288.83
Peroxide Fusion/Ni				
MFS/Acidification w		234.35	-220.75	-167.32
HNO3/HCl/				
MFDS/Cesium		288.83	-167.32	-191.17
Carbonate Fusion/Pt				

Positive values show pairs of means that are significantly different.

Oneway Analysis of Cd By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD				
		MFDS/Cesium	MFDS/Sodium	MFS/Acidification w
		Carbonate Fusion/Pt	Peroxide Fusion/Ni	HNO3/HCl/
MFDS/Cesium		-7.6252	-3.0002	-2.4736
Carbonate Fusion/Pt				
MFDS/Sodium		-3.0002	-7.6252	-7.0986
Peroxide Fusion/Ni				
MFS/Acidification w		-2.4736	-7.0986	-8.8048
HNO3/HCl/				

Positive values show pairs of means that are significantly different.

Oneway Analysis of Ce By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD				
		MFDS/Sodium	MFS/Acidification w	MFDS/Cesium
		Peroxide Fusion/Ni	HNO3/HCl/	Carbonate Fusion/Pt
MFDS/Sodium		-138.95	-119.33	-8.20
Peroxide Fusion/Ni				
MFS/Acidification w		-119.33	-160.45	-50.08
HNO3/HCl/				
MFDS/Cesium		-8.20	-50.08	-138.95
Carbonate Fusion/Pt				

Positive values show pairs of means that are significantly different.

Oneway Analysis of Cr By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD				
		MFDS/Sodium	MFDS/Cesium	MFS/Acidification w
		Peroxide Fusion/Ni	Carbonate Fusion/Pt	HNO3/HCl/
MFDS/Sodium		-164.51	346.24	368.81
Peroxide Fusion/Ni				
MFDS/Cesium		346.24	-164.51	-141.94
Carbonate Fusion/Pt				
MFS/Acidification w		368.81	-141.94	-189.96
HNO3/HCl/				

Positive values show pairs of means that are significantly different.

Exhibit A3. All-Pairs Comparisons Among the Preparation Methods for Samples of the Dried Solids Form of the Melter Feed Slurry Simulant

Oneway Analysis of Cu By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD				
		MFDS/Cesium	MFS/Acidification w	MFDS/Sodium
		Carbonate Fusion/Pt	HNO3/HCl/	Peroxide Fusion/Ni
MFDS/Cesium		-9.371	18.278	37.929
Carbonate Fusion/Pt				
MFS/Acidification w		18.278	-10.821	8.778
HNO3/HCl/				
MFDS/Sodium		37.929	8.778	-9.371
Peroxide Fusion/Ni				

Positive values show pairs of means that are significantly different.

Oneway Analysis of Fe By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD				
		MFS/Acidification w	MFDS/Sodium	MFDS/Cesium
		HNO3/HCl/	Peroxide Fusion/Ni	Carbonate Fusion/Pt
MFS/Acidification w		-657.31	-89.86	760.14
HNO3/HCl/				
MFDS/Sodium		-89.86	-569.25	280.75
Peroxide Fusion/Ni				
MFDS/Cesium		760.14	280.75	-569.25
Carbonate Fusion/Pt				

Positive values show pairs of means that are significantly different.

Oneway Analysis of K By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD				
		MFDS/Sodium	MFDS/Cesium	MFS/Acidification w
		Peroxide Fusion/Ni	Carbonate Fusion/Pt	HNO3/HCl/
MFDS/Sodium		-266.54	413.46	782.94
Peroxide Fusion/Ni				
MFDS/Cesium		413.46	-266.54	102.94
Carbonate Fusion/Pt				
MFS/Acidification w		782.94	102.94	-307.77
HNO3/HCl/				

Positive values show pairs of means that are significantly different.

Oneway Analysis of La By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD				
		MFS/Acidification w	MFDS/Sodium	MFDS/Cesium
		HNO3/HCl/	Peroxide Fusion/Ni	Carbonate Fusion/Pt
MFS/Acidification w		-38.426	-17.028	7.472
HNO3/HCl/				
MFDS/Sodium		-17.028	-33.278	-8.778
Peroxide Fusion/Ni				
MFDS/Cesium		7.472	-8.778	-33.278
Carbonate Fusion/Pt				

Positive values show pairs of means that are significantly different.

Exhibit A3. All-Pairs Comparisons Among the Preparation Methods for Samples of the Dried Solids Form of the Melter Feed Slurry Simulant

Oneway Analysis of Li By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD				
MFS/Acidification w HNO3/HCl/			MFDS/Sodium Peroxide Fusion/Ni	MFDS/Cesium Carbonate Fusion/Pt
MFS/Acidification w HNO3/HCl/			-133.18	-81.24
MFDS/Sodium			-81.24	-115.33
Peroxide Fusion/Ni				264.67
MFDS/Cesium			298.76	264.67
Carbonate Fusion/Pt				-115.33

Positive values show pairs of means that are significantly different.

Oneway Analysis of Mg By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD				
MFDS/Sodium			MFDS/Cesium Carbonate Fusion/Pt	MFS/Acidification w HNO3/HCl/
Peroxide Fusion/Ni				
MFDS/Sodium			-18.159	-12.159
Peroxide Fusion/Ni			-12.159	-18.159
MFDS/Cesium			-12.159	-2.697
Carbonate Fusion/Pt				
MFS/Acidification w HNO3/HCl/			3.303	-2.697
				-20.968

Positive values show pairs of means that are significantly different.

Oneway Analysis of Mn By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD				
MFS/Acidification w HNO3/HCl/			MFDS/Sodium Peroxide Fusion/Ni	MFDS/Cesium Carbonate Fusion/Pt
MFS/Acidification w HNO3/HCl/			-147.19	133.98
MFDS/Sodium			133.98	-127.47
Peroxide Fusion/Ni				105.03
MFDS/Cesium			366.48	105.03
Carbonate Fusion/Pt				-127.47

Positive values show pairs of means that are significantly different.

Oneway Analysis of Mo By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD				
MFDS/Sodium			MFDS/Acidification w HNO3/HCl/	MFDS/Cesium Carbonate Fusion/Pt
Peroxide Fusion/Ni				
MFDS/Sodium			-193.89	551.33
Peroxide Fusion/Ni			551.33	-223.88
MFS/Acidification w HNO3/HCl/				-189.80
MFDS/Cesium			586.49	-189.80
Carbonate Fusion/Pt				-193.89

Positive values show pairs of means that are significantly different.

Exhibit A3. All-Pairs Comparisons Among the Preparation Methods for Samples of the Dried Solids Form of the Melter Feed Slurry Simulant

Oneway Analysis of Na By Simulant/ Preparation/Crucible

Missing Rows 4

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

q*	Alpha
2.57059	0.05
Abs(Dif)-LSD	
MFS/Acidification w HNO3/HCl/	MFDS/Cesium Carbonate Fusion/Pt
MFS/Acidification w HNO3/HCl/	-368.6 1396.9
MFDS/Cesium Carbonate Fusion/Pt	1396.9 -319.2

Positive values show pairs of means that are significantly different.

Oneway Analysis of Ni By Simulant/ Preparation/Crucible

Missing Rows 4

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

q*	Alpha
2.57059	0.05
Abs(Dif)-LSD	
MFS/Acidification w HNO3/HCl/	MFDS/Cesium Carbonate Fusion/Pt
MFS/Acidification w HNO3/HCl/	-60.502 -21.928
MFDS/Cesium Carbonate Fusion/Pt	-21.928 -52.396

Positive values show pairs of means that are significantly different.

Oneway Analysis of P By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

q*	Alpha
2.85742	0.05
Abs(Dif)-LSD	
MFDS/Cesium Carbonate Fusion/Pt	MFDS/Sodium Peroxide Fusion/Ni
MFDS/Cesium Carbonate Fusion/Pt	-267.11 -100.86
MFDS/Sodium Peroxide Fusion/Ni	-100.86 -267.11
MFS/Acidification w HNO3/HCl/	-81.42 -247.67
	-308.43

Positive values show pairs of means that are significantly different.

Oneway Analysis of Pb By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

q*	Alpha
2.85742	0.05
Abs(Dif)-LSD	
MFDS/Sodium Peroxide Fusion/Ni	MFS/Acidification w HNO3/HCl/
MFDS/Sodium Peroxide Fusion/Ni	-626.49 -218.36
MFS/Acidification w HNO3/HCl/	-218.36 -723.41
MFDS/Cesium Carbonate Fusion/Pt	612.26 103.73
	-626.49

Positive values show pairs of means that are significantly different.

Exhibit A3. All-Pairs Comparisons Among the Preparation Methods for Samples of the Dried Solids Form of the Melter Feed Slurry Simulant

Oneway Analysis of S By Simulant/ Preparation/Crucible

Missing Rows 7

Oneway Analysis of Sb By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD			MFDS/Sodium Peroxide Fusion/Ni	MFDS/Cesium Carbonate Fusion/Pt
MFDS/Sodium Peroxide Fusion/Ni			-514.4	1161.1
MFDS/Cesium Carbonate Fusion/Pt			1161.1	-514.4
MFS/Acidification w HNO3/HCl/			1137.1	-538.4
				-593.9

Positive values show pairs of means that are significantly different.

Oneway Analysis of Si By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD			MFDS/Sodium Peroxide Fusion/Ni	MFDS/Cesium Carbonate Fusion/Pt
MFDS/Sodium Peroxide Fusion/Ni			-3849	-549
MFDS/Cesium Carbonate Fusion/Pt			-549	-3849
MFS/Acidification w HNO3/HCl/			76661	73361
				-4444

Positive values show pairs of means that are significantly different.

Oneway Analysis of Sn By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD			MFDS/Cesium Carbonate Fusion/Pt	MFDS/Sodium Peroxide Fusion/Ni
MFDS/Cesium Carbonate Fusion/Pt			-167.12	-65.24
MFDS/Sodium Peroxide Fusion/Ni			-65.24	-167.12
MFS/Acidification w HNO3/HCl/			-54.42	-156.30
				-192.97

Positive values show pairs of means that are significantly different.

Oneway Analysis of Sr By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD			MFDS/Sodium Peroxide Fusion/Ni	MFS/Acidification w HNO3/HCl/
MFDS/Sodium Peroxide Fusion/Ni			-48.341	72.452
MFS/Acidification w HNO3/HCl/			72.452	-55.820
MFDS/Cesium Carbonate Fusion/Pt			88.909	-39.631
				-48.341

Positive values show pairs of means that are significantly different.

Exhibit A3. All-Pairs Comparisons Among the Preparation Methods for Samples of the Dried Solids Form of the Melter Feed Slurry Simulant

Oneway Analysis of Th By Simulant/ Preparation/Crucible

Missing Rows 7

Oneway Analysis of Ti By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD			MFDS/Cesium	MFDS/Sodium
			Carbonate Fusion/Pt	Peroxide Fusion/Ni
MFDS/Cesium			-2.049	6.764
Carbonate Fusion/Pt				
MFDS/Sodium			6.764	-2.049
Peroxide Fusion/Ni				4.293
MFS/Acidification w			13.105	4.293
HNO3/HCl/				-2.366

Positive values show pairs of means that are significantly different.

Oneway Analysis of Tl By Simulant/ Preparation/Crucible

Missing Rows 7

Oneway Analysis of U By Simulant/ Preparation/Crucible

Missing Rows 7

Oneway Analysis of Y By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD			MFS/Acidification w	MFDS/Cesium
			HNO3/HCl/	Carbonate Fusion/Pt
MFS/Acidification w			-2702.4	-1141.8
HNO3/HCl/				-1135.3
MFDS/Cesium			-1141.8	-2340.3
Carbonate Fusion/Pt				-2333.8
MFDS/Sodium			-1135.3	-2333.8
Peroxide Fusion/Ni				-2340.3

Positive values show pairs of means that are significantly different.

Oneway Analysis of Zn By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD			MFDS/Sodium	MFDS/Cesium
			Peroxide Fusion/Ni	Carbonate Fusion/Pt
MFDS/Sodium			-373.95	556.09
Peroxide Fusion/Ni				907.80
MFS/Acidification w			556.09	-431.80
HNO3/HCl/				-82.16
MFDS/Cesium			907.80	-82.16
Carbonate Fusion/Pt				-373.95

Positive values show pairs of means that are significantly different.

Oneway Analysis of Zr By Simulant/ Preparation/Crucible

Means Comparisons/Comparisons for all pairs using Tukey-Kramer HSD

	q*	Alpha		
	2.85742	0.05		
Abs(Dif)-LSD			MFDS/Sodium	MFDS/Cesium
			Peroxide Fusion/Ni	Carbonate Fusion/Pt
MFDS/Sodium			-38.91	102.09
Peroxide Fusion/Ni				332.31
MFDS/Cesium			102.09	-38.91
Carbonate Fusion/Pt				191.31
MFS/Acidification w			332.31	191.31
HNO3/HCl/				-44.93

Positive values show pairs of means that are significantly different.