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Statistical Analysis of DWPF ARG-1 Data

by

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May 24, 2000

Technical Assistance Request: HLW/DWPF/TTR-990020

Keywords: ARG-1, Standards, Control Charts, Statistics, Variance Components

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Statistical Analysis of DWPF ARG-1 Data (U)

S. P. Harris

1. Summary

A statistical analysis of analytical results for ARG-1, an Analytical Reference Glass, blanks and the associated calibration and bench standards has been completed. The statistical work was in response to HLW/DWPF/TTR-990020, Rev. 0 [1].

The ARG-1 data consist of results supporting DWPF production from Batch 20 to Batch 93 during the time frame from May 1996 to October 1998. Data from both microwave assisted acid dissolutions (MA) and sodium peroxide/sodium hydroxide fusion (FS) dissolutions have been statistically analyzed. Statistical summaries are presented in this report along with estimates of variance components for effects both within and between calibration. These statistics provide a means for DWPF to review the performance of their laboratory as well as identify areas of improvement.

2. Background

The DWPF Laboratory employs ARG-1 as part of a comprehensive quality control program. The powdered glass was prepared by Corning Glass and characterized by the Material Characterization Center (MCC) at Pacific Northwest Laboratory (PNL). ARG-1 is distributed as a 1 kg. package of powdered glass which is partitioned at the DWPF over a period of about two years into 2.0 g portions. Vials containing the nominal 2.0 gram portions of ARG-1 are placed in shielded cells for analyses. Aliquots taken from the vial (~ .25 g portions) are analyzed for required ARG-1 replicates. The samples are subdivided again and dissolved/analyzed along side of vitrified samples of the DWPF slurry. Each portion is prepared individually with two prepared by microwave assisted acid dissolution and two by sodium peroxide/sodium hydroxide fusion. If the analyses for ARG-1 fails pre-established limits, the sample results are considered suspect until the cause is identified and resolved. This report provides the input for modification of the limits.

Working Calibration Standards (WCS) are prepared by diluting and combining single element commercial standard solutions to pre-defined concentrations that mimic the ratio of concentrations expected in the production samples. The calibration is considered successful if the fit to the three-point curve is within tolerances.

Bench standards are prepared by diluting and combining single element commercial standards to pre-defined concentrations. The commercial single element standards are from a source independent of the WCS. The Bench standard is measured twice after the calibration is successful and is used throughout the series of analyses to bracket the results. The two measurements after calibration are defined as a "calibration standard". A single measurement in the analytical series is defined as a "bench standard" and will most likely be the same solution as

that used for the "calibration standard." A set of WCS or Calibration standards may be in service for up to one year.

Due to stability issues with synthetic WCS and Bench standards, there are two to three different mixtures for each analysis designated as A, B and C. Bench and WCS solutions are typically used up before the annual expiration date and one lot is in service at a time.

Blanks are solutions that combine the reagents from the dissolution steps and are diluted to levels comparable with expected sample concentrations. Blanks are used to monitor for potential contamination from reagents, the water supply and laboratory equipment.

3. Data

Both DWPF rejected and passed data were supplied to provide an unbiased data set for statistical analysis. The data were obtained from the DWPF Laboratory Information Management System (LIMS). The DWPF analytical results were supplied for both fusion and mixed acid for ARG-1. Data from the acid standard were also included. The results include laboratory measurements corresponding to the following elements for MA: Al (aluminum), Ca (calcium), Cr (chromium), Cu (copper), Fe (iron), K (potassium), Li (lithium), Mg (magnesium), Mn (manganese), Na (sodium), Ni (nickel), Si (silicon), Ti (titanium), Ur (uranium) and Zr (zirconium). The results for FS include Al, B (boron), Ca, Cr, Cu, Fe, K, Li, Mg, Mn, Ni, Si, and Ti.

The data were electronically transferred to SRTC's Statistical Analysis Section (SRTC/SCS) in fifteen data sets. The electronically transferred data were verified by comparison with the official data transmittal[2]. The total number of records was verified as well as the data in the first and last record in each data file. In addition, the column headers were verified. The first data set (D01) contained a listing of production batches associated with calibration numbers, the corresponding batch and LIMS numbers and information if the analyses were rejected by DWPF for various reasons. The reasons for rejection include dissolution issues as well as calibration difficulties. This data set (D01) was merged using JMP®[3] by matching the calibration numbers in the D01 data set with the calibration numbers in the target data set. This resulted in the following fourteen data sets:

D0102: ARG-1, SME MA Data
D0103: Blanks, SME MA Data
D0104: ARG-1, SME FS Data
D0105: Blanks, SME MA Data
D0106: Calibration Standard A, SME ICP MA Data
D0107: Calibration Standard B, SME ICP MA Data
D0108: Calibration Standard C, SME ICP MA Data
D0109: Bench Standard A, SME ICP MA Data
D0110: Bench Standard B, SME ICP MA Data
D0111: Bench Standard C, SME ICP MA Data
D0112: Calibration Standard A, SME ICP FS Data
D0113: Calibration Standard B, SME ICP FS Data
D0114: Bench Standard A, SME ICP FS Data
D0115: Bench Standard B, SME ICP FS Data

Extreme outliers were excluded from the data, on an element by element basis, using Tukey's method of outer fences[4]. These are data points that lie more than three inter-quartile ranges below the first quartile (25th percentile) or above the third quartile (75th percentile). The method is simply a rule of thumb for picking "far out" values in the data. The data sets in which these extreme outliers were deleted are referred to as "screened" data. The unscreened data include data that have been passed according to DWPF QA criteria and also the data that have been rejected by DWPF for various special causes.

Appendix 1 contains probability plots and sample statistics on an elemental basis for screened and unscreened ARG-1 and screened blanks. Appendix 2 contains probability plots and sample statistics for the sum of oxides and Fe/Li ratios.

4. Statistical Analysis

The earlier statistical work on DWPF ARG-1 compositions has been documented in an SRTC report[5] that incorporated results in the time frame of March 1993 to September 8, 1995. The data consisted of results supporting production, training and method development activities.

The current ARG-1 data consist of results supporting DWPF production from Batch 20 to Batch 93 during the time frame from May 1996 to October 1998. The statistical analysis of the current data was conducted in compliance with the applicable quality assurance requirements of the DOE/RW-0333P QA Program. The checklist of QA implementing plans includes Supplement V (Control of the Electronic Management of Data) based on WSRC-IM-9573.

The statistical analysis was conducted using SAS® Release 6.12, JMP® Version 3.2.6 Professional Edition, and Statgraphics® 4.0 Professional Edition for Windows. Both SAS® and JMP® are commercial software products from the SAS Institute in Cary, NC[6]. Statgraphics® is a product on Manugistics Inc., Rockville, MD[7]. The JMP® and Statgraphics® statistical analysis software runs under the Microsoft NT Version 4 operating system on an IBM Personal Computer 300PL. SAS® runs on the DEC ALPHASERVER Model 4100 5/533.

All data evaluated as part of this study were included in the deliverables for this task or were supplied to the customer in electronic form. This provides the basis for reproducibility of all statistical results generated from this study. Software verification and validation was previously performed for the statistical routines used in this statistical analysis[8]. The primary elements for ARG-1 are Al, B, Ca, Fe, K, Li, Mg, Mn, Na, Ni, Si, and Ti for the purposes of the statistical analysis. The following elements are included for WCS and bench testing: B, Cu, Cr, U, and Zr. The conclusions in this report are based on this listing of elements. The corresponding tables can be examined for statistical results on the remaining elements.

5. Variance Components

ARG-1 results incorporate calibration fit variance, instrument measurement variance, time shifts and calibration variance. The results also include variation in ARG-1 induced by weights

recorded in error, and a time based shift termed instrument drift. It is also possible to have impacts from contamination by one or more elements during the preparation in the shielded cells.

Instrument measurement impact can be defined by the variance associated with the variance **within** the two calibration standard measurements.

Calibration fit impact is defined by the variance **between** the calibration standards pairs.

A random effects model for data from a nested design with one factor has the form:

$$y_{ij} = \mu + \alpha_i + \varepsilon_{ij}$$

where: y_{ij} is the value of the elemental concentration measurement at the j th replicate within the i th calibration,

μ is the overall elemental population mean and

α_i and ε_{ij} are mutully uncorrelated random effects with zero means and respective variances σ_1^2 and σ_ε^2 (the variance components).

The coefficients of variation (CV's) based on the variance component breakdowns are also presented

$$CV = 100 \times s/\bar{x}$$

where s is the estimated standard deviation and $\bar{x}$ is the average.

Conclusions from the descriptive statistics are presented. However, no conclusions on statistical significance were drawn since the data sets were somewhat unbalanced and not normally distributed. In addition, cycling, mean shifts & trending were present in calibration and bench standard data. Variance components were estimated for MA and FS ARG-1, blanks and calibration standards. Typically, no replication was done within calibration for the bench standards so the variance components were not estimated.

Table 1.1(D0102: ARG-1, SME MA Data): The CV's within calibration (preparation) are greater than the CV's between calibration for the primary elements. For example, the CV for Al within calibration is 2.51% versus 1.22% for the CV between calibration.

Table 1.2(D0103: Blanks, SME MA Data): A number of variance component percentages are greater within calibration than between calibration (Fe, K, MN, Ni) while the percentages are less within calibration for Al, Ca, Li, Mg, Na, Si and Ti. The CV's are not presented in this table since the data set is composed of SME MA Blanks. All detection limits based on 3σ considerations (Section 8) are below 0.15 mg/L except 0.52 mg/L for Si and 0.21 mg/L for K.

Table 1.3(D0104: ARG-1, SME FS Data): The CV's within calibration (preparation), ranging from 3.86% to 7.27%, are greater than the CV's between calibration, ranging from 1.81% to 5.08%, for the primary elements (Al, Ca, Fe, K, Li, Mg, Mn, Na, Ni, Si, and Ti). The opposite is true for B. The CV within calibration is 4.53% while the CV between calibration is 2.54%.

Table 1.4(D0105: Blanks, SME FS Data): A number of variance component percentages are greater within calibration, 50.9% to 82.2%, than between calibration for the primary elements (Al, Fe, Li, Mg, Mn, Ni, Si, and Ti) which range from 17.8% to 49.1%. The percentages are less within calibration than between calibration for B and K. The CV's are not presented in this table since the data set is composed of SME FS Blanks. All detection limits are below 0.20 mg/L except 0.46 mg/L for Si and 0.29 mg/L for Fe.

Table 2.1(D0106: Calibration Standard A, SME ICP MA Data): The CV's between calibration range from 0.92% to 2.19%. They are typically greater than the CV's within calibration, which range from 0.53% to 1.50%. The exception is Ni for which the CV's between and within calibration are approximately identical (1.19%).

Table 2.1(D0107: Calibration Standard B, SME ICP MA Data): The CV's between calibration are always greater than the CV's within calibration. The CV's between calibration range from 0.95% to 1.4% while the CV's within calibration are all less than 0.40%.

Table 2.1(D0108: Calibration Standard C, SME ICP MA Data): The CV between calibration for U is approximately equal to the CV within calibration for U (0.9%).

Table 2.2(D0112: Calibration Standard A, SME ICP FS Data): The CV's between calibration are typically greater than the CV's within calibration except for Ni. 1.03% versus 1.15%.

Table 2.2(D0113: Calibration Standard B, SME ICP FS Data): The CV's between calibration are always greater than the CV's within calibration. For example, the between calibration CV for Fe is 0.76% and the within CV is 0.36%.

6. Difference Between Calibration and Bench Standards

The impact of instrument drift can be determined from the difference between the calibration standard means and the bench standard means. The averages were calculated for each element within calibration number for the calibration and bench standard data sets. Then the calibration and bench standard data sets were merged on the basis of calibration number. The averages for the calibration standards (Table 2.3) ranged from 0.29% (Si) to 0.78% (U) greater for the ICP MA than for the ICP FS Type A, B and C data.

For the ICP FS Type A Data, the Si calibration standard in mg/L is 0.84% lower than the bench standard while the mg/L for Li is 0.38% higher (Table 2.4). The percentage differences for ICP FS Type B Data range from 0.04% to 0.27% higher for the calibration standards. The bias percentages are also shown in the Table 2.4. The Boron (B) bias is -4.26% for the calibration data and -4.46% for the bench ICP FS Type A data. Boron is a matrix stabilizer for the ICP FS Type A data. The apparent block like changes in the calibration standards (Plots D.4-D.6) are

mimicked in the Bench Standards (Plots D.9-D.10). This could indicate that dilution and pipetting may be the source of the shifts.

7. Difference Between ARG-1 MA and FS Analyses

The ARG-1 data were averaged for each batch number and then the ARG-1 MA and ARG-1 FS were then merged on batch number. As a result, the weight percentages (Table 3) for MA analyses ranged from 2.8% to 8.3% higher than for FS analyses (Ca, Fe, K, Li, Mg, Mn, and Ni). The weight percentage for Si was 5.9% lower for MA analysis. The sum of oxides for ARG-1 MA was 1.8% less than for ARG-1 FS based on the statistically screened data.

8. Detection Limits Based on Calibration and Bench Standard Data

The detection limits based on the calibration and bench standard data are shown in Table 4. The units are in mg/L and the limits are calculated as $\bar{x}+3s$ where s is the sample standard deviation.

9. Comparisons with Prior Report & DWPF Passed Data

The first SRTC/SCS statistical report[5] on ARG-1 data was issued March 11, 1996. Comparisons were made with statistics from the current data sets versus the first report. As can be seen in Table 5.1, the CV's for the MA data are comparable. However, the CV's for the current FS data are substantially higher now than in the first report. It is believed that this is more than an artifact of any subjective outlier screening methods. This greater variability could be due to contamination from furnace insulation and more difficulty in cleaning the furnace. Other special causes could include additional variability from starting radioactive operations in March 1996, heavy turnover of laboratory personnel, and the fact that the prior data was not fully remote with the nuances of waste handling, decontamination operations, and MSM workloads increasing.

Table 5.2 contains the statistics from the DWPF "passed" data representing the actual production data set. The ARG-1, MA (FS) data set had 387 (391) analyses of which 57 (64) were rejected by DWPF. As such, the criteria used by DWPF eliminated 14.7% of the data for MA and approximately 16.4% for FS. Reasons for rejection include erratic data, contamination or instrument drift. The DWPF passed data include wt% for all elementals. Specifically, none of the elementals are missing or eliminated. The MA CV's for the DWPF passed data are greater than for the current statistically screened data; e.g.: the CV for Si: 3.7 versus 4.0.

10. Percentage of Data Statistically Screened

The percentage of data screened on an elemental basis is shown in Table 6 for the current data set. The purpose of the statistical screening was to remove extremely large values from the statistical analysis and not necessarily to induce normality upon the data. Data beyond the outer fences[4] were excluded from the analysis. No more than three points, on average, in 100,000

would be excluded as outliers if the data were statistically stable and normally distributed. The ARG-1 MA results were more prone to outliers than the ARG-1 FS results. For example, 7.2% of the Al MA results were rejected versus 4.9% for FS. For Si MA results, 6.5% was rejected versus 4.9% for FS.

11. Shewhart Control Charts

The Shewhart Charts presented in Plots A, B and D are based on individual elemental measurements. The elementals (wt%'s) are plotted in sequence along with the historical average and the corresponding three-sigma limits. The three sigma limits are based on the sample standard deviation of the observations. The purpose of the charting was to detect trends and patterns in the time sequence plot of the data rather than to assess statistical control of the system. The time sequence index for the ARG-1 plot points is shown in Appendix 3 where the sequential plot point is indexed to the batch number, LIMS and calibration number.

The majority of Shewhart charts show cycles in the data. A few observations are noted on the most recent data.

Plot A.1(ARG-1, MA): The most recent Mg data, starting at Calibration 952, is about 3% below its historical average (0.53 wt%) while Si is about 1.5% below its historical average(21.54 wt%).

Plot A.3(ARG-1, FS): The most recent Mg data, from Calibration 1229, is about 3.6% below its historical average of 0.5164 wt% and Ti is about below its historical average of 0.677 wt%.

Plot B.1(ARG-1, MA): The most recent sum of oxides is about 0.8% below its historical average (97.2%).

Plot C.1(ARG-1, MA) and C.2(ARG-1, FS): The multivariate control charts, based on the primary elements, show no cycles or trends. However, a number of points (6% to 7%) are above the upper control limit. It is assumed that the variables follow a multivariate normal distribution. The charts are of limited usefulness since the past ARG-1 data have not been shown to come from a single multivariate normal distribution.

A multivariate control chart was constructed for the 11 ARG-1, MA data variables (Al, Ca, Fe, K, Li, Mg, Mn, Na, Ni, Si, Ti). Unlike most control charts that treat variables separately, this procedure takes into account possible correlations between the variables.

The upper control limit has been located so as to give a 0.27% false alarm rate. There were 19 points above the control limit. The probability of seeing 19 or more points above the control limit just by chance is 1.8×10^{-7} if the data come from the assumed multivariate normal distribution.

Also, a multivariate control chart was constructed for the 11 ARG-1 FS data variables (Al, B, Ca, Fe, K, Li, Mg, Mn, Ni, Si, Ti). As for the MA case, the upper limit has been located so as to give a 0.27% false alarm rate. There were 25 points above the control limit. The probability of seeing 25 or more points above the control limit just by chance is 1.9×10^{-7} if the data come from

the assumed multivariate normal distribution.

Plots D.1-D.10 (Shewhart Plots for Standard MA & FS Data)

The Shewhart plots for MA (D.1-D.6) generally indicate time based shifts in addition to shifts from standard preparation. The FS plots (D.7-D.10) are somewhat less influenced by the time based shifts.

12. References

[1] Beck, R. S. (2/9/99). Statistical Evaluation of ARG-1, HLW/DWPF/TTR-990020, Rev. 0.

[2] Beck, R.S. (5/5/00). Transmittal of Official Data for Statistical Review Sludge Batch 1A QC Data, HLW-DEN-2000-00152.

[3] JMP®, SAS Institute, Cary, N.C.

[4] Tukey, J.W. (1977). *Exploratory Data Analysis*. Massachusetts: Addison-Wesley.

[5] Harris, S.P. (1996). DWPF ARG-1 Glass Composition (U), SRT-ASG-95-0081.

[6] SAS Institute, Cary, NC.

[7] Manugistics Inc., Rockville, MD.

[8] Edwards, T.B., et al. (1999). Software Verification & Validation for Commercial Statistical Packages Utilized by the Statistical Consulting Section of SRTC (U), WSRC-RP-99-00422.

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Table 1.1
Variance Components and CV's for Screened ARG-1, SME MA Data

Elementals are in wt%

SCREENED ARG-1, SME MA Data

	Variance Components							Standard Deviations			CV's			
	Total	Calib	Calib %	Error	Er %	Mean	StdErr	Total	Calib	Error		Total	Calib	Error
Al	0.00460	0.00087	19.0%	0.00372	81.0%	2.42952	0.00399	0.06780	0.02956	0.06102	Al	2.79	1.22	2.51
B											B			
Ca	0.00254	0.00118	46.5%	0.00136	53.5%	1.04932	0.00332	0.05037	0.03434	0.03685	Ca	4.80	3.27	3.51
Cr	0.00007	0.00003	46.2%	0.00004	53.8%	0.07380	0.00054	0.00812	0.00552	0.00596	Cr	11.00	7.48	8.07
Cu	0.00002	0.00001	58.2%	0.00001	41.8%	0.00663	0.00027	0.00390	0.00297	0.00252	Cu	58.73	44.81	37.98
Fe	0.06724	0.02946	30.4%	0.04678	69.6%	9.78435	0.01608	0.25931	0.14304	0.21628	Fe	2.65	1.46	2.21
K	0.00903	0.00330	36.5%	0.00573	63.5%	2.31029	0.00598	0.09500	0.05740	0.07570	K	4.11	2.48	3.28
Li	0.00109	0.00030	27.4%	0.00079	72.6%	1.49400	0.00202	0.03295	0.01726	0.02807	Li	2.21	1.16	1.88
Mg	0.00047	0.00017	35.9%	0.00030	64.1%	0.52860	0.00137	0.02170	0.01300	0.01738	Mg	4.11	2.46	3.29
Mn	0.00115	0.00033	28.2%	0.00083	71.8%	1.45289	0.00209	0.03393	0.01803	0.02874	Mn	2.34	1.24	1.98
Na	0.04345	0.00922	21.2%	0.03424	78.8%	8.51060	0.01240	0.20846	0.09601	0.18503	Na	2.45	1.13	2.17
Ni	0.00113	0.00022	19.9%	0.00088	80.1%	0.85074	0.00194	0.03317	0.01480	0.02968	Ni	3.90	1.74	3.49
Si	0.63022	0.30910	49.0%	0.32111	51.0%	21.40422	0.05325	0.79386	0.55597	0.56667	Si	3.71	2.60	2.65
Ti	0.00051	0.00017	32.5%	0.00034	67.5%	0.70953	0.00141	0.02258	0.01288	0.01855	Ti	3.18	1.82	2.61
U	0.02523	0.01547	61.2%	0.00981	38.8%	0.22633	0.01102	0.15898	0.12437	0.09903	U	70.24	54.95	43.75
Zr	0.00003	0.00002	63.4%	0.00001	36.6%	0.10253	0.00039	0.00546	0.00435	0.00331	Zr	5.33	4.24	3.22

Table 1.2
Variance Components and CV's for Screened Blanks, SME MA Data

Elementals are in mg/L

Screened Blanks, SME MA Data

	Variance Components							Standard Deviations				
	Total	Calib	Calib %	Error	Err %	Mean	StdErr	Total	Calib	Error		Det Lim
Al	0.00037	0.00019	51.9%	0.00018	48.1%	0.01377	0.00131	0.01929	0.01389	0.01338	Al	0.07164
B											B	
Ca	0.00086	0.00061	70.1%	0.00026	29.7%	0.01555	0.00210	0.02939	0.02462	0.01603	Ca	0.10373
Cr	0.00004	0.00002	45.1%	0.00002	54.9%	0.00535	0.00041	0.00625	0.00420	0.00463	Cr	0.02410
Cu	0.00001	0.00001	59.2%	0.00000	40.8%	0.00236	0.00024	0.00350	0.00269	0.00223	Cu	0.01336
Fe	0.00164	0.00080	48.9%	0.00084	51.1%	0.02147	0.00270	0.04045	0.02828	0.02891	Fe	0.14282
K	0.00215	0.00075	34.9%	0.00140	65.0%	0.07458	0.00289	0.04641	0.02742	0.03743	K	0.21391
Li	0.00001	0.00000	55.4%	0.00000	44.6%	0.00277	0.00016	0.00227	0.00169	0.00152	Li	0.00958
Mg	0.00001	0.00001	66.4%	0.00000	33.6%	0.00073	0.00022	0.00308	0.00251	0.00178	Mg	0.00996
Mn	0.00001	0.00000	47.1%	0.00000	52.9%	0.00153	0.00016	0.00243	0.00167	0.00177	Mn	0.00893
Na	0.00144	0.00099	68.5%	0.00045	31.5%	0.01498	0.00274	0.03792	0.03138	0.02128	Na	0.12874
Ni	0.00009	0.00004	42.8%	0.00005	57.2%	0.00406	0.00625	0.00959	0.00628	0.00725	Ni	0.03284
Si	0.02552	0.01333	52.2%	0.01218	47.7%	0.03819	0.01091	0.15973	0.11546	0.11038	Si	0.51739
Ti	0.00003	0.00002	67.3%	0.00001	32.7%	0.00478	0.00041	0.00573	0.00470	0.00328	Ti	0.02197
U	0.02157	0.01080	50.1%	0.01077	49.9%	0.20575	0.00968	0.14688	0.10393	0.10378	U	0.64639
Zr	0.00001	0.00001	68.1%	0.00000	31.9%	0.00095	0.00022	0.00304	0.00251	0.00172	Zr	0.01006

Table 1.3
Variance Components and CV's for Screened ARG-1, SME FS Data

Elementals are in wt%

SCREENED ARG-1, SME FS Data

	Variance Components								Standard Deviations				CV's		
	Total	Calib	Calib %	Error	Err %	Mean	StdErr		Total	Calib	Error		Total	Calib	Error
Al	0.01585	0.00442	27.9%	0.01144	72.1%	2.44398	0.00756		0.12591	0.06647	0.10694	Al	5.15	2.72	4.38
B	0.01852	0.00442	23.9%	0.01409	76.1%	2.61928	0.00799		0.13607	0.06651	0.11871	B	5.19	2.54	4.53
Ca	0.00730	0.00239	32.8%	0.00491	67.2%	0.96392	0.00520		0.08546	0.04893	0.07006	Ca	8.87	5.08	7.27
Cr	0.00016	0.00007	43.8%	0.00009	56.4%	0.07911	0.00081		0.01245	0.00824	0.00935	Cr	15.74	10.42	11.82
Cu	0.00003	0.00001	56.2%	0.00001	43.8%	0.00922	0.00034		0.00502	0.00377	0.00332	Cu	54.49	40.86	36.05
Fe	0.23386	0.06061	25.9%	0.17325	74.1%	9.52206	0.02862		0.48359	0.24619	0.41623	Fe	5.08	2.59	4.37
K	0.01774	0.00699	39.4%	0.01075	60.6%	2.21518	0.00838		0.13318	0.08358	0.10369	K	6.01	3.77	4.68
Li	0.00430	0.00118	27.3%	0.00313	72.7%	1.44932	0.00394		0.06560	0.03431	0.05592	Li	4.53	2.37	3.86
Mg	0.00115	0.00038	33.3%	0.00077	66.8%	0.50568	0.00207		0.03385	0.01954	0.02766	Mg	6.64	3.83	5.43
Mn	0.00507	0.00121	23.9%	0.00385	76.1%	1.41009	0.00420		0.07118	0.03481	0.06208	Mn	5.05	2.47	4.40
Na												Na			
Ni	0.00202	0.00022	10.8%	0.00180	89.2%	0.81493	0.00246		0.04491	0.01473	0.04243	Ni	5.51	1.81	5.21
Si	1.42520	0.21074	14.8%	1.21446	85.2%	22.68542	0.06707		1.19382	0.45906	1.10203	Si	5.26	2.02	4.86
Ti	0.00118	0.00031	26.1%	0.00087	73.9%	0.67506	0.00205		0.03438	0.01755	0.02956	Ti	5.09	2.60	4.38
U												U			
Zr												Zr			

Table 1.4
Variance Components and CV's for Screened Blanks, SME FS Data

Elementals are in mg/L

Screened Blanks, SME FS Data

	Variance Components								Standard Deviations				
	Total	Calib	Calib %	Error	Err %	Mean	StdErr		Total	Calib	Error		Det Lim
Al	0.00091	0.00045	49.1%	0.00047	50.9%	0.03230	0.00200		0.03022	0.02117	0.02156	Al	0.12295
B	0.00106	0.00060	56.2%	0.00046	43.8%	0.01083	0.00221		0.03253	0.02439	0.02152	B	0.10841
Ca	0.00196	0.00098	50.2%	0.00098	49.9%	0.00357	0.00289		0.04422	0.03132	0.03122	Ca	0.13622
Cr	0.00012	0.00005	40.6%	0.00007	59.6%	0.01279	0.00069		0.01077	0.00686	0.00831	Cr	0.04510
Cu	0.00003	0.00001	43.2%	0.00002	56.8%	0.00658	0.00034		0.00532	0.00350	0.00401	Cu	0.02255
Fe	0.00479	0.00185	38.7%	0.00293	61.3%	0.08183	0.00439		0.06920	0.04306	0.05417	Fe	0.28944
K	0.00271	0.00171	62.9%	0.00101	37.1%	0.04263	0.00357		0.05210	0.04130	0.03175	K	0.19892
Li	0.00004	0.00002	36.3%	0.00003	63.7%	0.00603	0.00042		0.00555	0.00395	0.00523	Li	0.02568
Mg	0.00004	0.00001	36.3%	0.00002	63.7%	0.00510	0.00039		0.00522	0.00375	0.00497	Mg	0.02376
Mn	0.00002	0.00001	43.9%	0.00001	56.1%	0.00452	0.00026		0.00400	0.00265	0.00299	Mn	0.01652
Na												Na	
Ni	0.00016	0.00006	34.3%	0.00011	66.0%	0.01098	0.00078		0.01273	0.00745	0.01034	Ni	0.04916
Si	0.01536	0.00274	17.8%	0.01262	82.2%	0.08503	0.00726		0.12395	0.05233	0.11236	Si	0.45687
Ti	0.00002	0.00001	45.4%	0.00001	54.6%	0.00637	0.00027		0.00416	0.00280	0.00307	Ti	0.01884
U												U	
Zr												Zr	

Table 2.1
Variance Components and CV's for Screened MA Calibration Standard Data

Elementals are in mg/L

D0106

Screened Calibration Standard A, SME ICP MA Data

	Variance Components							Standard Deviations				CV's		
	Total	Calib	Calib %	Error	Err %	Mean	StdErr	Total	Calib	Error		Total	Calib	Error
Ca	0.00071	0.00048	68.1%	0.00022	31.8%	0.99988	0.00185	0.02655	0.02191	0.01497	Ca	2.66	2.19	1.50
Cr	0.00019	0.00011	57.9%	0.00008	42.5%	1.00467	0.00093	0.01378	0.01049	0.00899	Cr	1.37	1.04	0.89
Cu	0.00015	0.00012	80.3%	0.00003	19.1%	0.99970	0.00087	0.01212	0.01086	0.00530	Cu	1.21	1.09	0.53
K	0.00792	0.00573	72.4%	0.00219	27.6%	4.96415	0.00630	0.08901	0.07572	0.04679	K	1.79	1.53	0.94
Li	0.00045	0.00033	74.5%	0.00011	25.3%	1.98721	0.00150	0.02114	0.01825	0.01063	Li	1.06	0.92	0.53
Mg	0.00059	0.00046	78.7%	0.00013	21.4%	1.01174	0.00174	0.02425	0.02152	0.01122	Mg	2.40	2.13	1.11
Na	0.29860	0.22680	76.0%	0.07180	24.0%	32.87354	0.03903	0.54645	0.47624	0.26796	Na	1.66	1.45	0.82
Ni	0.00028	0.00014	49.3%	0.00014	50.7%	1.00197	0.00104	0.01679	0.01179	0.01196	Ni	1.68	1.18	1.19
Si	0.09138	0.06220	68.1%	0.02918	31.9%	19.97685	0.02100	0.30229	0.24940	0.17083	Si	1.51	1.25	0.86

D0107

Screened Calibration Standard B, SME ICP MA Data

	Variance Components							Standard Deviations				CV's		
	Total	Calib	Calib %	Error	Err %	Mean	StdErr	Total	Calib	Error		Total	Calib	Error
Al	0.00050	0.00045	89.2%	0.00005	10.8%	1.99376	0.00164	0.02234	0.02110	0.00736	Al	1.12	1.06	0.37
Fe	0.02015	0.01898	94.2%	0.00117	5.8%	10.00020	0.01063	0.14195	0.13778	0.03415	Fe	1.42	1.38	0.34
Mn	0.00040	0.00036	88.8%	0.00005	11.4%	1.98992	0.00147	0.02000	0.01884	0.00675	Mn	1.01	0.95	0.34
Na	0.00271	0.00243	89.7%	0.00028	10.3%	4.93781	0.00385	0.05206	0.04932	0.01670	Na	1.05	1.00	0.34
Ti	0.00018	0.00017	94.3%	0.00001	5.5%	1.00215	0.00099	0.01323	0.01285	0.00311	Ti	1.32	1.28	0.31
Zr	0.00011	0.00010	90.2%	0.00001	9.6%	0.99194	0.00077	0.01039	0.00987	0.00322	Zr	1.05	0.99	0.32

D0108

Screened Calibration Standard C, SME ICP MA Data

	Variance Components							Standard Deviations				CV's		
	Total	Calib	Calib %	Error	Err %	Mean	StdErr	Total	Calib	Error		Total	Calib	Error
U	0.01589	0.00826	51.9%	0.00764	48.1%	9.98493	0.00834	0.12607	0.09086	0.08739	U	1.26	0.91	0.88

Table 2.2
Variance Components and CV's for Screened FS Calibration Standard Data

Elementals are in mg/L

D0112

Screened Calibration Standard A, SME ICP FS Data

	Variance Components								Standard Deviations				CV's		
	Total	Calib	Calib %	Error	Err %	Mean	StdErr		Total	Calib	Error		Total	Calib	Error
B	0.01052	0.00946	89.9%	0.00106	10.1%	3.82684	0.00767		0.10255	0.09724	0.03256	B	2.68	2.54	0.85
Ca	0.00060	0.00038	63.0%	0.00022	37.0%	0.99042	0.00166		0.02456	0.01949	0.01493	Ca	2.48	1.97	1.51
Cr	0.00016	0.00009	56.4%	0.00007	43.8%	1.00053	0.00083		0.01245	0.00935	0.00824	Cr	1.24	0.93	0.82
Cu	0.00007	0.00005	75.2%	0.00002	24.8%	0.99498	0.00060		0.00849	0.00736	0.00423	Cu	0.85	0.74	0.43
K	0.00667	0.00526	78.8%	0.00141	21.2%	4.96513	0.00587		0.08166	0.07250	0.03758	K	1.64	1.46	0.76
Li	0.00021	0.00017	81.0%	0.00004	18.7%	1.98228	0.00105		0.01453	0.01308	0.00629	Li	0.73	0.66	0.32
Mg	0.00050	0.00033	66.4%	0.00017	33.4%	1.00458	0.00154		0.02236	0.01822	0.01292	Mg	2.23	1.81	1.29
Ni	0.00024	0.00011	44.9%	0.00013	55.1%	0.99570	0.00097		0.01536	0.01030	0.01140	Ni	1.54	1.03	1.15
Si	0.07919	0.05050	63.8%	0.02869	36.2%	19.56582	0.01923		0.28140	0.22472	0.16937	Si	1.44	1.15	0.87

D0113

Screened Calibration Standard B, SME ICP FS Data

	Variance Components								Standard Deviations				CV's		
	Total	Calib	Calib %	Error	Err %	Mean	StdErr		Total	Calib	Error		Total	Calib	Error
Al	0.00044	0.00038	86.2%	0.00006	13.9%	1.99774	0.00151		0.02086	0.01936	0.00776	Al	1.04	0.97	0.39
B	0.00165	0.00137	82.9%	0.00028	17.0%	1.98512	0.00290		0.04057	0.03695	0.01673	B	2.04	1.86	0.84
Fe	0.00696	0.00568	81.7%	0.00127	18.3%	9.94851	0.00597		0.08340	0.07539	0.03568	Fe	0.84	0.76	0.36
Mn	0.00026	0.00020	74.2%	0.00007	25.9%	1.99202	0.00113		0.01625	0.01400	0.00826	Mn	0.82	0.70	0.41
Ti	0.00032	0.00031	96.6%	0.00001	3.4%	1.00156	0.00133		0.01792	0.01761	0.00330	Ti	1.79	1.76	0.33

Table 2.3
Screened MA Calibration and Bench Standard Data
Sample Statistics, Bias and Percentage Difference

%Bias=100(Mean-Target)/Mean
PD is based on Merged data on Calibration Number
PD=100(Cal Standard – Bench Standard)/(Cal Standard)

Calibration Std A, ICP MA, Bench Std A, ICP MA

		D06					D09					PD		
	Target (ml/L)	N	Mean	Std Dev	% Bias	CV	N	Mean	Std Dev	% Bias	CV	N	Mean	Std Err
Ca	1.0	180	1.001	0.023	0.05	2.30	180	0.993	0.029	-0.68	2.92	180	0.72	0.150
Cr	1.0	180	1.005	0.013	0.47	1.24	180	1.000	0.016	0.04	1.63	180	0.42	0.088
Cu	1.0	180	1.000	0.012	-0.03	1.15	180	0.995	0.014	-0.46	1.40	180	0.43	0.064
K	5.0	180	4.963	0.081	-0.74	1.64	180	4.940	0.090	-1.20	1.82	180	0.46	0.077
Li	2.0	180	1.988	0.020	-0.61	1.03	178	1.975	0.021	-1.24	1.08	178	0.62	0.062
Mg	1.0	180	1.012	0.022	1.16	2.20	180	1.005	0.026	0.46	2.54	180	0.67	0.153
Na	32.8	180	32.879	0.496	0.24	1.51	180	32.744	0.526	-0.17	1.61	180	0.41	0.066
Ni	1.0	180	1.002	0.014	0.16	1.40	180	0.997	0.018	-0.28	1.76	180	0.43	0.103
Si	20.0	180	19.979	0.273	-0.11	1.37	180	19.921	0.372	-0.40	1.87	180	0.29	0.091

Calibration Std B, ICP MA, Bench Std B, ICP MA

		D07					D10					PD %		
	Target (ml/L)	N	Mean	Std Dev	% Bias	CV	N	Mean	Std Dev	% Bias	CV	N	Mean	Std Err
Al	2.0	181	1.994	0.022	-0.32	1.09	180	1.981	0.025	-0.95	1.24	180	0.61	0.066
Fe	10.0	180	9.999	0.142	-0.01	1.42	180	9.965	0.161	-0.35	1.62	179	0.35	0.072
Mn	2.0	180	1.990	0.019	-0.52	0.96	179	1.979	0.022	-1.03	1.12	178	0.48	0.067
Na	5.0	180	4.937	0.051	-1.26	1.03	180	4.917	0.051	-1.67	1.03	179	0.40	0.057
Ti	1.0	181	1.002	0.013	0.24	1.30	181	0.999	0.014	-0.14	1.44	181	0.38	0.066
Zr	1.0	181	0.992	0.010	-0.81	1.03	180	0.988	0.011	-1.24	1.10	180	0.43	0.063

Calibration Std C, ICP MA, Bench Std C, ICP MA

		D08					D11					PD		
	Target (ml/L)	N	Mean	Std Dev	% Bias	CV	N	Mean	Std Dev	% Bias	CV	N	Mean	Std Err
U	10.0	175	9.984	0.109	-0.16	1.09	172	9.904	0.150	-0.96	1.51	172	0.78	0.092

Table 2.4
Screened FS Calibration and Bench Standard Data
Sample Statistics, Bias and Percentage Difference

%Bias=100(Mean-Target)/Mean
PD is based on Merged data on Calibration Number
PD=100(Cal Standard – Bench Standard)/(Cal Standard)

Calibration Std A, ICP FS, Bench Std A, ICP FS

		D12				D14				PD		
	Target (ml/L)	N	Mean	Std Dev	% Bias	CV	N	Mean	Std Dev	% Bias	CV	N	Mean	Std Err
B	4.0	182	3.830	0.104	-4.26	2.72	179	3.822	0.112	-4.46	2.93	179	0.12	0.077
Ca	1.0	182	0.990	0.021	-0.98	2.14	182	0.994	0.025	-0.63	2.51	182	-0.36	0.140
Cr	1.0	182	1.000	0.011	0.04	1.06	182	1.001	0.014	0.11	1.39	182	-0.08	0.081
Cu	1.0	182	0.995	0.008	-0.51	0.79	182	0.994	0.009	-0.59	0.92	182	0.07	0.046
K	5.0	182	4.964	0.077	-0.72	1.55	182	4.964	0.087	-0.72	1.76	182	0.00	0.062
Li	2.0	182	1.982	0.014	-0.90	0.69	182	1.974	0.017	-1.28	0.85	182	0.38	0.043
Mg	1.0	182	1.005	0.020	0.51	1.96	182	1.006	0.021	0.59	2.13	182	-0.09	0.131
Ni	1.0	182	0.996	0.013	-0.44	1.30	182	0.995	0.015	-0.46	1.55	182	0.01	0.103
Si	20.0	182	19.564	0.251	-2.18	1.28	182	19.727	0.278	-1.37	1.41	182	-0.84	0.079

Calibration Std B, ICP FS, Bench Std B, ICP FS

		D13				D15				PD		
	Target (ml/L)	N	Mean	Std Dev	% Bias	CV	N	Mean	Std Dev	% Bias	CV	N	Mean	Std Err
Al	2.0	182	1.998	0.020	-0.12	1.01	183	1.992	0.024	-0.39	1.20	182	0.27	0.060
B	2.0	182	1.985	0.039	-0.75	1.95	183	1.978	0.044	-1.11	2.23	182	0.35	0.094
Fe	10.0	180	9.948	0.079	-0.53	0.80	182	9.941	0.109	-0.59	1.10	180	0.04	0.062
Mn	2.0	182	1.992	0.016	-0.42	0.78	181	1.989	0.020	-0.54	1.00	180	0.12	0.057
Ti	1.0	182	1.002	0.018	0.16	1.79	183	1.001	0.019	0.05	1.90	182	0.11	0.054

Table 3

Difference between ARG-1 MA and FS Analyses

MA and FS ARG-1 Merged on Batch Number

lo95: Lower 95% Confidence Limit on the Mean
up95: Lower 95% Confidence Limit on the Mean
% lo95: Lower Relative 95% Confidence Limit on the Mean
% up95: Lower Relative 95% Confidence Limit on the Mean

Elementals are in wt%

	ARG-1 MA	ARG-1 FS	Mean	Diff	lo95	up95	% Diff	% lo95	%up95
Al	2.4303	2.4417	2.4360	-0.0114	-0.0232	0.0055	-0.5	-1.2	0.2
Ca	1.0484	0.9646	1.0065	0.0839	0.0727	0.0950	8.3	7.2	9.4
Cr	0.0737	0.0802	0.0769	-0.0065	-0.0089	-0.0041	-8.5	-11.6	-5.3
Cu	0.0065	0.0094	0.0079	-0.0029	-0.0038	-0.0020			
Fe	9.7832	9.5162	9.6497	0.2670	0.1976	0.3364	2.8	2.0	3.5
K	2.3114	2.2114	2.2614	0.1000	0.0795	0.1205	4.4	3.5	5.3
Li	1.4932	1.4488	1.4710	0.0444	0.0349	0.0540	3.0	2.4	3.7
Mg	0.5274	0.5086	0.5180	0.0189	0.0146	0.0231	3.6	2.8	4.5
Mn	1.4529	1.4079	1.4304	0.0450	0.0346	0.0554	3.1	2.4	3.9
Ni	0.8495	0.8149	0.8322	0.0346	0.0289	0.0403	4.2	3.5	4.8
Si	21.3905	22.6795	22.0350	-1.2891	-1.4818	-1.0964	-5.9	-6.7	-5.0
Ti	0.7108	0.6750	0.6929	0.0358	0.0307	0.0410	5.2	4.4	5.9
Oxsum	97.2280	98.9251	98.0825	-1.7350	-2.3442	-1.1257	-1.8	-2.4	-1.1
FeLi	6.5480	6.5803	6.5641	-0.0324	-0.0573	-0.0075	-0.5	-0.9	-0.1

Table 4
Upper Detection Limits Based on Screened Calibration and Bench Standard Data

Screened Standard Data
Upper Detection Limits : $\bar{X}+3s$

ID	Al(mg/L)	B(mg/L)	Ca(mg/L)	Cr(mg/L)	Cu(mg/L)	Fe(mg/L)	K(mg/L)	Li(mg/L)	Mg(mg/L)	Mn(mg/L)	Na(mg/L)	Ni(mg/L)	Si(mg/L)	Ti(mg/L)	U(mg/L)	Zr(mg/L)
D0106	0.0354					0.0299				0.0026				0.0072	0.4046	0.0070
D0107			0.0695	0.0119	0.0095		0.1392	0.0046	0.0068			0.0292	0.3016		0.4183	
D0108	0.0977		0.3808	0.0530	0.0329	0.0410	0.1332	0.0042	0.0204	0.0212	0.1281	0.0234	0.5053	0.0055		0.0105
D0109	0.0382					0.0352				0.0017				0.0075	0.4226	0.0073
D0110			0.0826	0.0130	0.0113		0.1488	0.0051	0.0074			0.0309	0.4483		0.4632	
D0111	0.1013		0.3834	0.0516	0.0349	0.0428	0.1553	0.0040	0.0192	0.0209	0.1163	0.0226	1.0539	0.0052		0.0099
D0112	0.0377					0.0325				0.0014				0.0055		
D0113			0.0565	0.0139	0.0082		0.1424	0.0037	0.0059			0.0328	0.0855			
D0114	0.0450					0.0347				0.0031				0.0059		
D0115			0.0773	0.0154	0.0109		0.1626	0.0045	0.0069			0.0331	0.0799			

ID:

D0106: Screened Calibration Standard A, SME ICP MA Data
D0107: Screened Calibration Standard B, SME ICP MA Data
D0108: Screened Calibration Standard C, SME ICP MA Data
D0109: Screened Bench Standard A, SME ICP MA Data
D0110: Screened Bench Standard B, SME ICP MA Data
D0111: Screened Bench Standard C, SME ICP MA Data
D0112: Screened Calibration Standard A, SME ICP FS Data
D0113: Screened Calibration Standard B, SME ICP FS Data
D0114: Screened Bench Standard A, SME ICP FS Data
D0115: Screened Bench Standard B, SME ICP FS Data

Table 5.1
Statistically Screened ARG-1 Data Comparisons

Screened MA vs Screened FS Data

CV: Coefficient of Variation from Current Data Set
CV(*): Coefficient of Variation from SRT-ASG-95-0081 dated March 11, 1996

Elementals are in wt%

	Screened ARG-1, SME MA Data						Screened ARG-1, SME FS Data					
	Corning	N	Mean	Std Dev	CV	CV(*)		N	Mean	Std Dev	CV	CV(*)
Al	2.5	359	2.430	0.068	2.8	2.9	Al	372	2.444	0.126	5.2	2.9
B	2.69						B	380	2.619	0.136	5.2	3.7
Ca	1.02	370	1.049	0.050	4.8	4.4	Ca	386	0.964	0.085	8.9	6.3
Cr	0.06	359	0.074	0.008			Cr	374	0.079	0.013		
Cu	0	370	0.007	0.004			Cu	376	0.009	0.005		
Fe	9.79	362	9.784	0.259	2.6	2.8	Fe	381	9.522	0.483	5.1	2.6
K	2.25	373	2.310	0.095	4.1	3.7	K	382	2.215	0.133	6.0	3.4
Li	1.49	359	1.494	0.033	2.2	2.6	Li	375	1.449	0.066	4.5	2.7
Mg	0.52	367	0.529	0.022	4.1	3.2	Mg	383	0.510	0.034	6.6	3.0
Mn	1.46	357	1.453	0.034	2.3	2.8	Mn	375	1.410	0.071	5.0	2.7
Na	8.53	359	8.511	0.208	2.4	2.9	Na					
Ni	0.83	367	0.851	0.033	3.9	3.4	Ni	381	0.815	0.045	5.5	3.2
Si	22.4	362	21.404	0.793	3.7	4.2	Si	377	22.689	1.194	5.3	2.9
Ti	0.69	365	0.710	0.023	3.2	2.9	Ti	378	0.675	0.034	5.1	2.7
U		378	0.226	0.159			U					
Zr	0.1	348	0.103	0.006			Zr					

Table 5.2
DWPF Passed ARG-1 Data Comparisons

CV: Coefficient of Variation from Current Data Set
CV(*): Coefficient of Variation from SRT-ASG-95-0081 dated March 11, 1996

Elementals are in wt%

	DWPF Passed ARG-1, SME MA Data N=387						DWPF Passed ARG-1, SME FS Data N=391					
	Corning	N	Mean	Std Dev	CV	CV(*)		N	Mean	Std Dev	CV	CV(*)
Al	2.5	330	2.428	0.092	3.8	2.9	Al	327	2.456	0.139	5.7	2.9
B	2.69						B	327	2.624	0.118	4.5	3.7
Ca	1.02	330	1.053	0.078	7.4	4.4	Ca	327	0.967	0.079	8.2	6.8
Cr	0.06	330	0.076	0.014			Cr	327	0.082	0.022		
Cu	0	330	0.007	0.009			Cu	327	0.010	0.008		
Fe	9.79	330	9.765	0.286	2.9	2.8	Fe	327	9.539	0.420	4.4	2.6
K	2.25	330	2.315	0.091	3.9	3.7	K	327	2.222	0.114	5.1	3.4
Li	1.49	330	1.494	0.044	2.9	2.6	Li	327	1.450	0.063	4.4	2.7
Mg	0.52	330	0.529	0.026	4.8	3.2	Mg	327	0.512	0.029	5.7	3.0
Mn	1.46	330	1.455	0.066	4.5	2.8	Mn	327	1.410	0.064	4.5	2.7
Na	8.53	330	8.501	0.240	2.8	2.9	Na					
Ni	0.83	330	0.852	0.034	4.0	3.4	Ni	327	0.816	0.038	4.7	3.2
Si	22.4	330	21.403	0.849	4.0	4.2	Si	327	22.725	1.142	5.0	2.9
Ti	0.69	330	0.710	0.026	3.6	2.9	Ti	327	0.677	0.032	4.7	2.7
U		330	0.239	0.213			U					
Zr	0.1	330	0.101	0.014			Zr					

Table 6
Screened Percentages Using Tukey's Outer Fence Method

	Unscreened Data		Screened Data				
ID	Total		Min	Max		% Screened	
	N		N	N		Min	Max
D0102	387		348	378		2.3%	10.1%
D0103	391		357	386		1.3%	8.7%
D0104	391		372	386		1.3%	4.9%
D0105	386		354	383		0.8%	8.3%
D0106	386		368	380		1.6%	4.7%
D0107	380		360	380		0.0%	5.3%
D0108	366		336	364		0.5%	8.2%
D0109	214		171	213		0.5%	20.1%
D0110	198		184	198		0.0%	7.1%
D0111	189		175	188		0.5%	7.4%
D0112	398		315	390		2.0%	20.9%
D0113	380		358	380		0.0%	5.8%
D0114	211		207	209		0.9%	1.9%
D0115	201		184	200		0.5%	8.5%

ID:
D0102: ARG-1, SME MA Data
D0103: Blanks, SME MA Data
D0104: ARG-1, SME FS Data
D0105: Blanks, SME MA Data
D0106: Calibration Standard A, SME ICP MA Data
D0107: Calibration Standard B, SME ICP MA Data
D0108: Calibration Standard C, SME ICP MA Data
D0109: Bench Standard A, SME ICP MA Data
D0110: Bench Standard B, SME ICP MA Data
D0111: Bench Standard C, SME ICP MA Data
D0112: Calibration Standard A, SME ICP FS Data
D0113: Calibration Standard B, SME ICP FS Data
D0114: Bench Standard A, SME ICP FS Data
D0115: Bench Standard B, SME ICP FS Data

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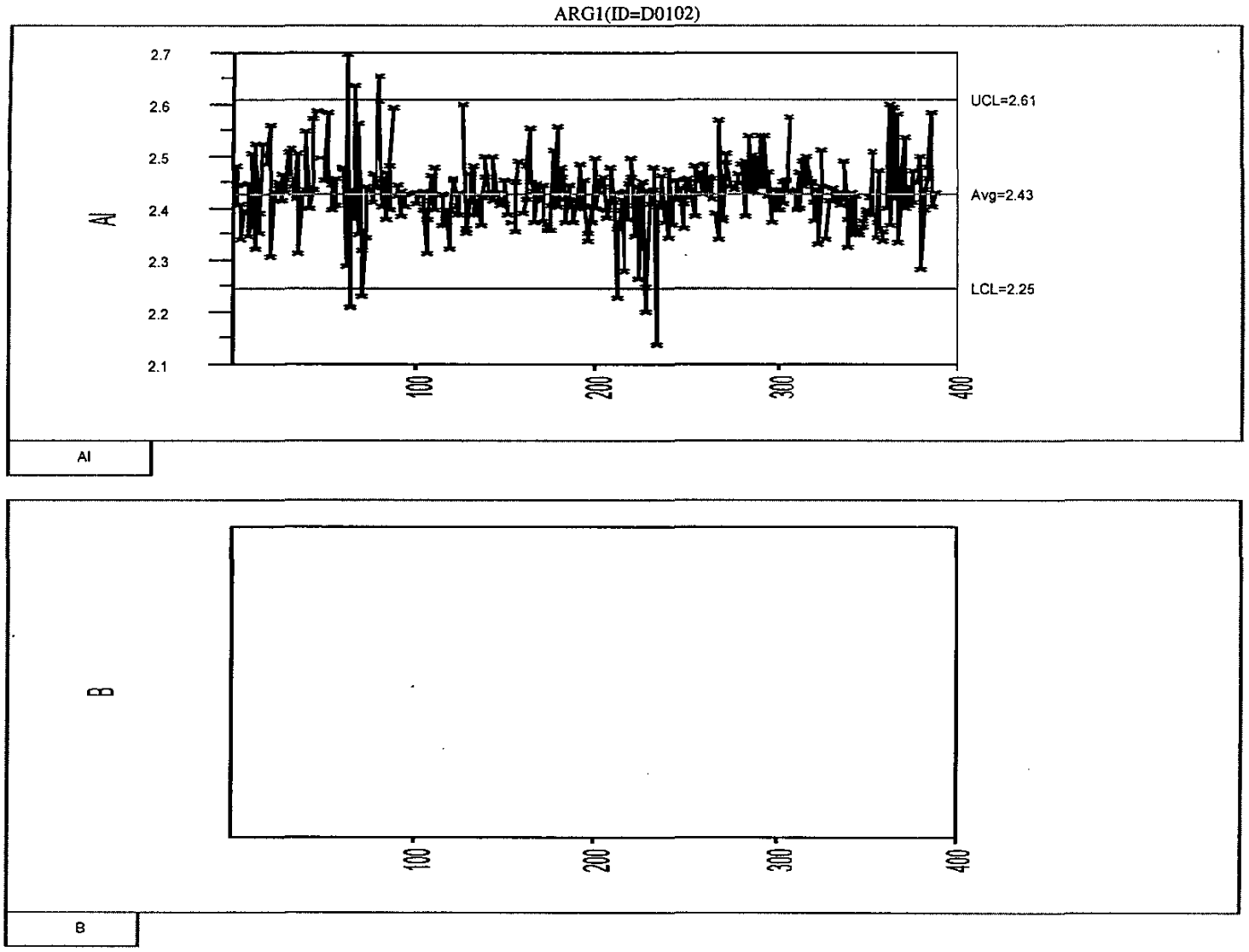
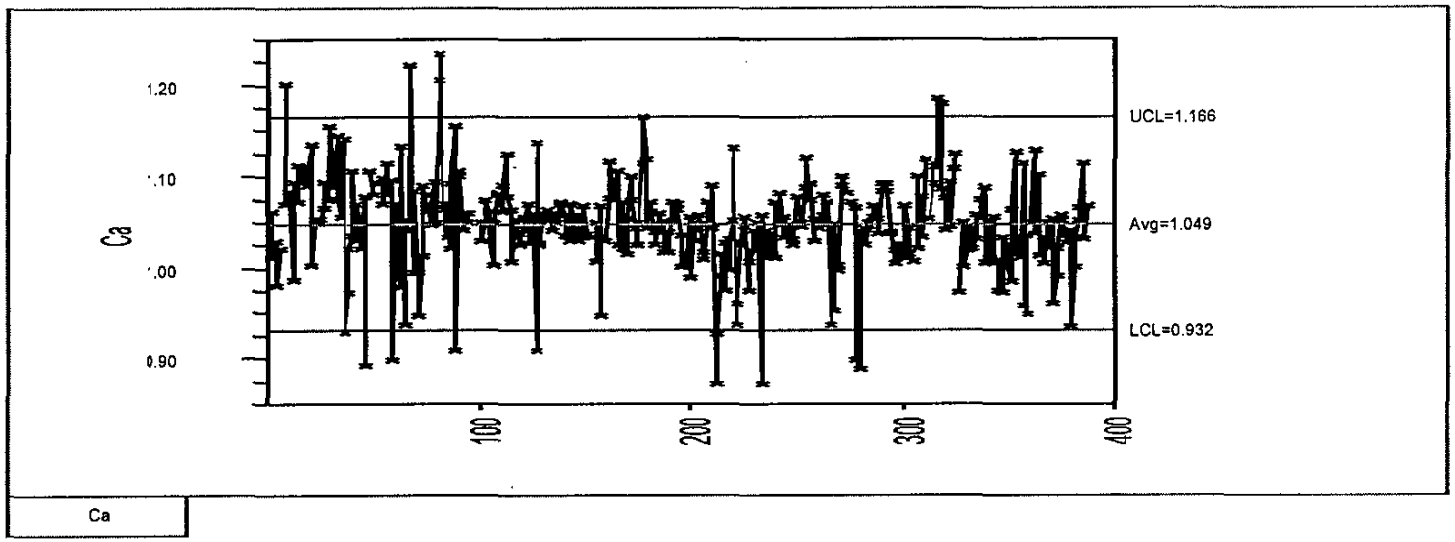
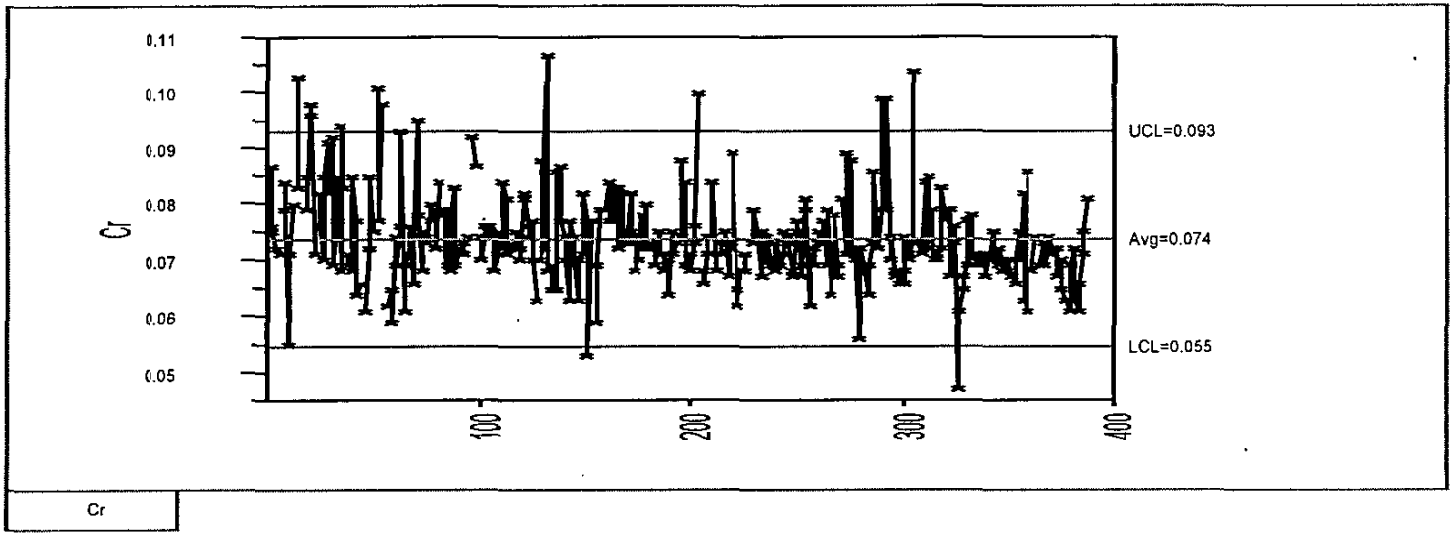
Plot A.1
SCREENED ARG-1, SME MA Data
Shewhart Time Sequence Plots

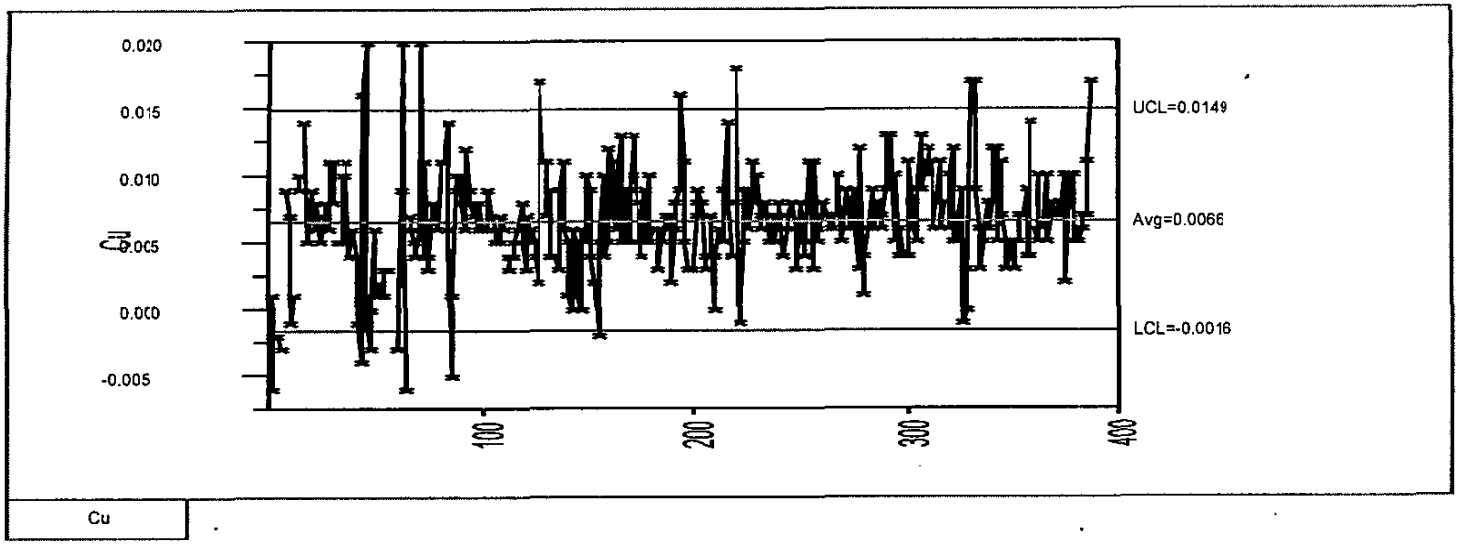


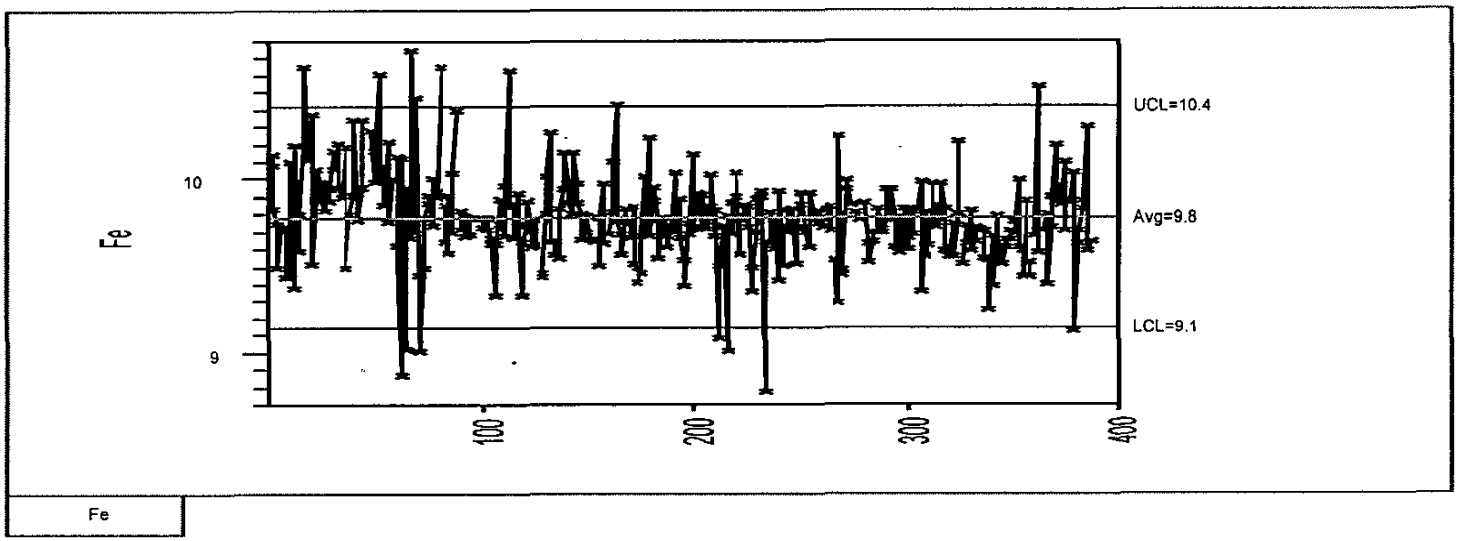
Plot A.1
SCREENED ARG-1, SME MA Data
Shewhart Time Sequence Plots



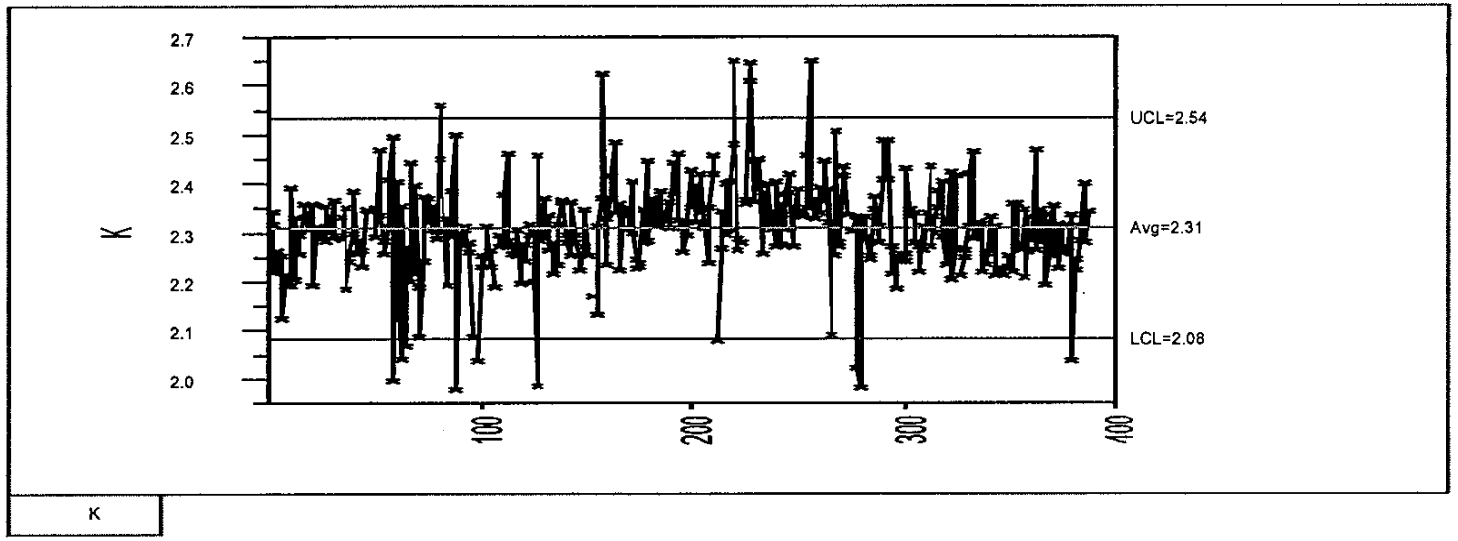


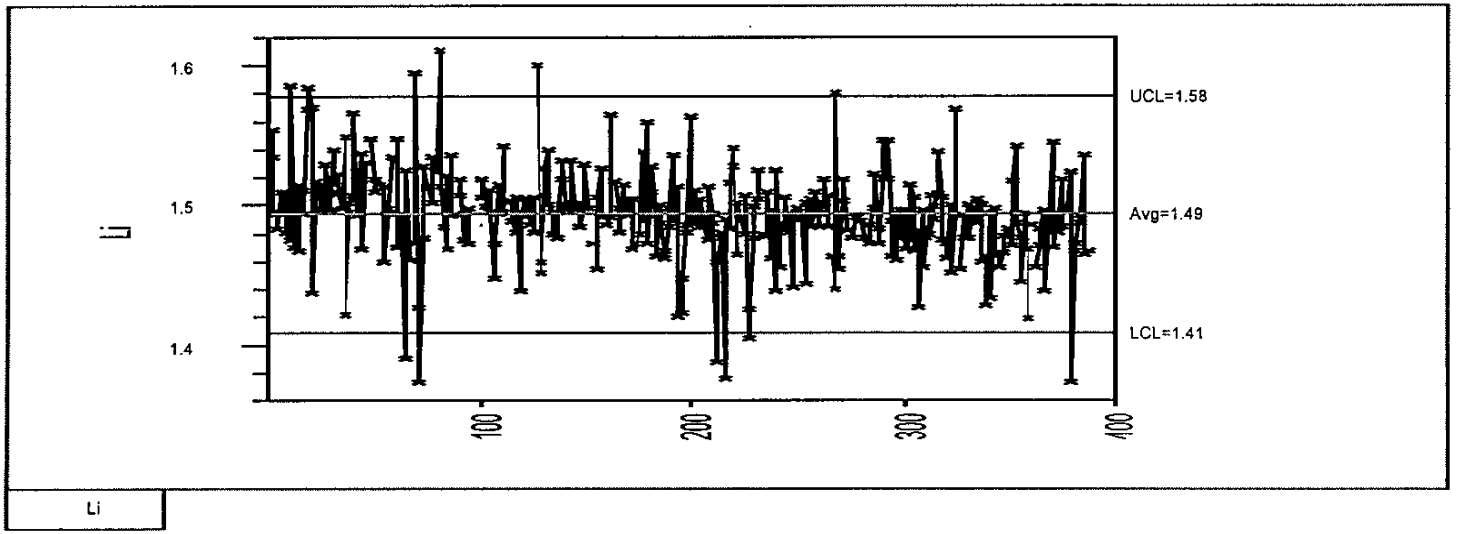
Plot A.1
SCREENED ARG-1, SME MA Data
Shewhart Time Sequence Plot





Plot A.1
SCREENED ARG-1, SME MA Data
Shewhart Time Sequence Plots





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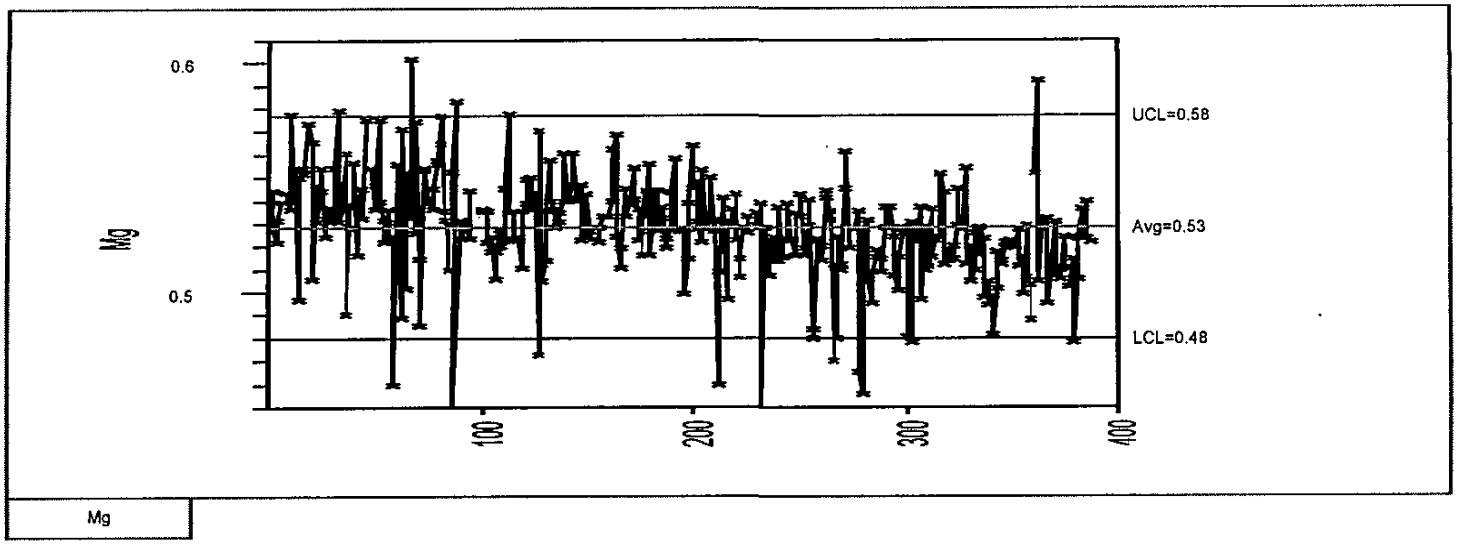
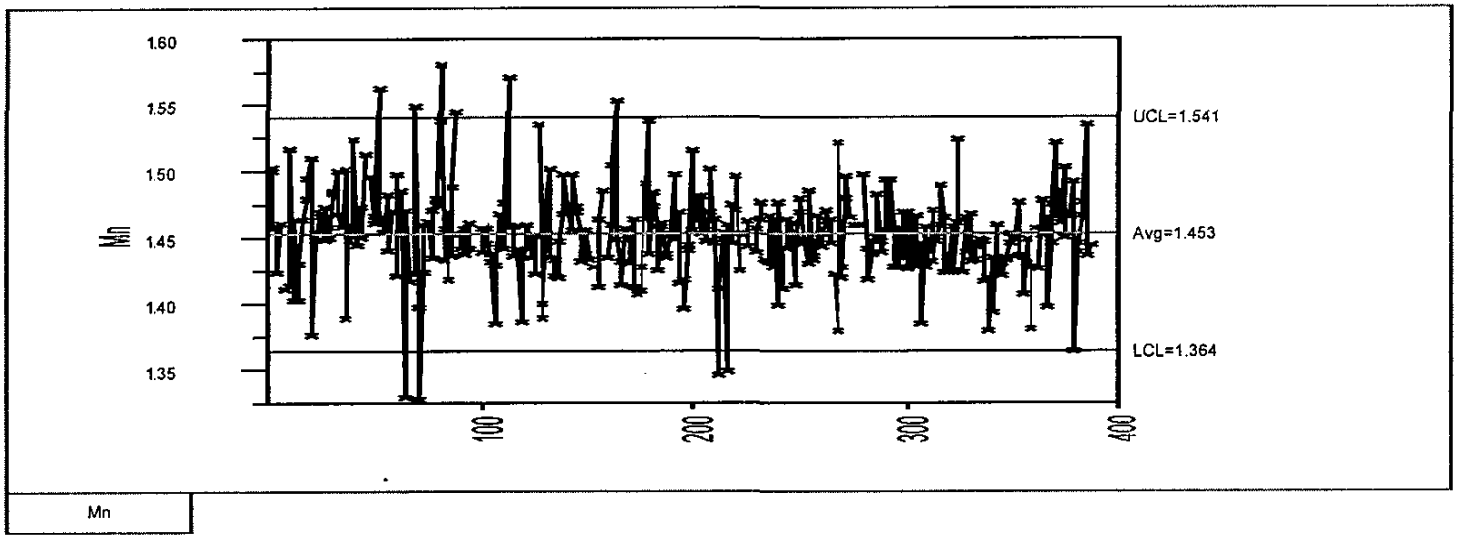
SCREENED ARG-1, SME MA Data
Shewhart Time Sequence Plots





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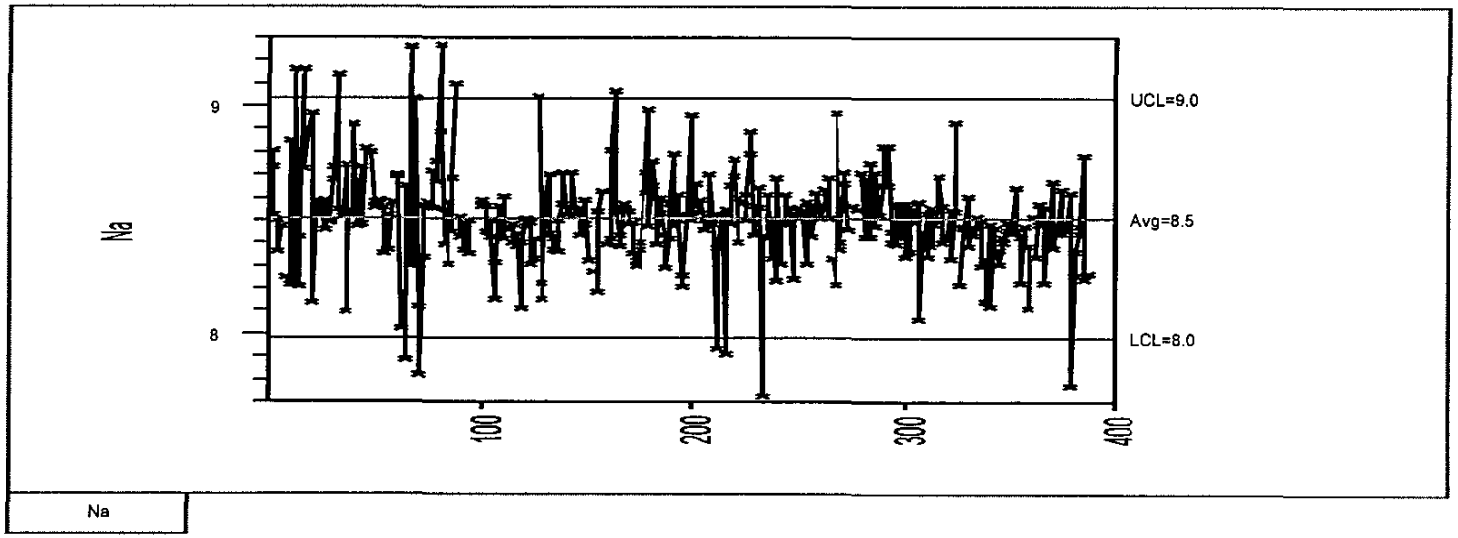
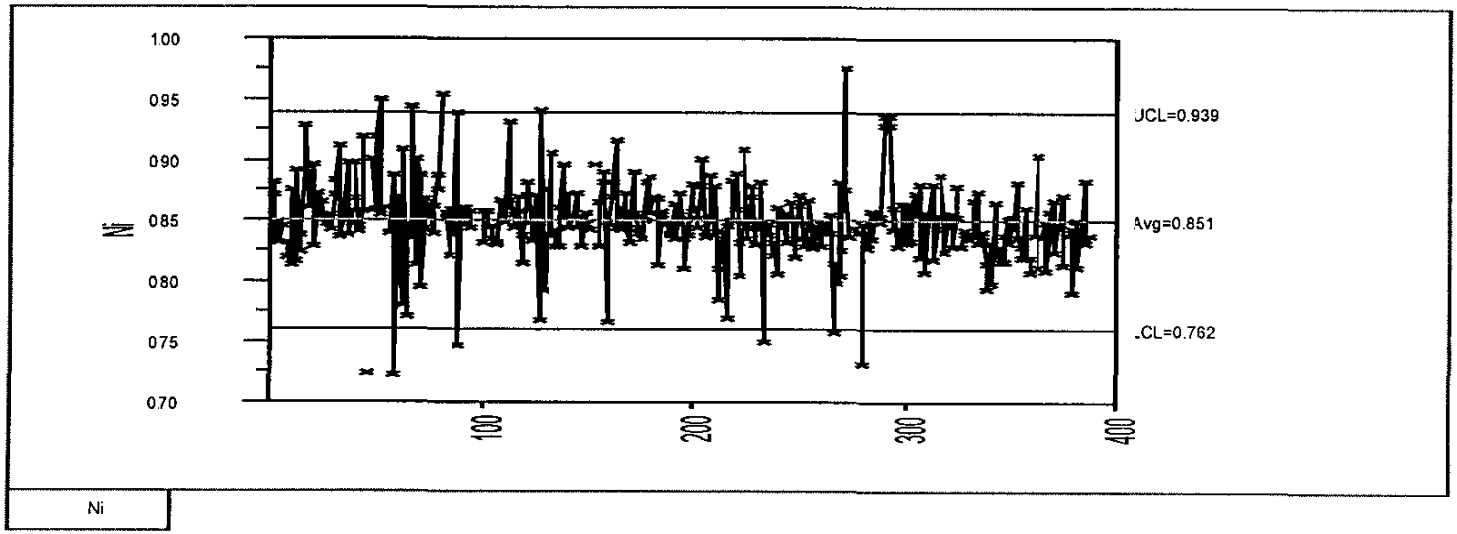
SCREENED ARG-1, SME MA Data
Shewhart Time Sequence Plots





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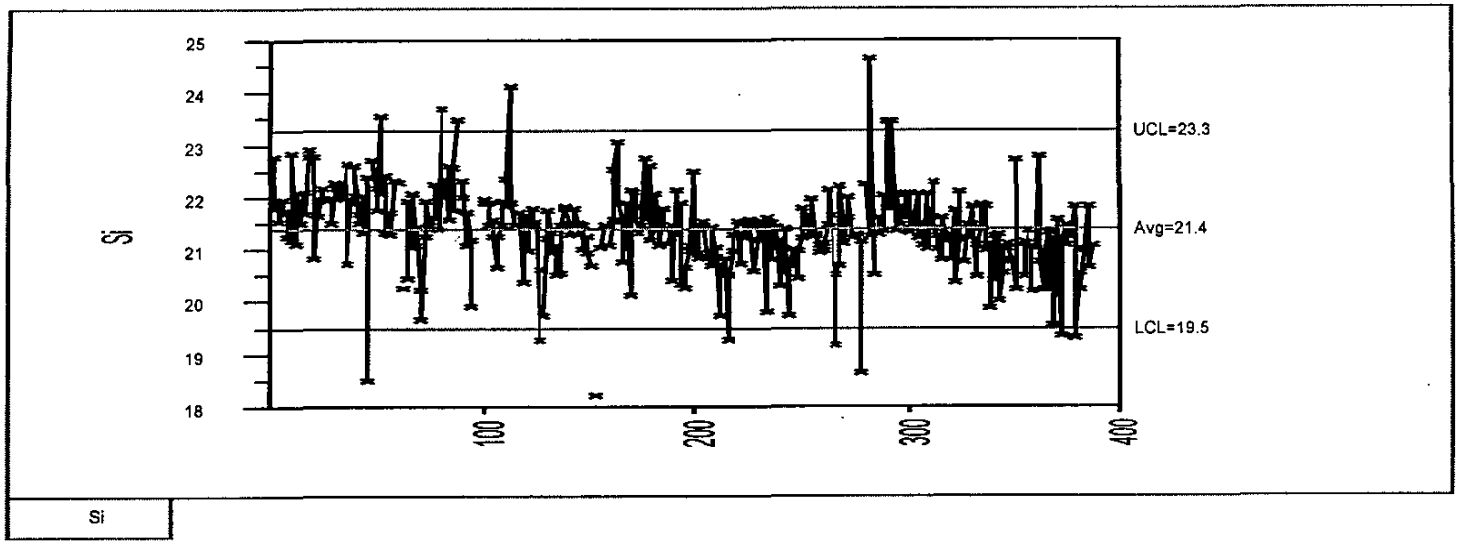
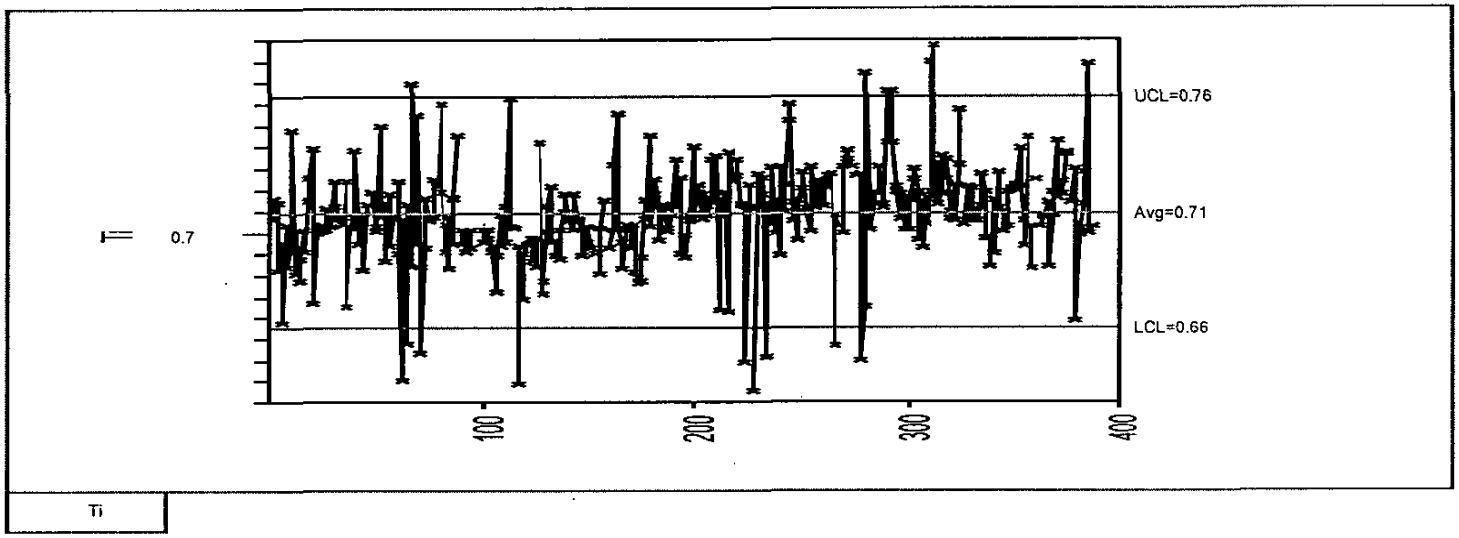
SCREENED ARG-1, SME MA Data
Shewhart Time Sequence Plots





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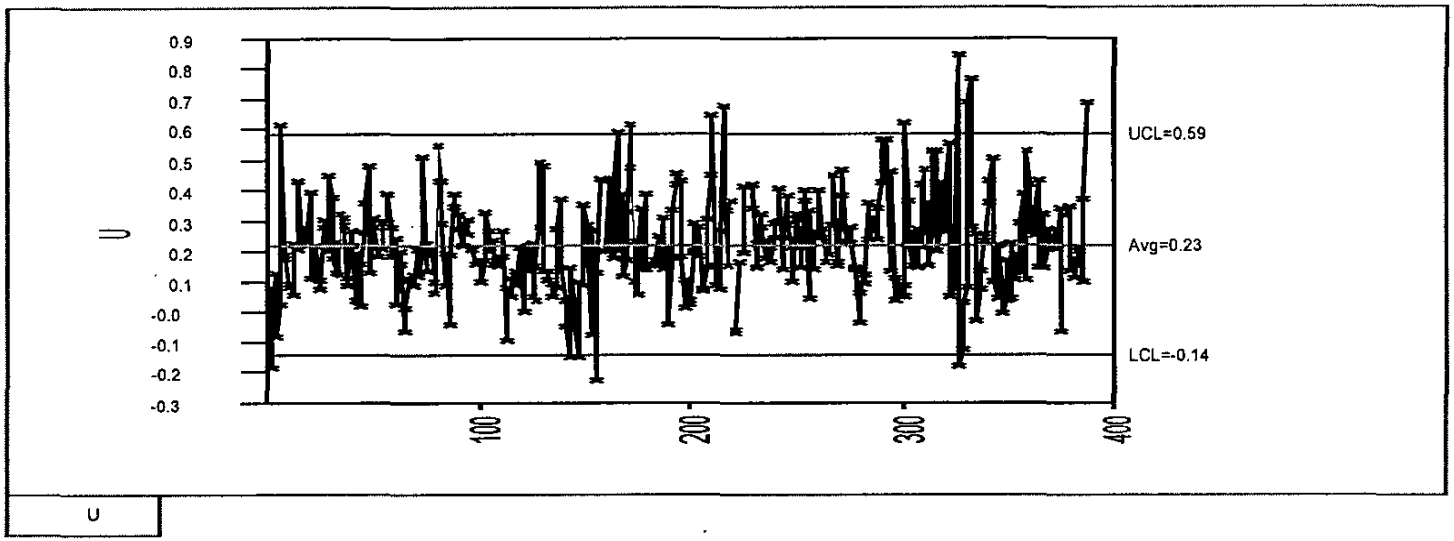
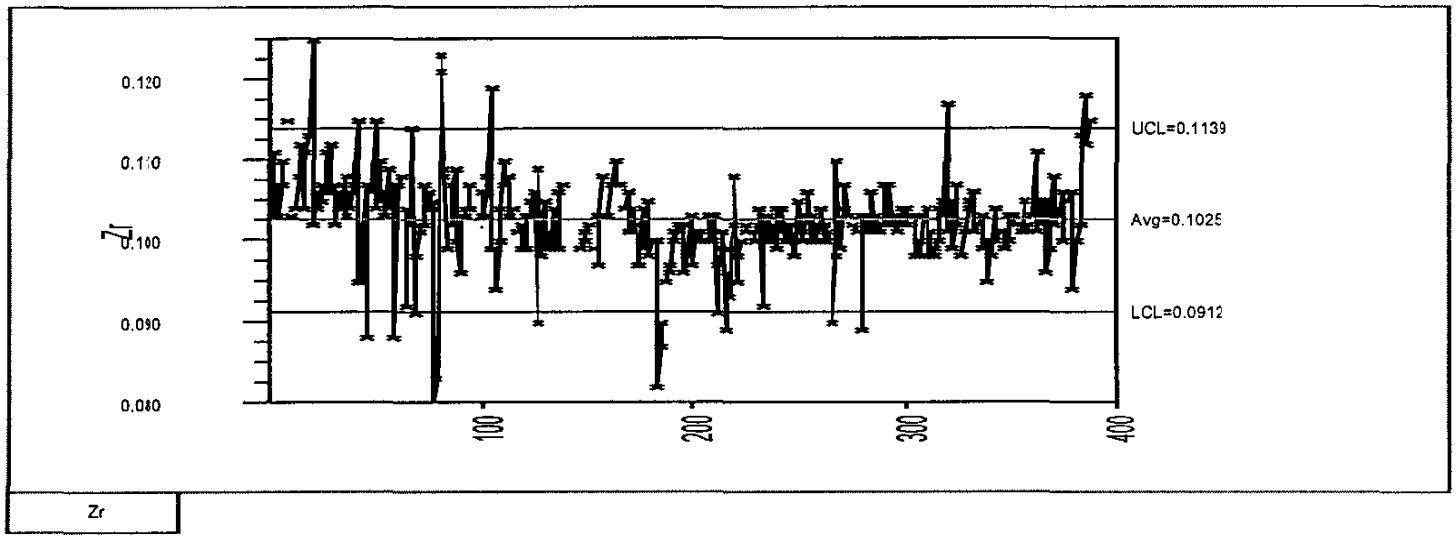
SCREENED ARG-1, SME MA Data
Shewhart Time Sequence Plots





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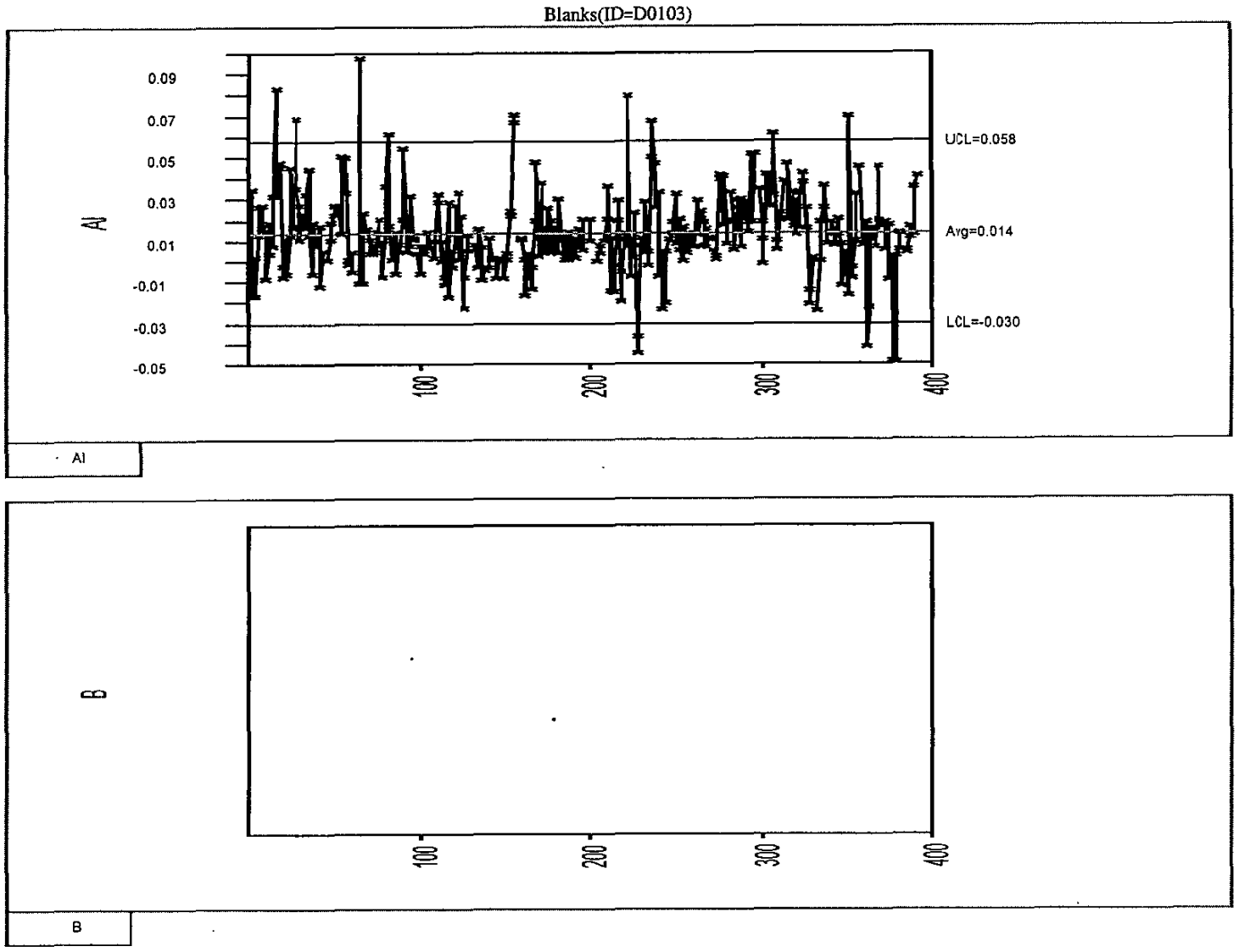

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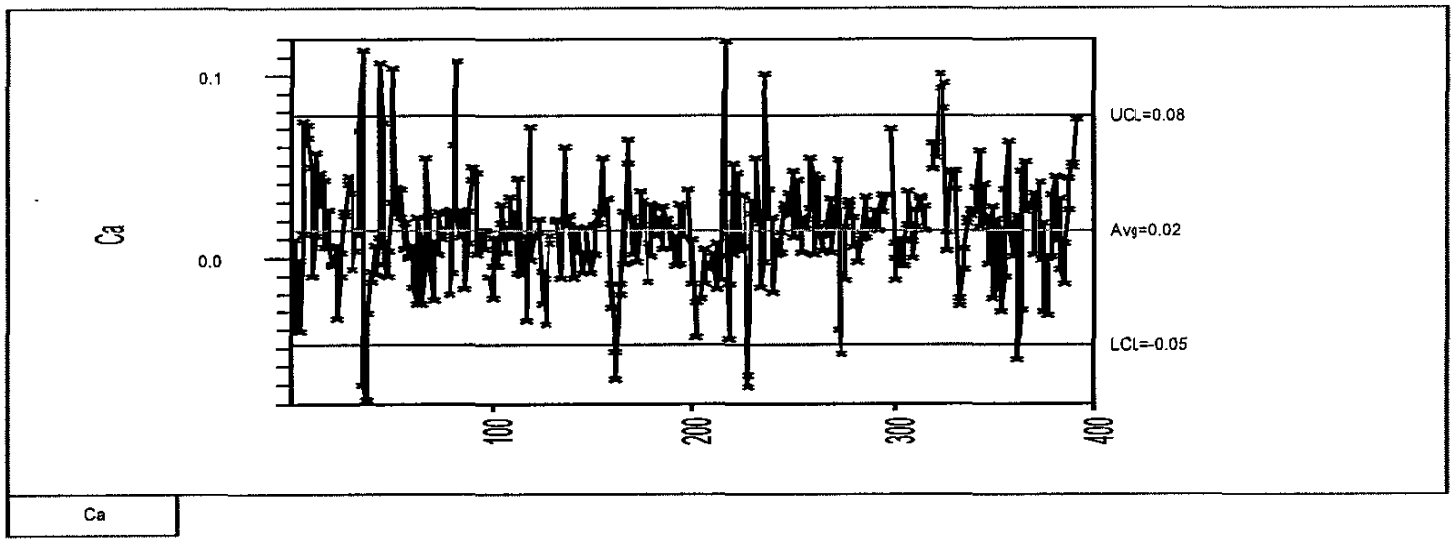

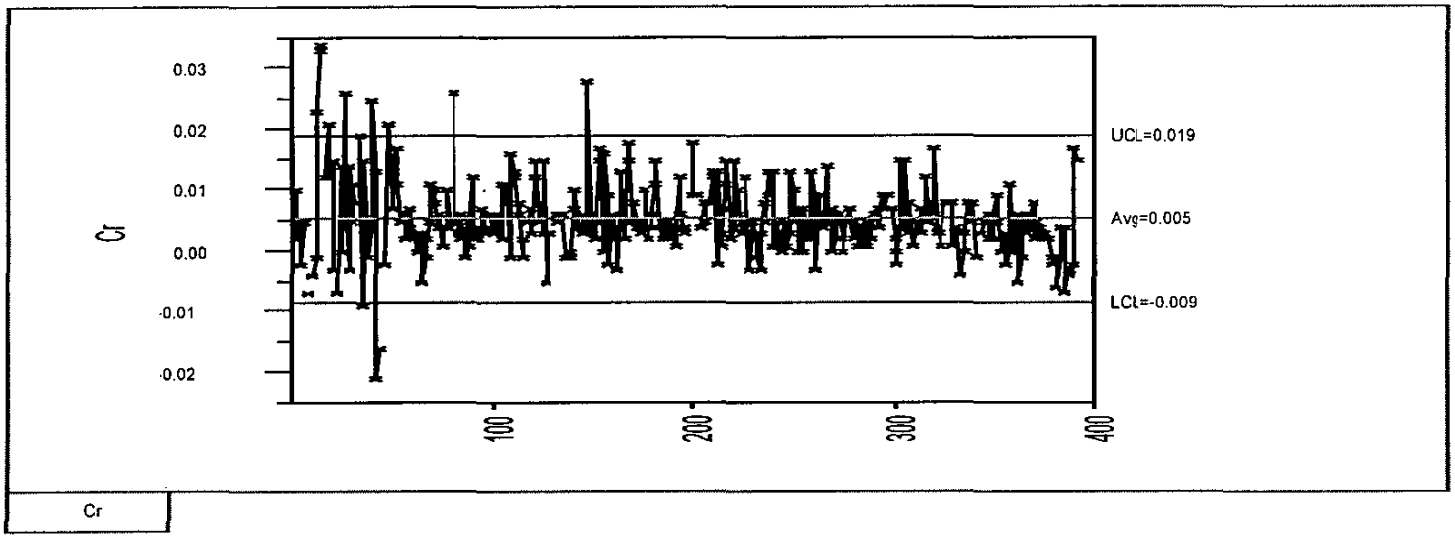

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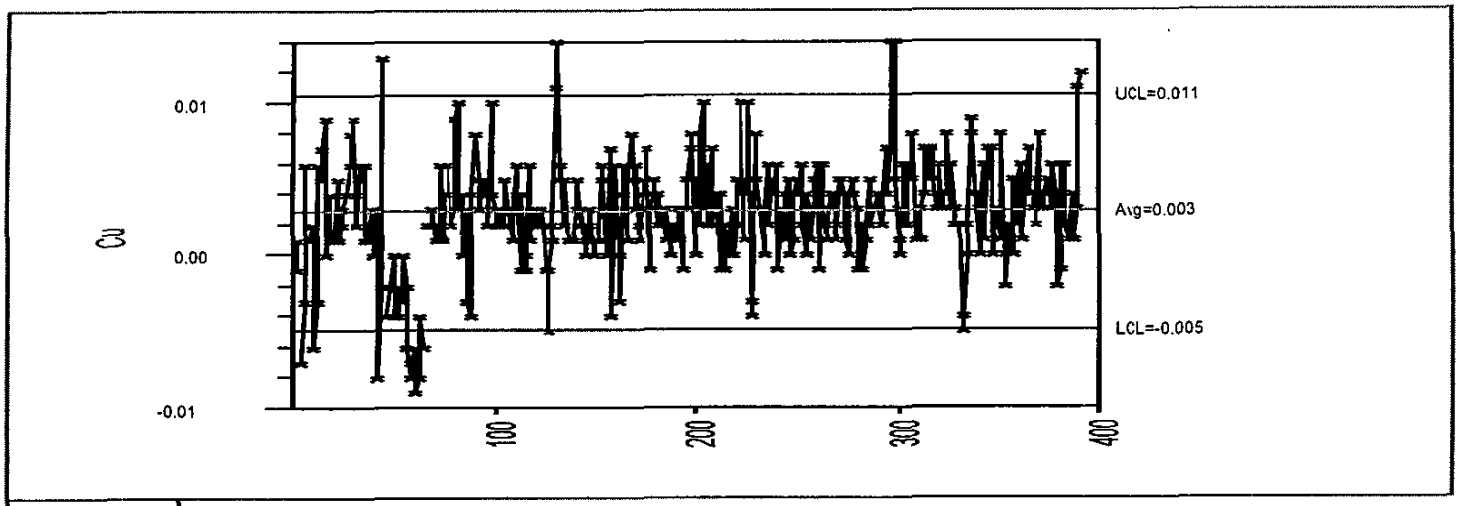

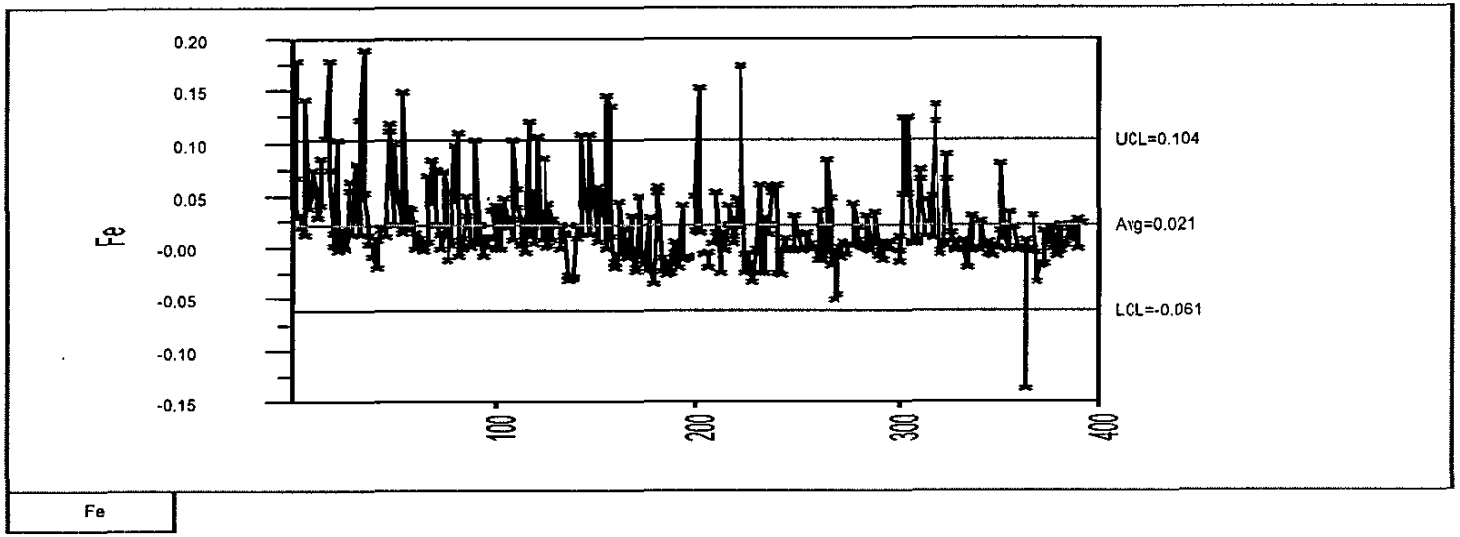

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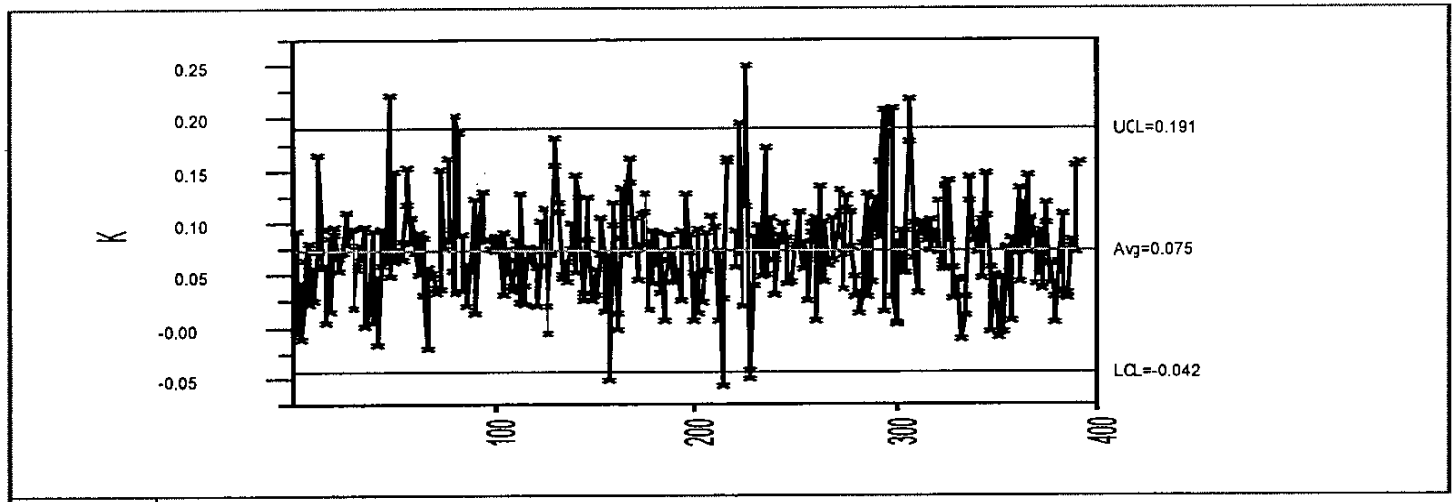
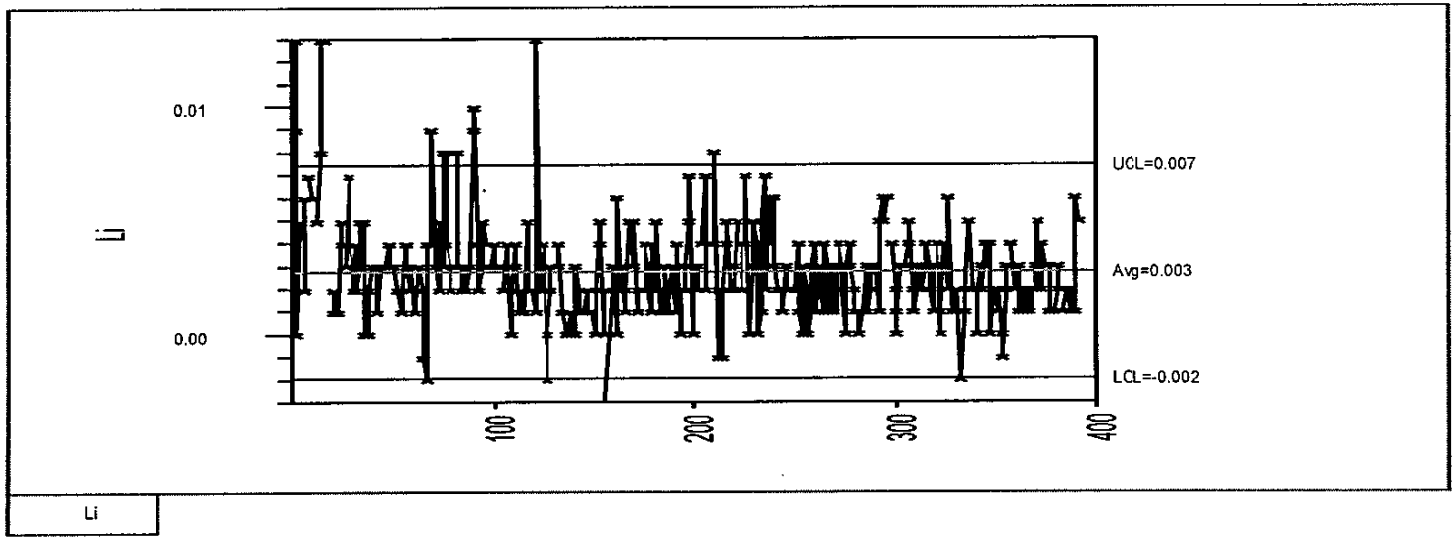
Shewhart Time Sequence Plots





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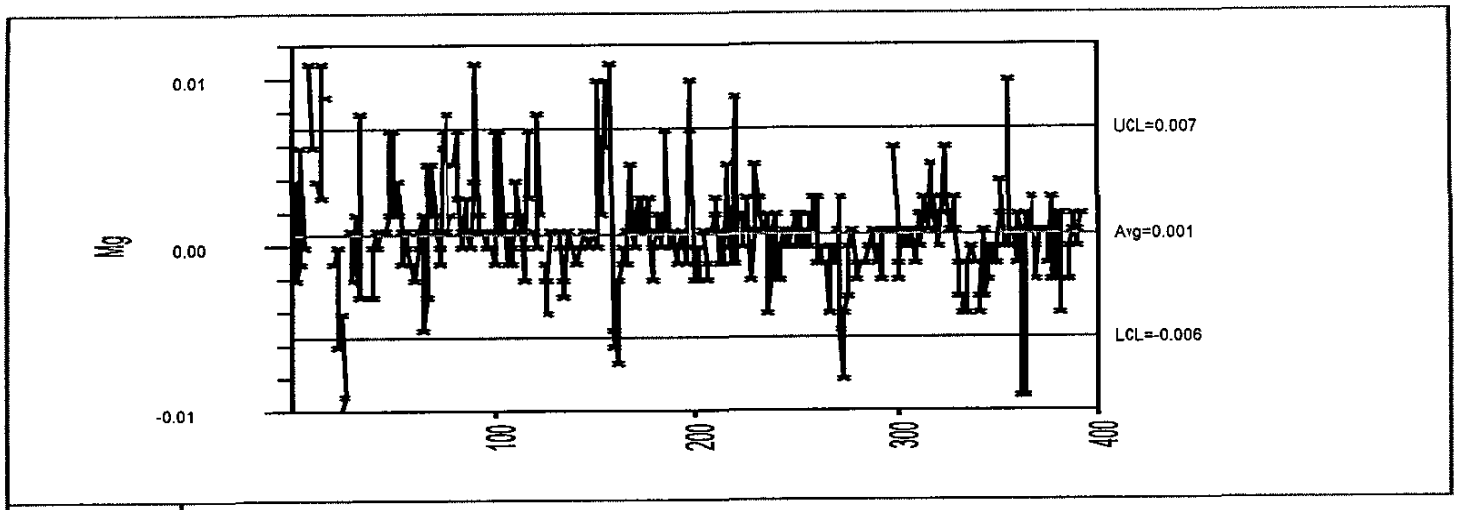
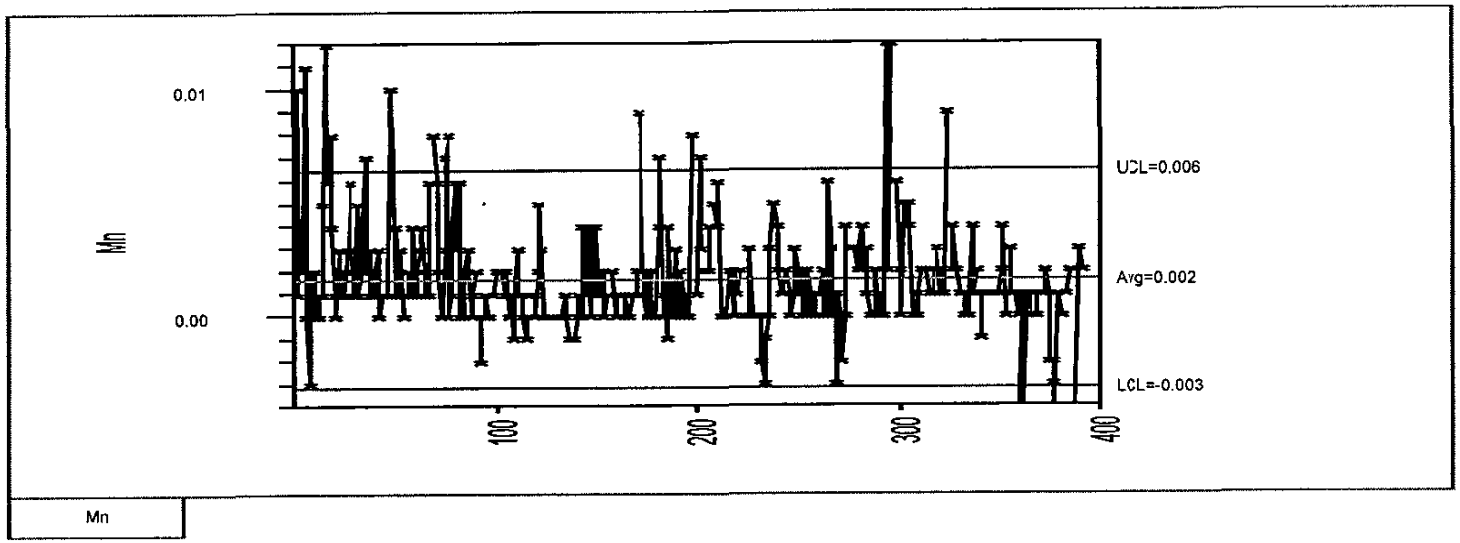
Shewhart Time Sequence Plots





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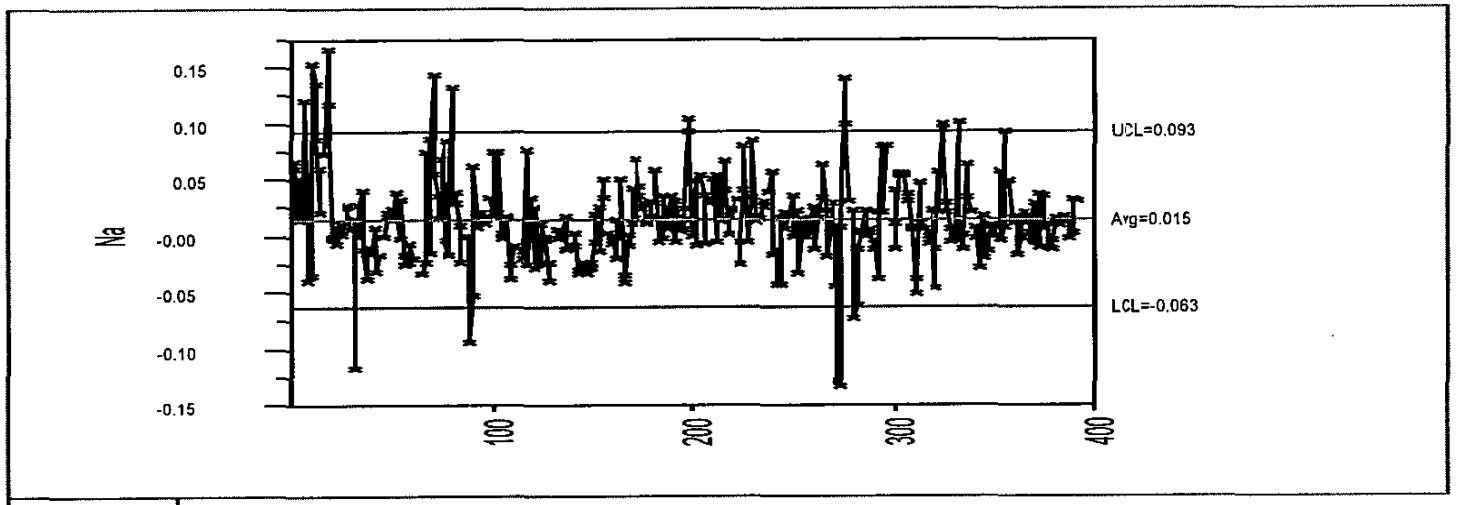
Shewhart Time Sequence Plots



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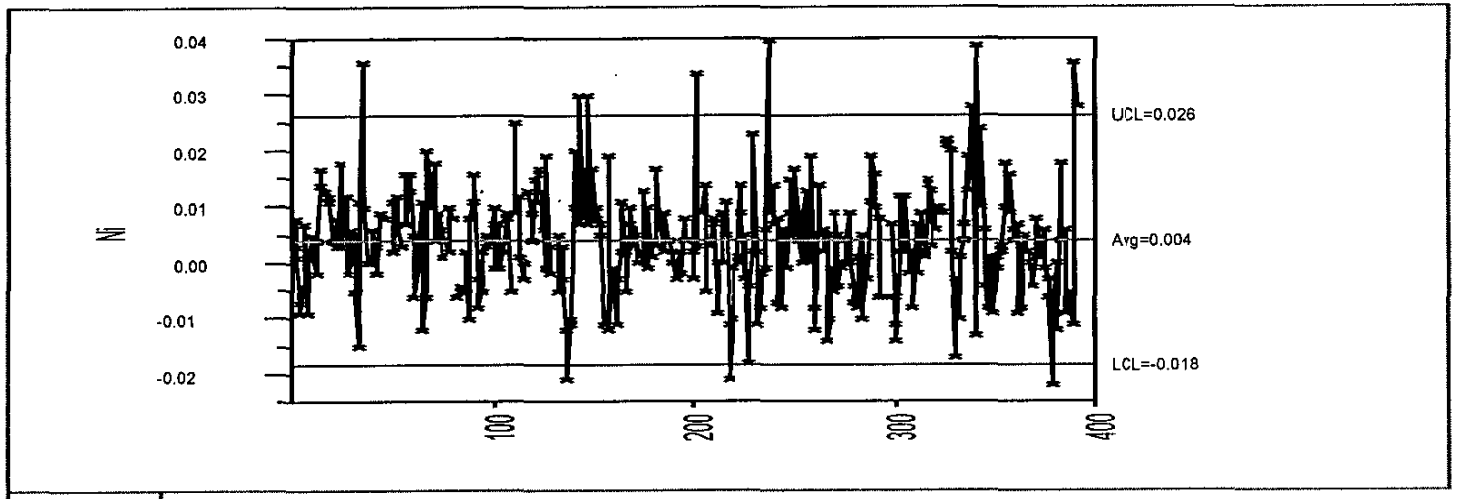

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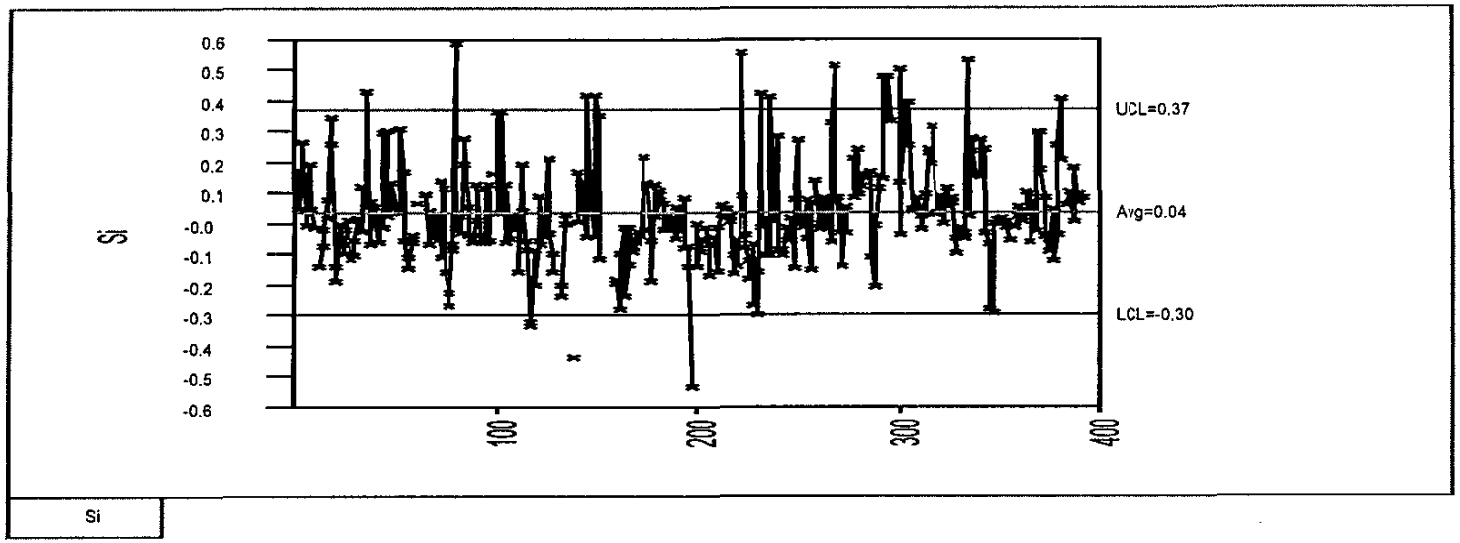
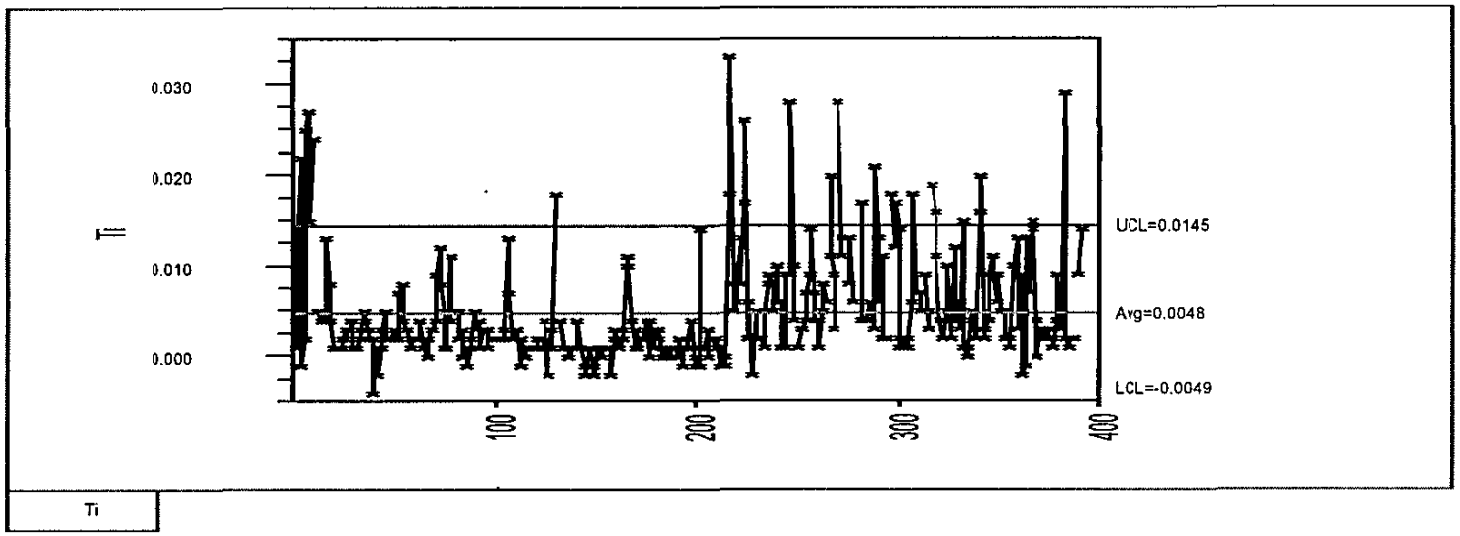
Shewhart Time Sequence Plots





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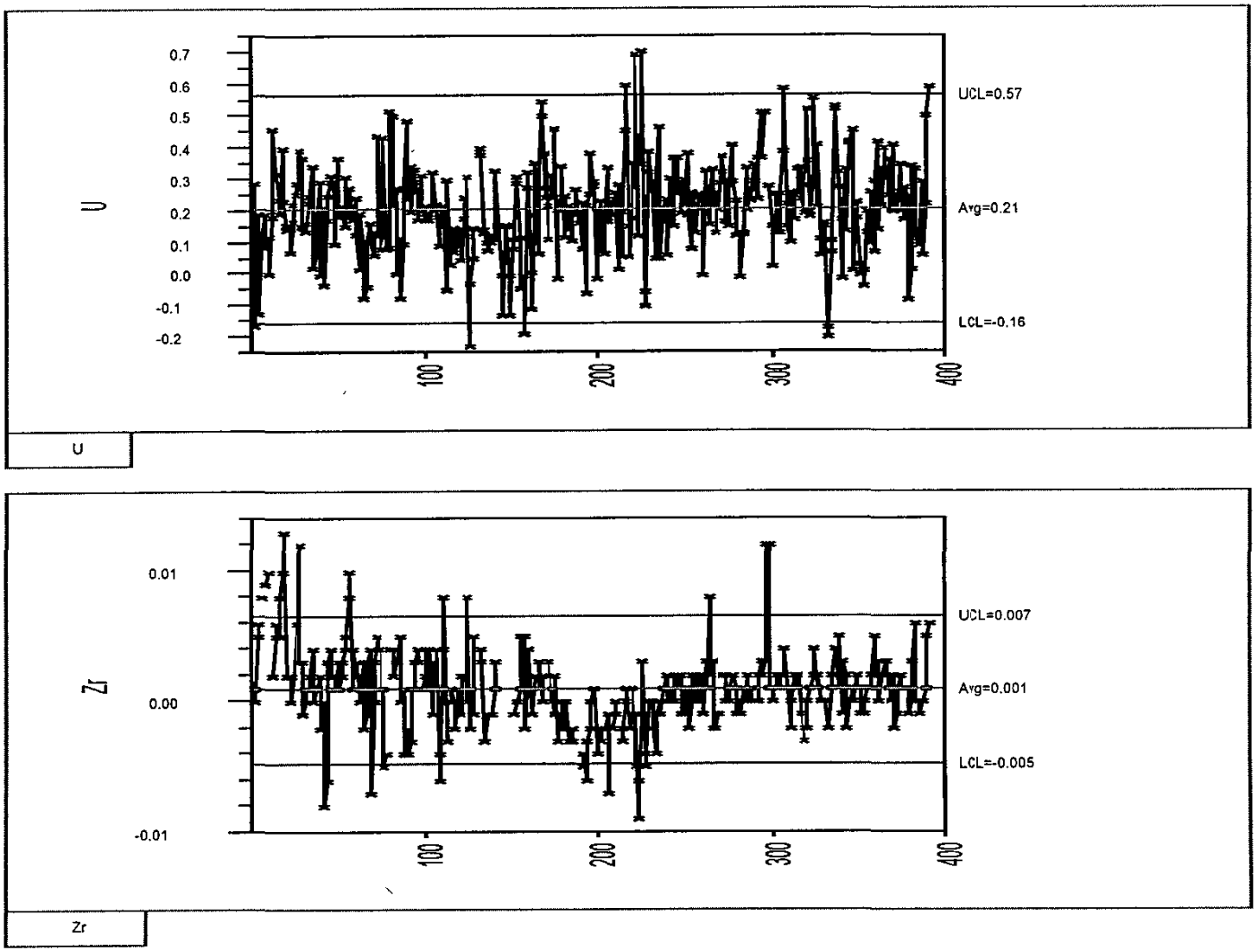
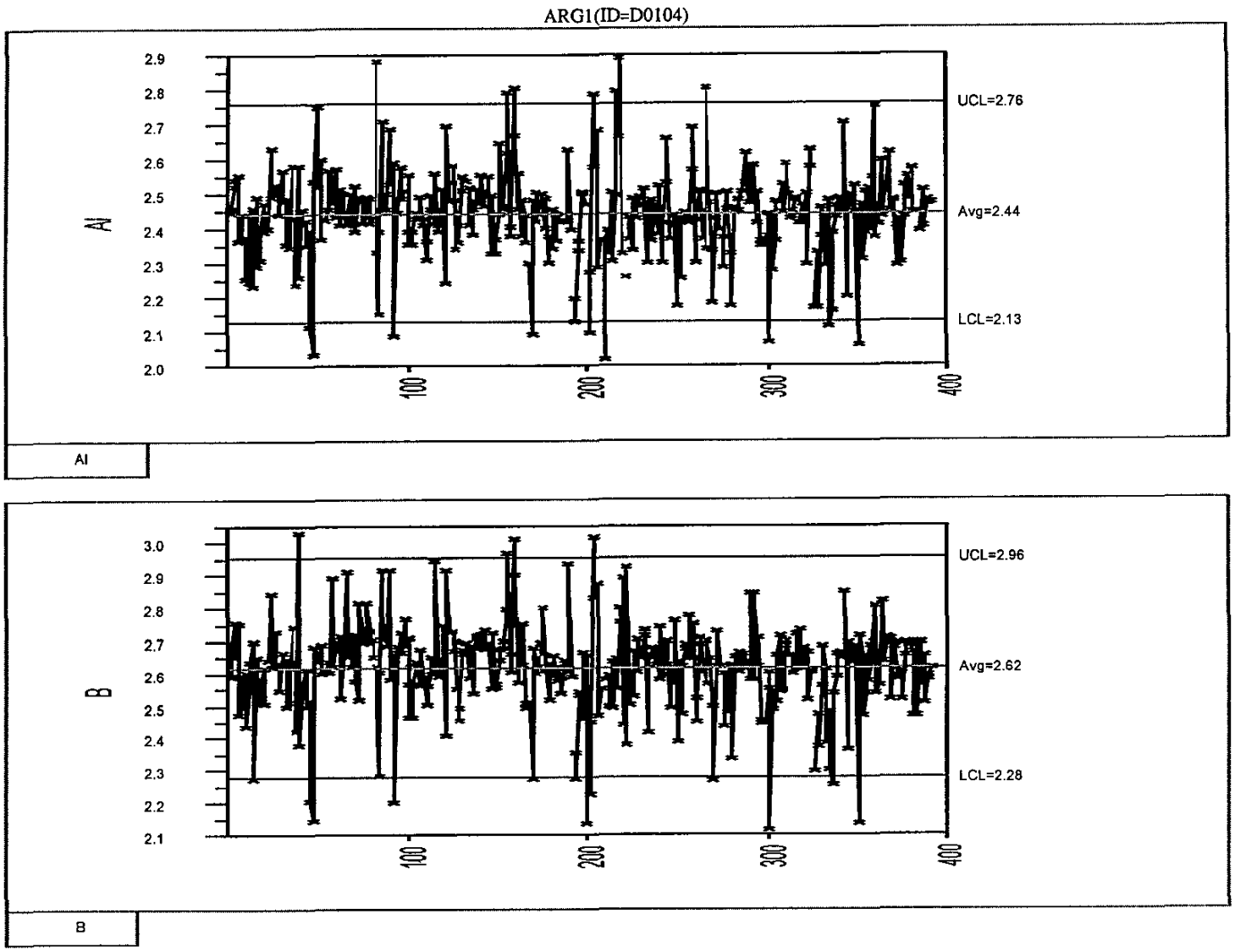
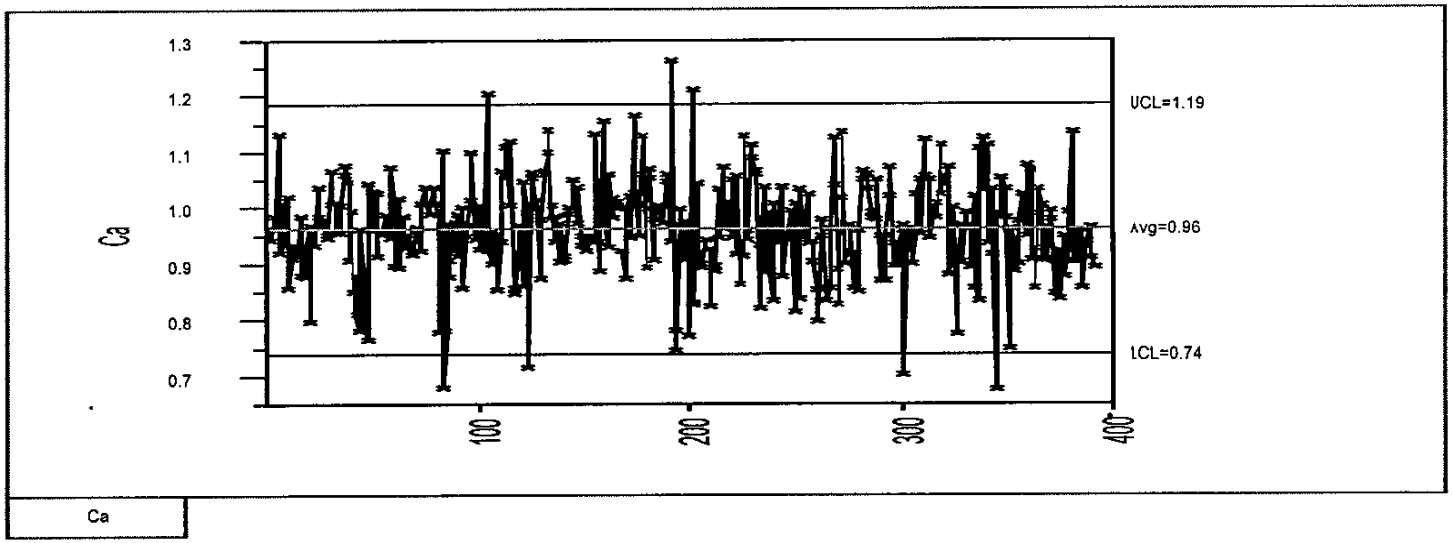
Shewhart Time Sequence Plots

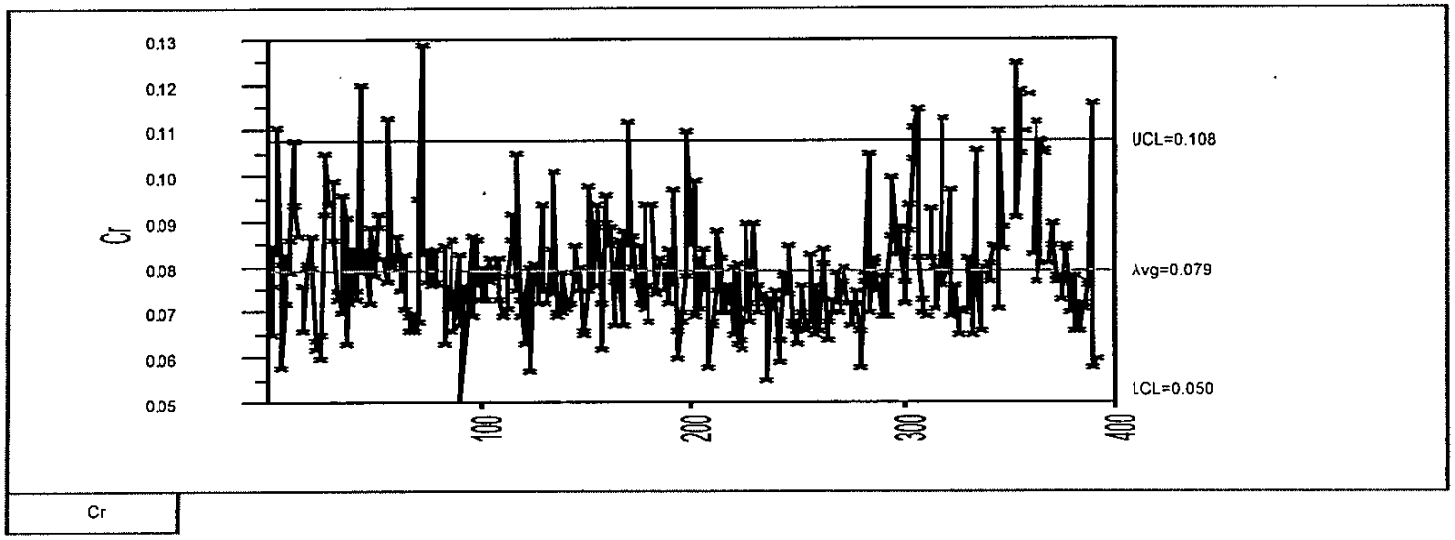


Plot A.3
SCREENED ARG-1, SME FS Data
Shewhart Time Sequence Plot

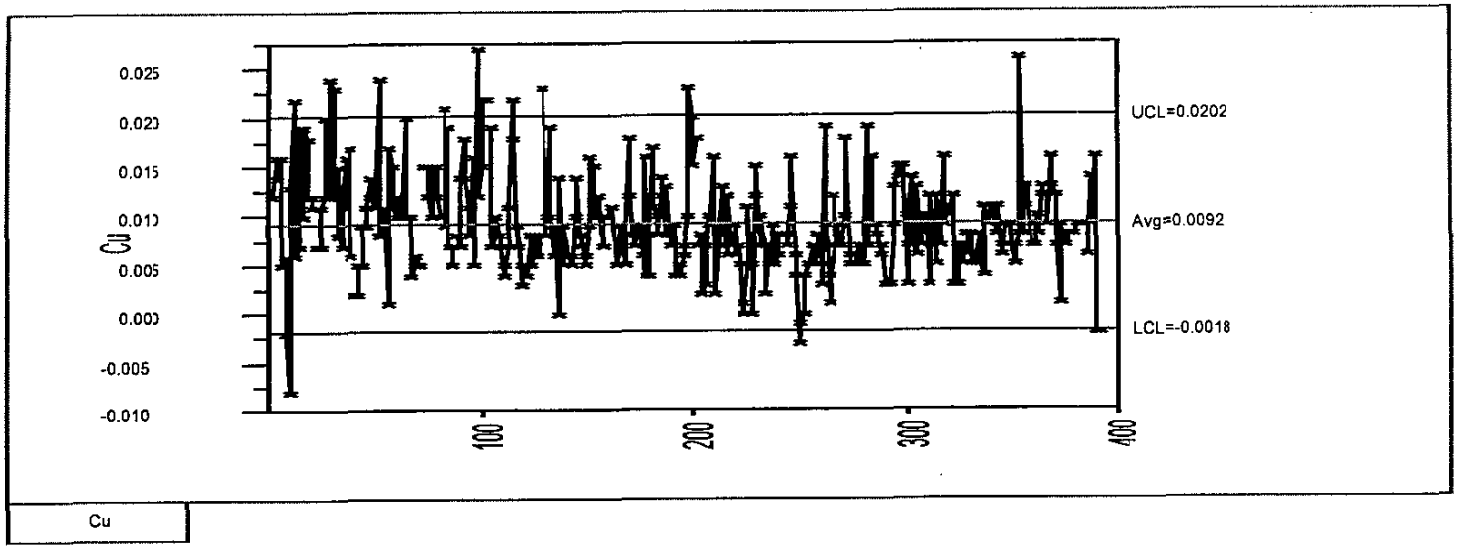


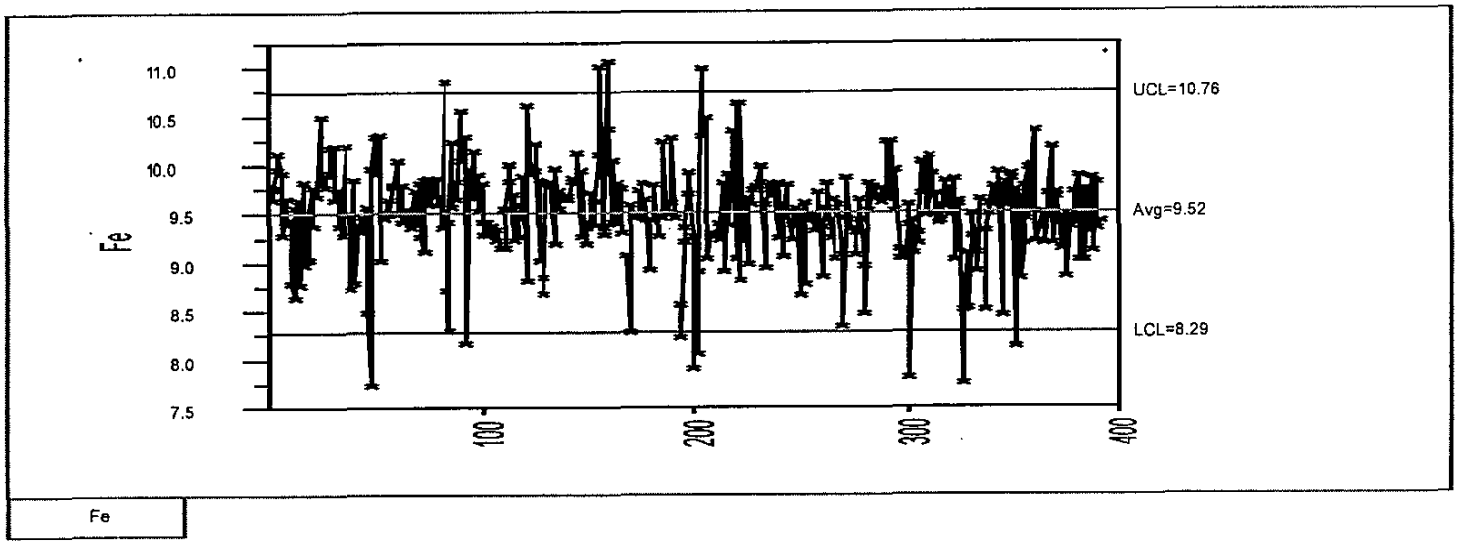
Plot A.3
SCREENED ARG-1, SME FS Data
Shewhart Time Sequence Plots





Plot A.3
SCREENED ARG-1, SME FS Data
Shewhart Time Sequence Plots





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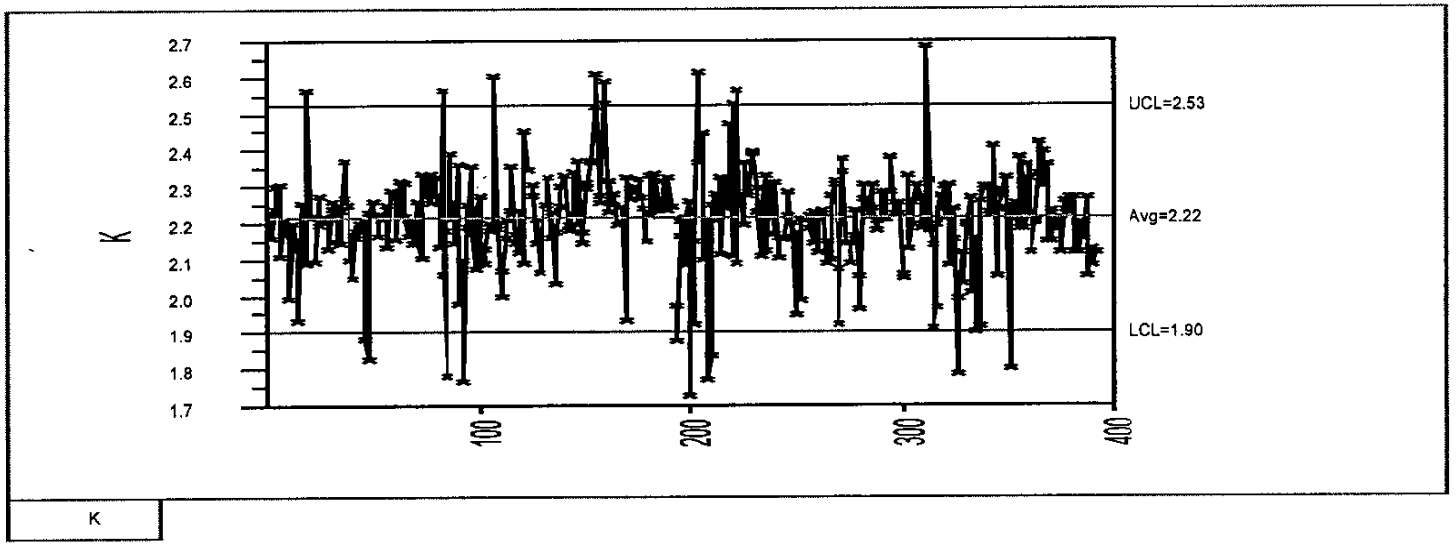
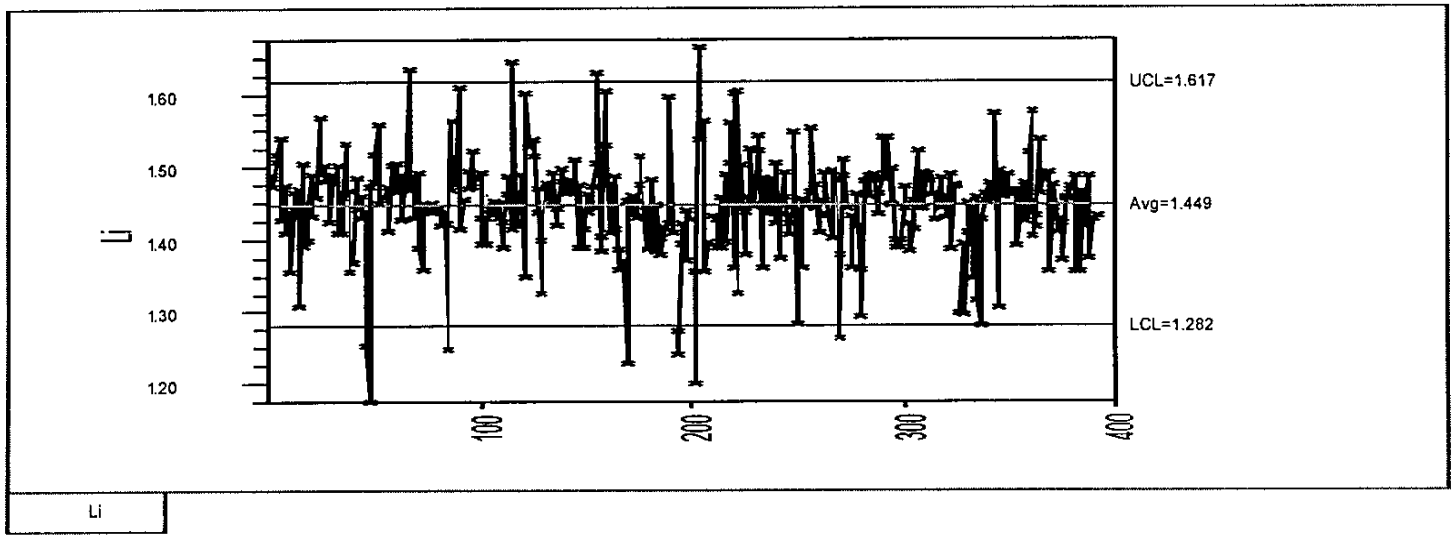
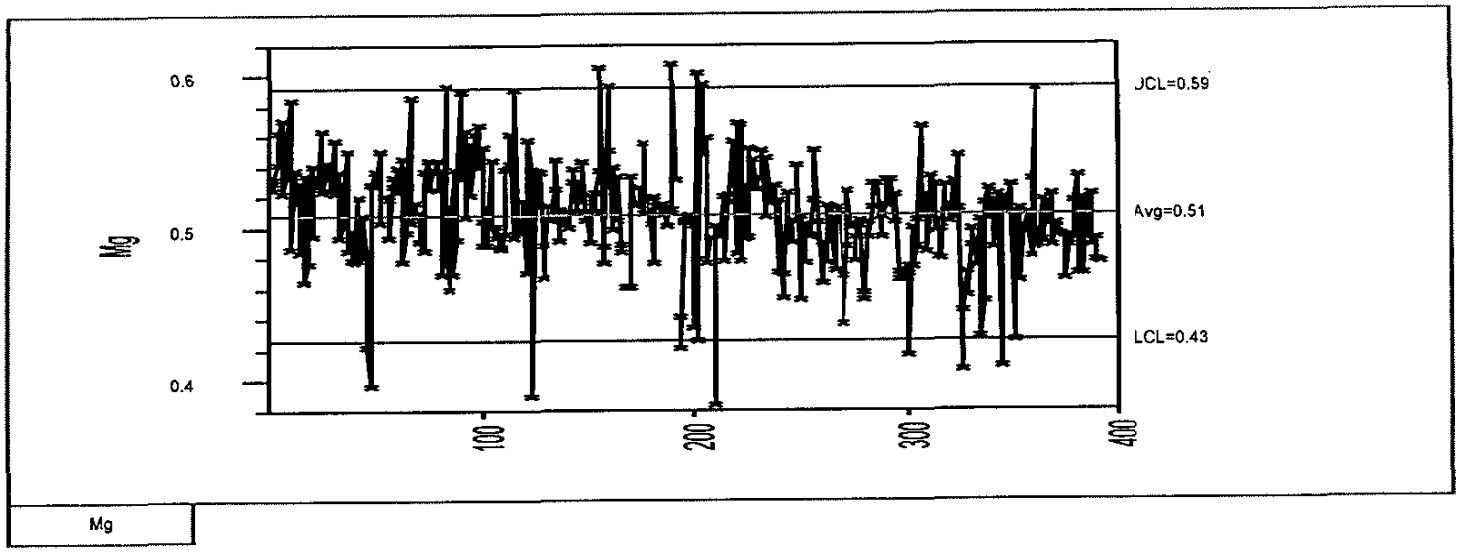
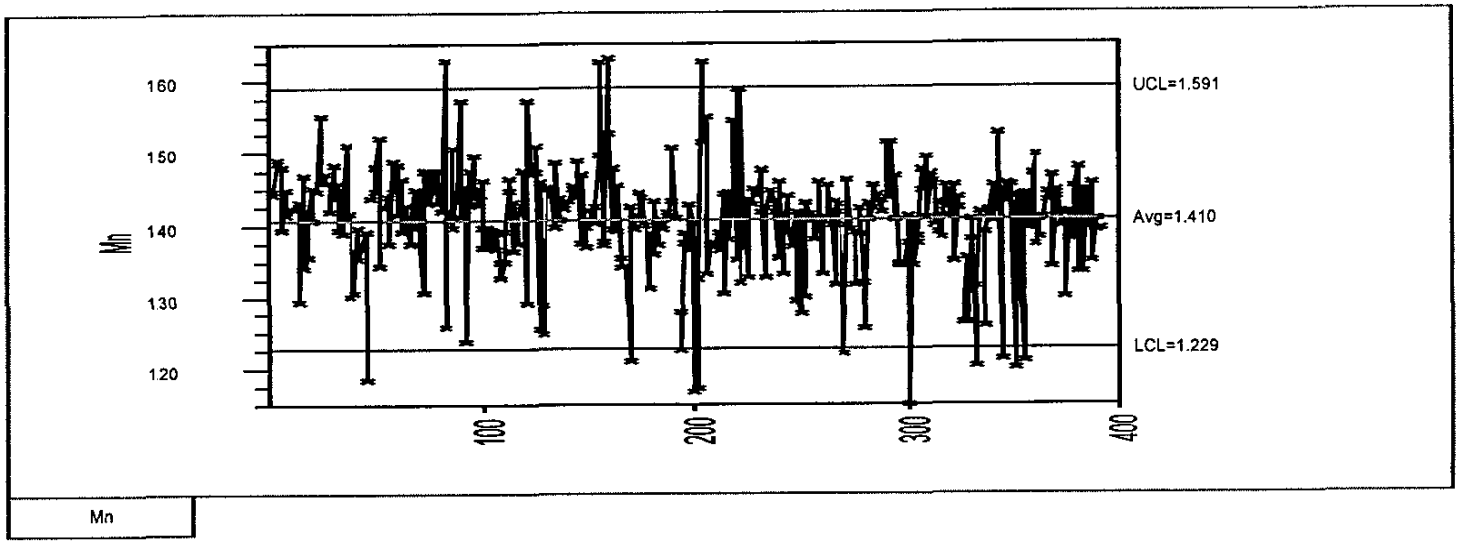
SCREENED ARG-I, SME FS Data
Shewhart Time Sequence Plots





Plot A.3
SCREENED ARG-1, SME FS Data
Shewhart Time Sequence Plots





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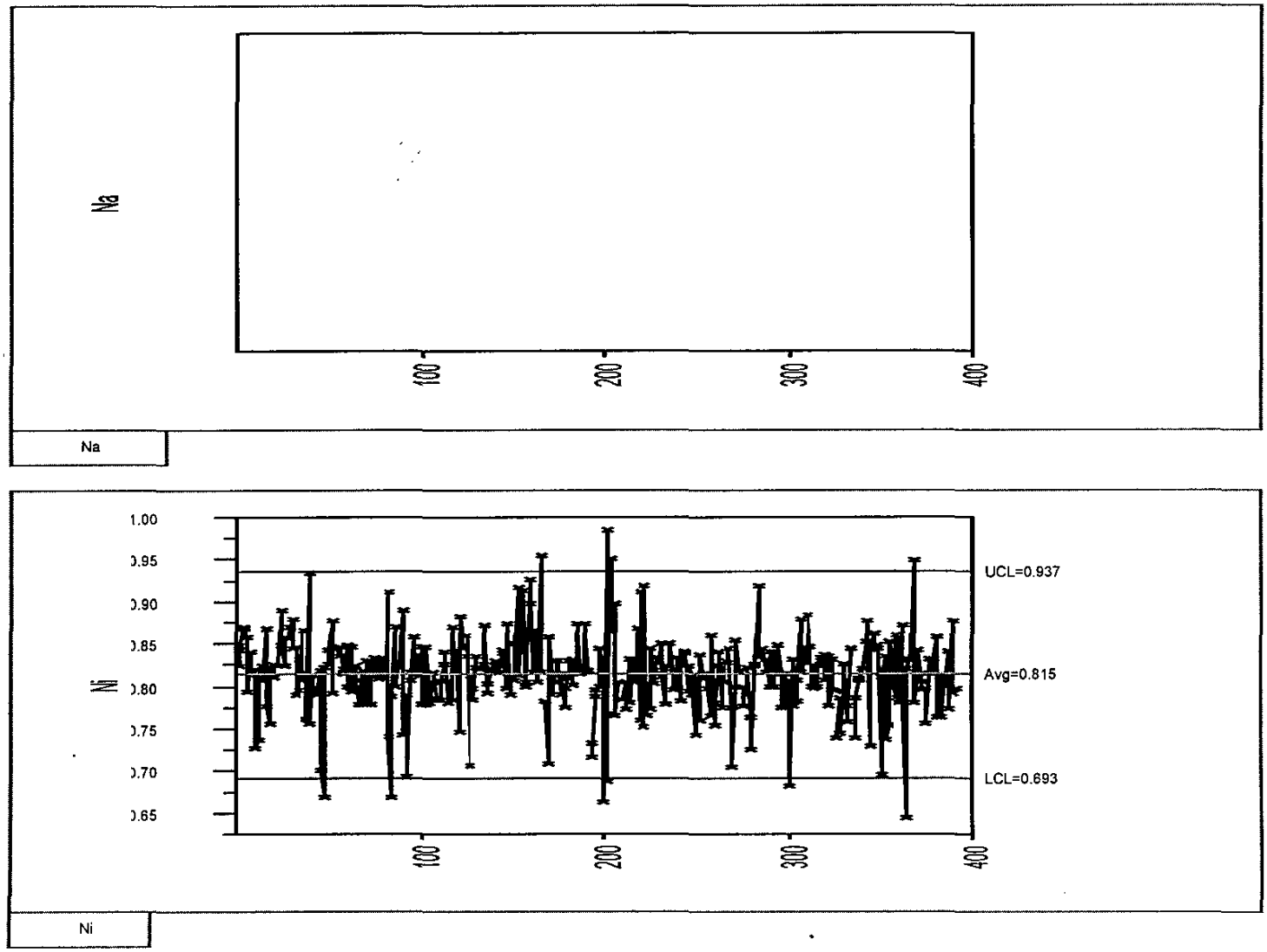
SCREENED ARG-1, SME FS Data
Shewhart Time Sequence Plots



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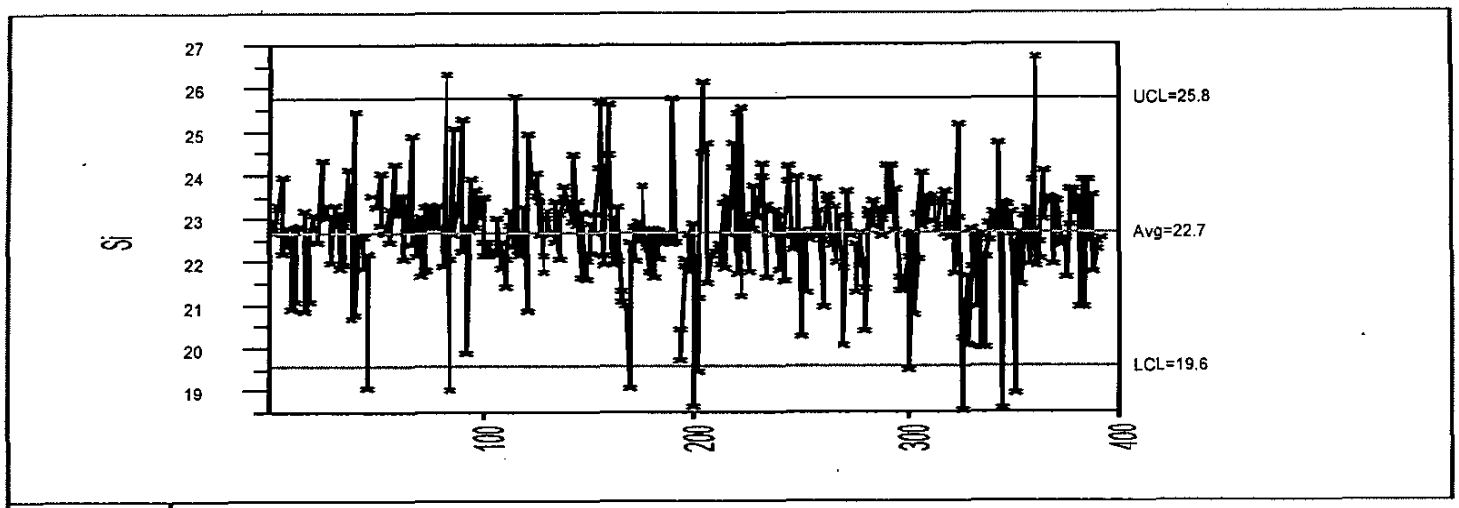
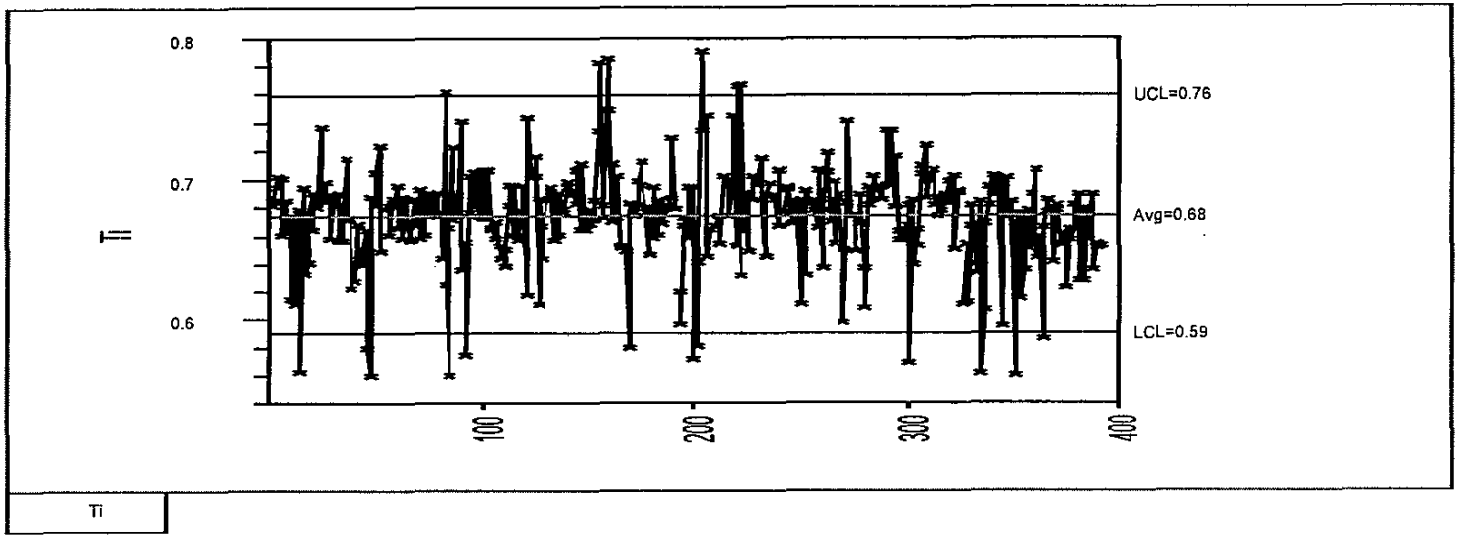
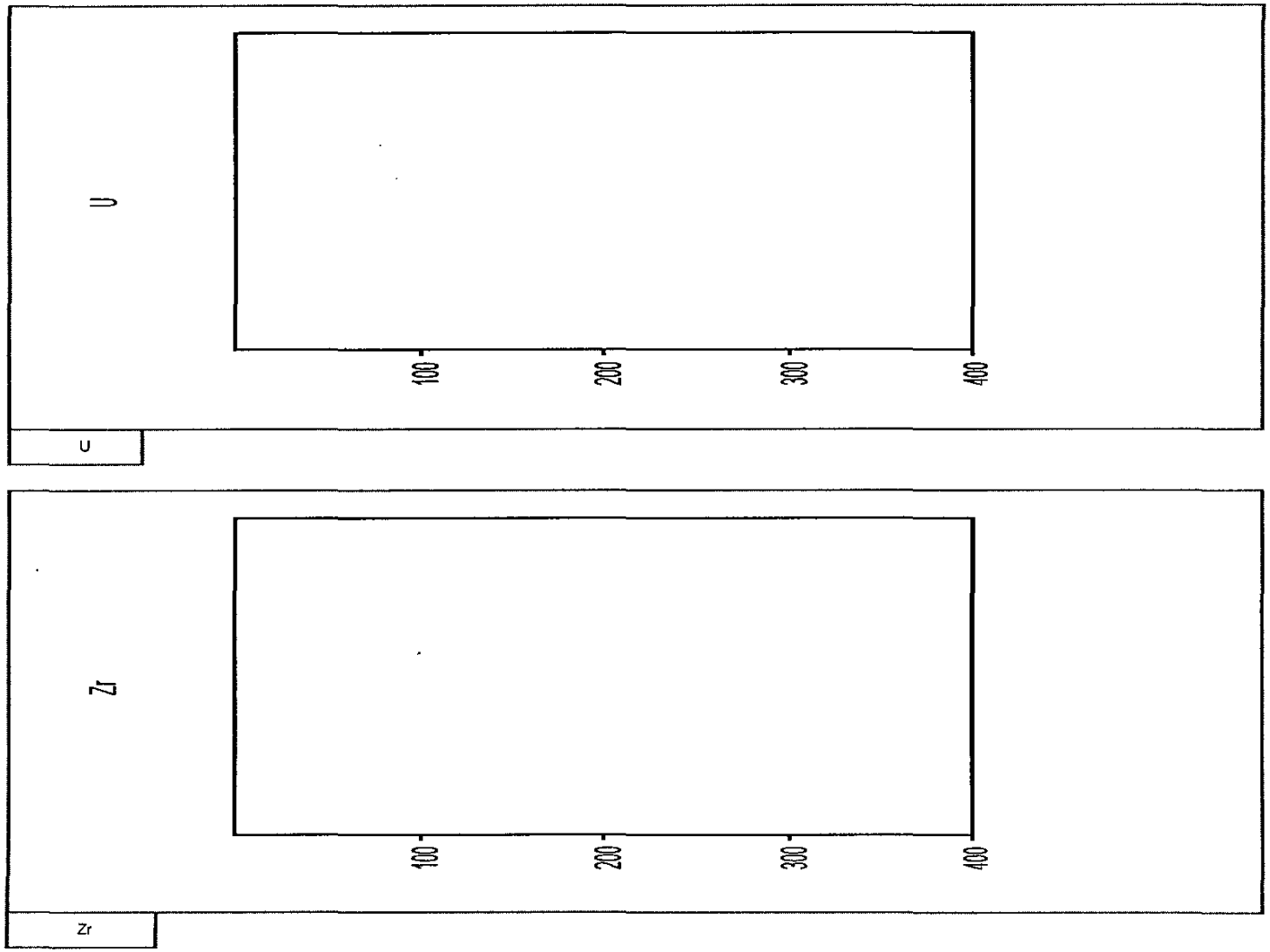
SCREENED ARG-1, SME FS Data
Shewhart Time Sequence Plots





Plot A.3
SCREENED ARG-1, SME FS Data
Shewhart Time Sequence Plot



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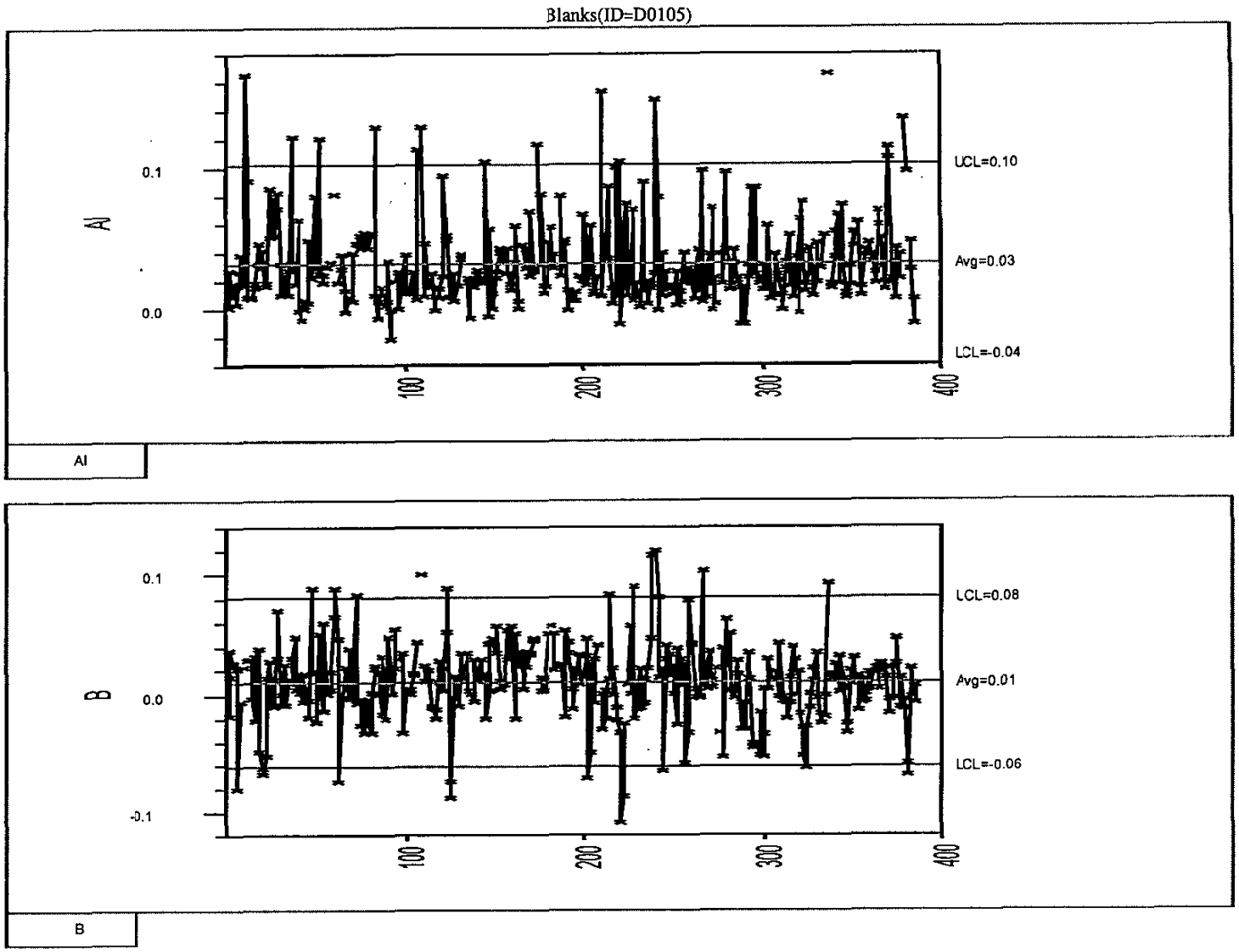
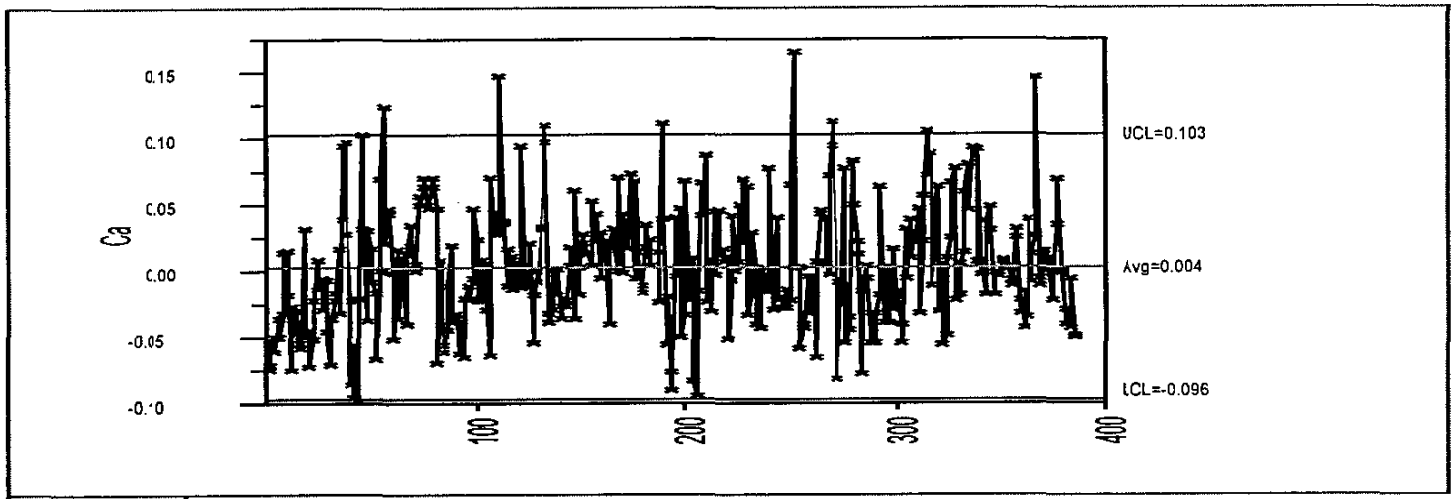
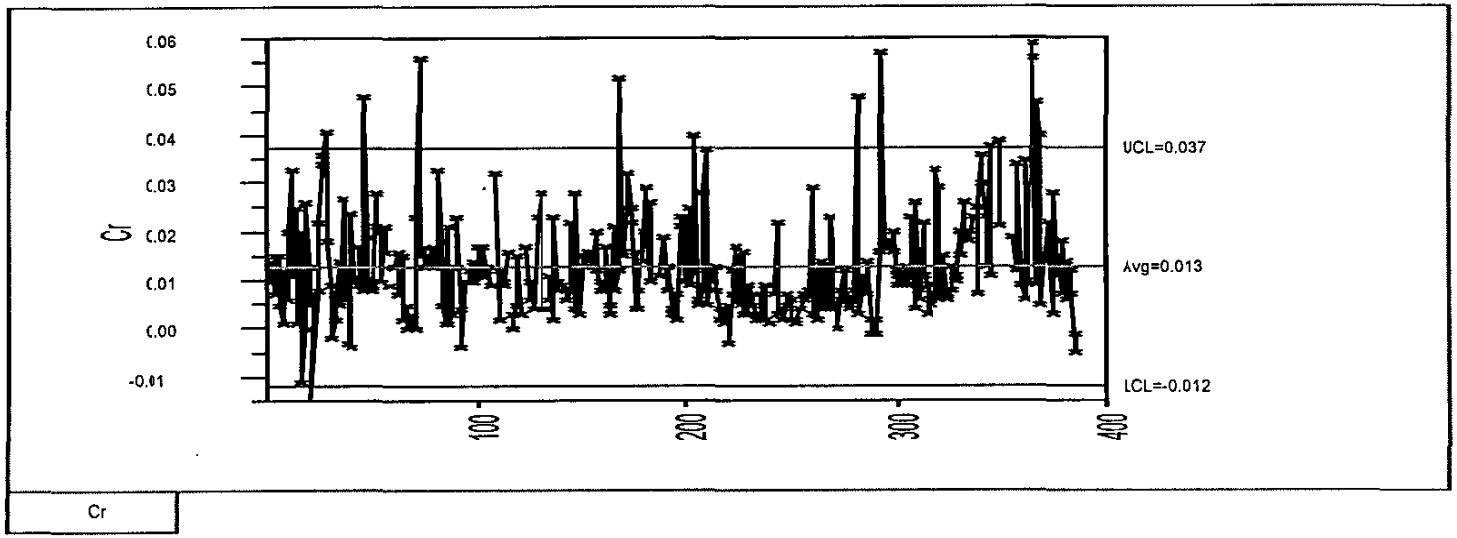
SCREENED Blanks, SME FS Data
Shewhart Time Sequence Plots

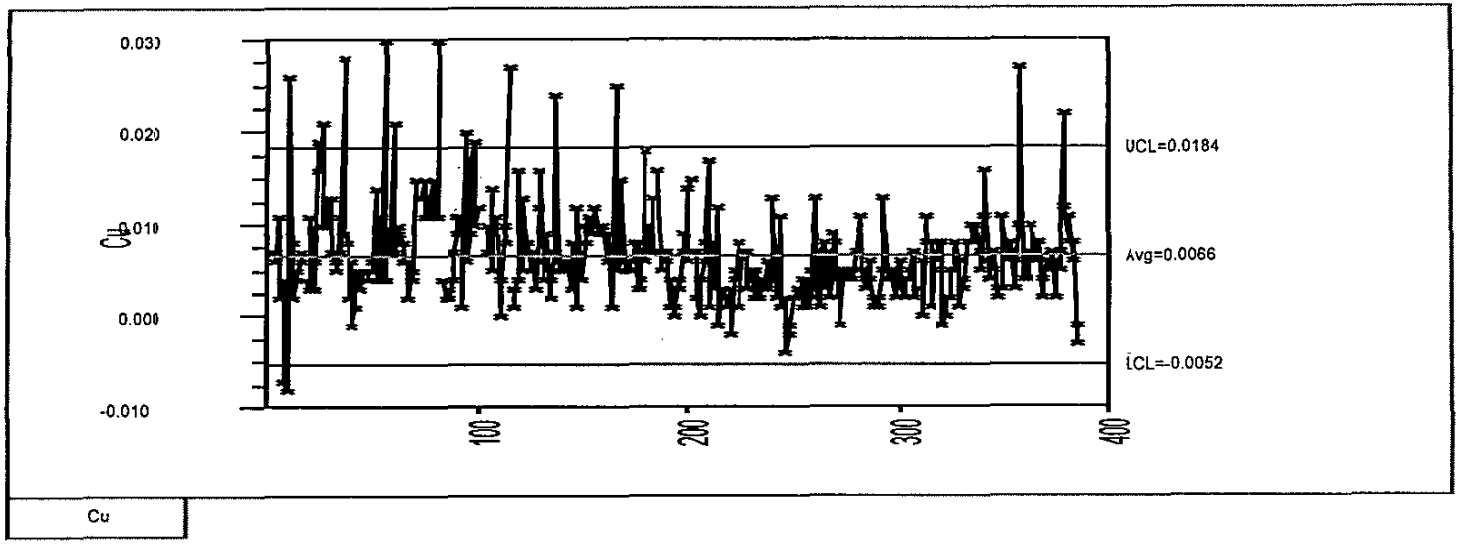


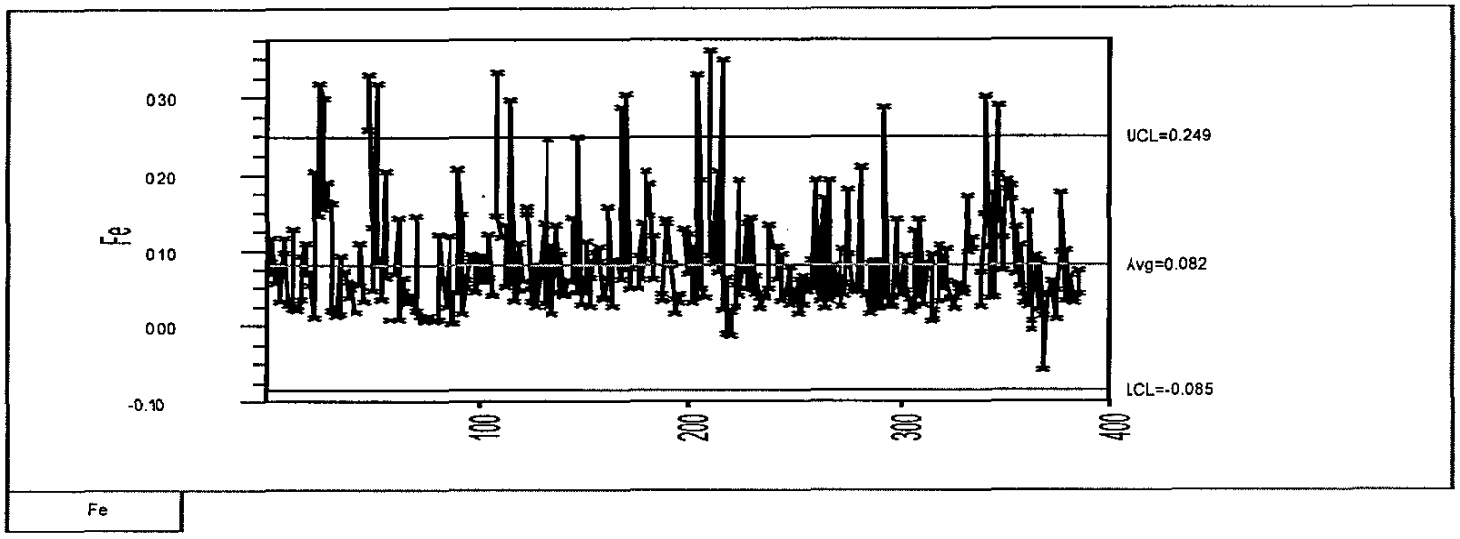
Plot A.4
SCREENED Blanks, SME FS Data
Shewhart Time Sequence Plots



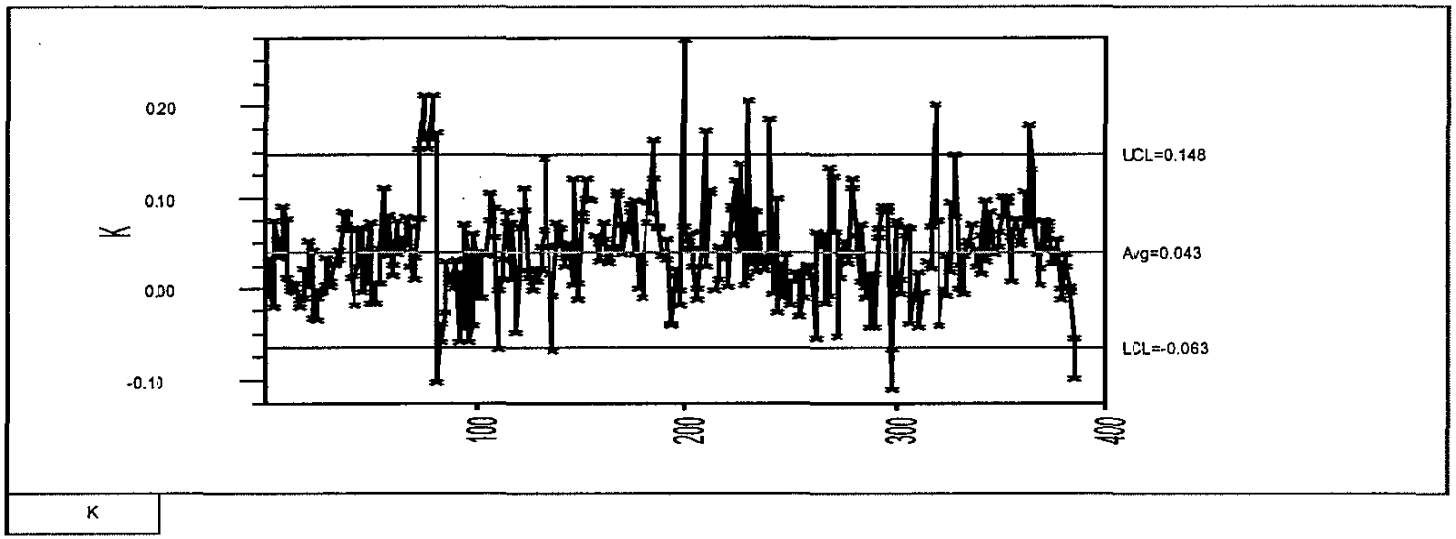


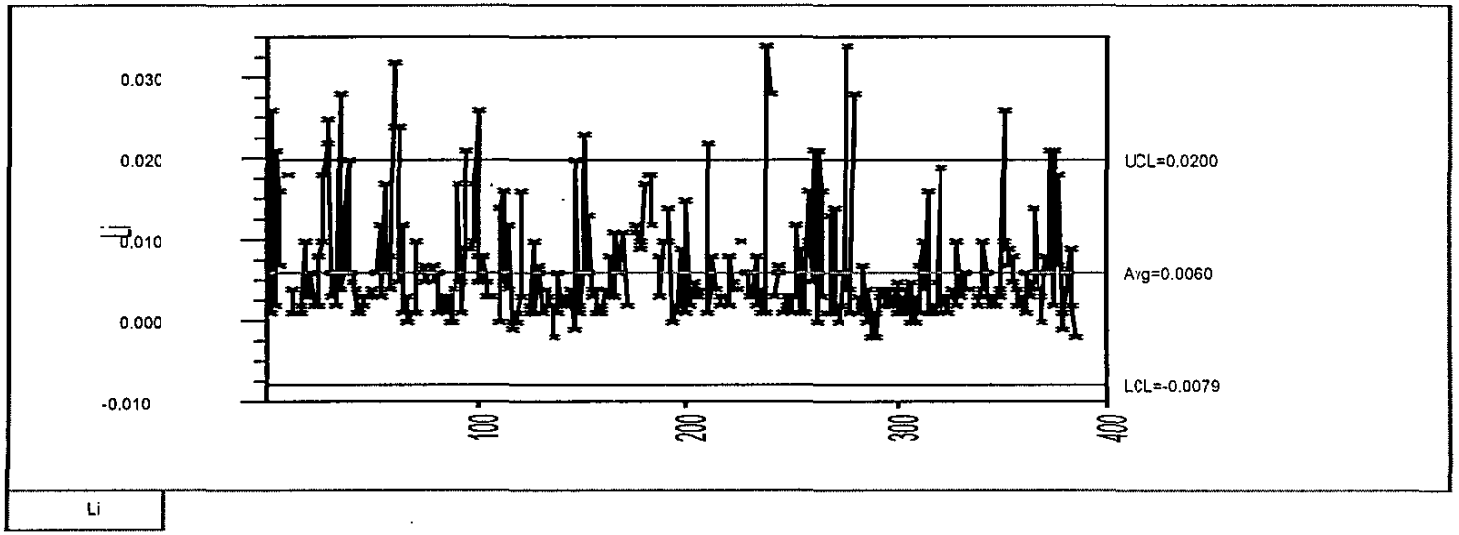
Plot A.4
SCREENED Blanks, SME FS Data
Shewhart Time Sequence Plots



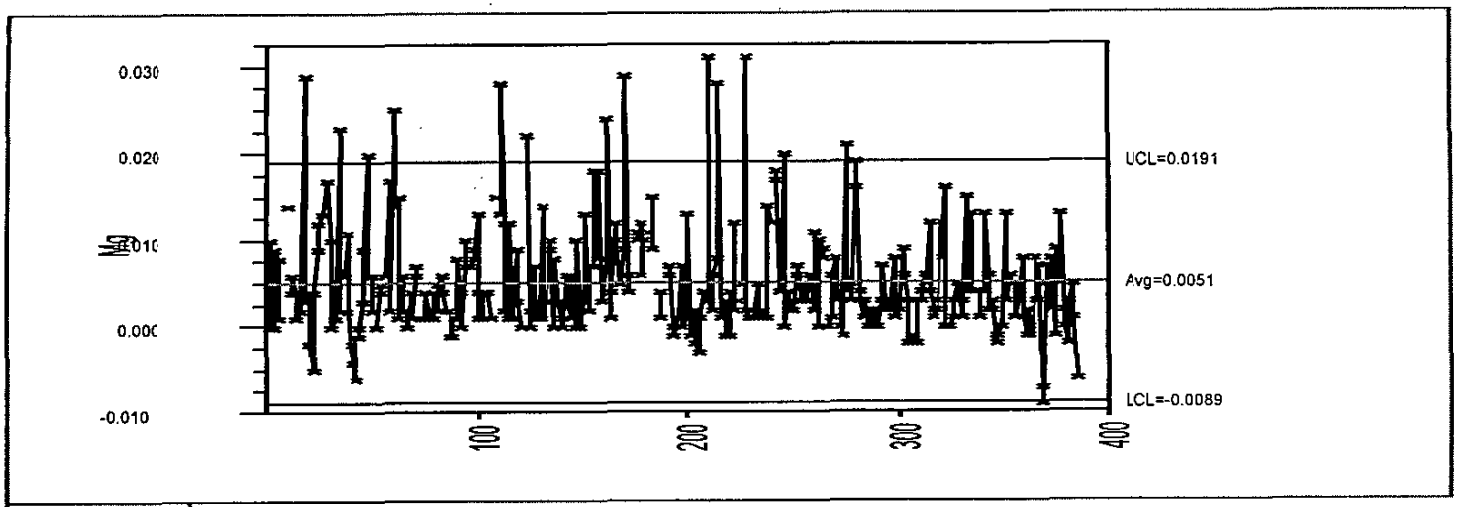


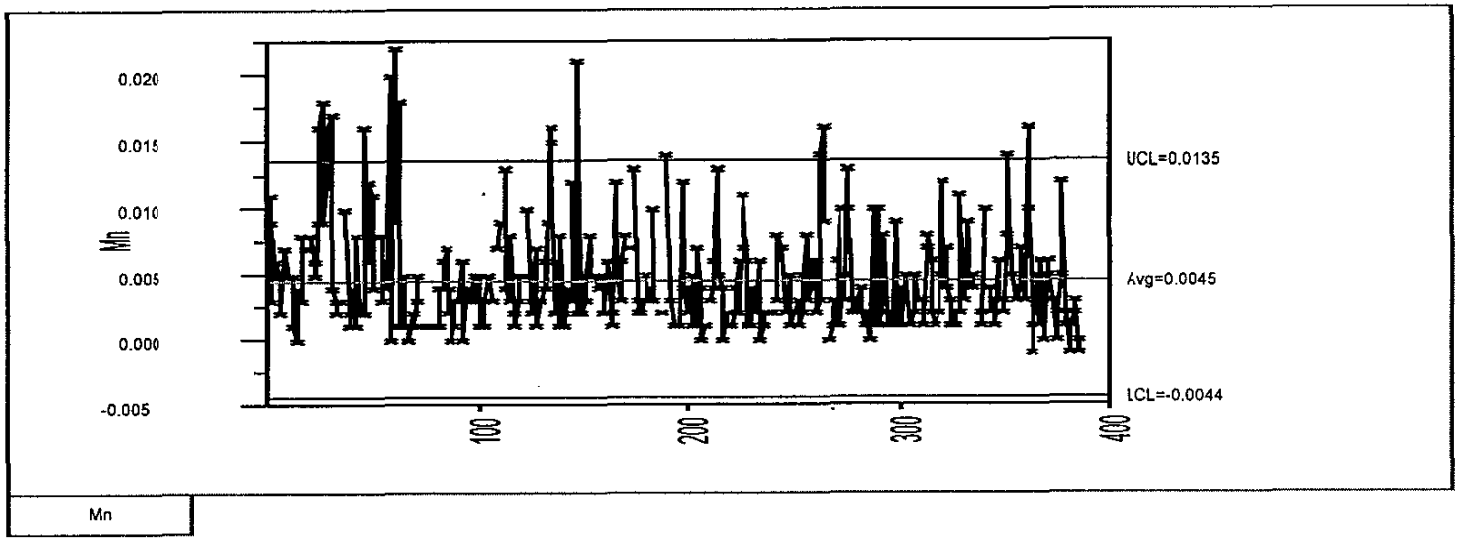
Plot A.4
SCREENED Blanks, SME FS Data
Shewhart Time Sequence Plots



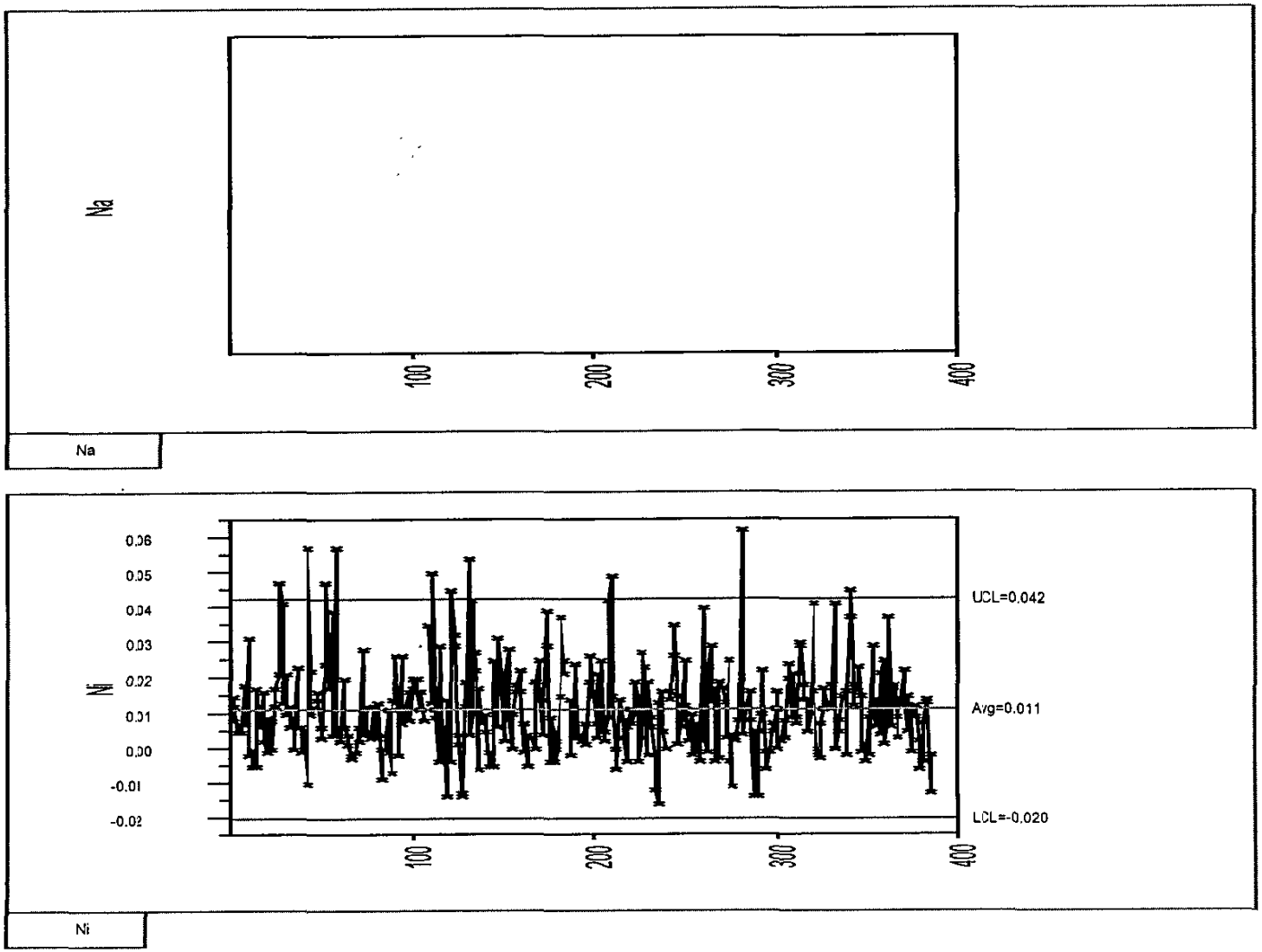


Plot A.4
SCREENED Blanks, SME FS Data
Shewhart Time Sequence Plots

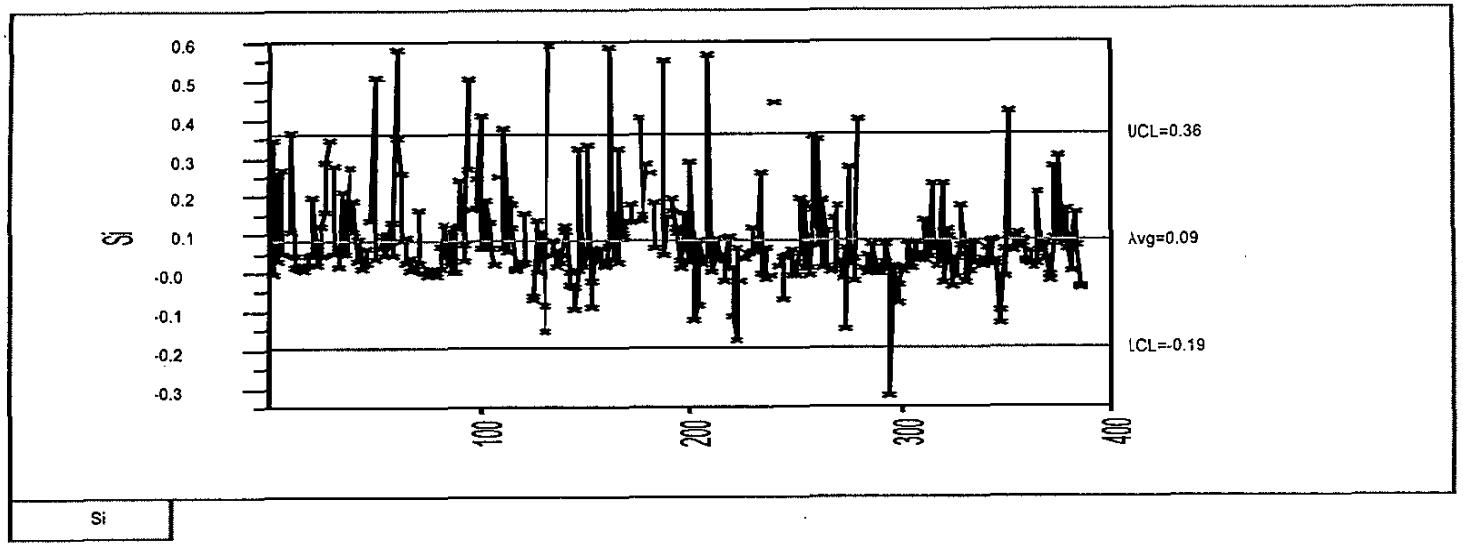


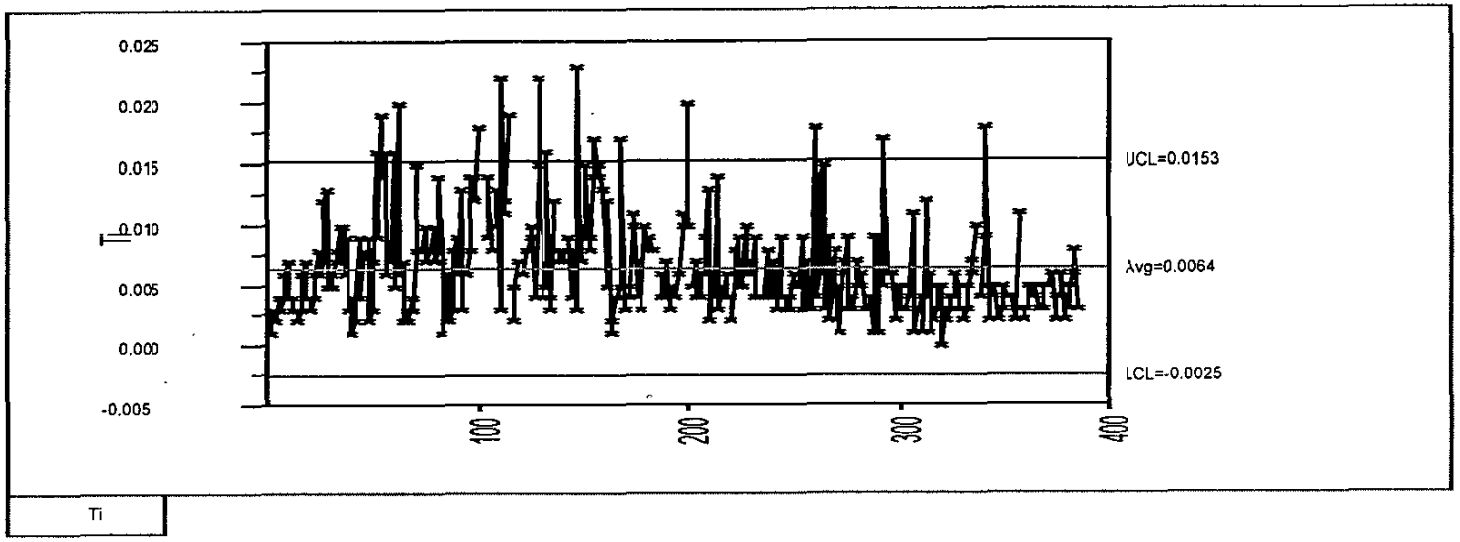


Plot A.4
SCREENED Blanks, SME FS Data
Shewhart Time Sequence Plots

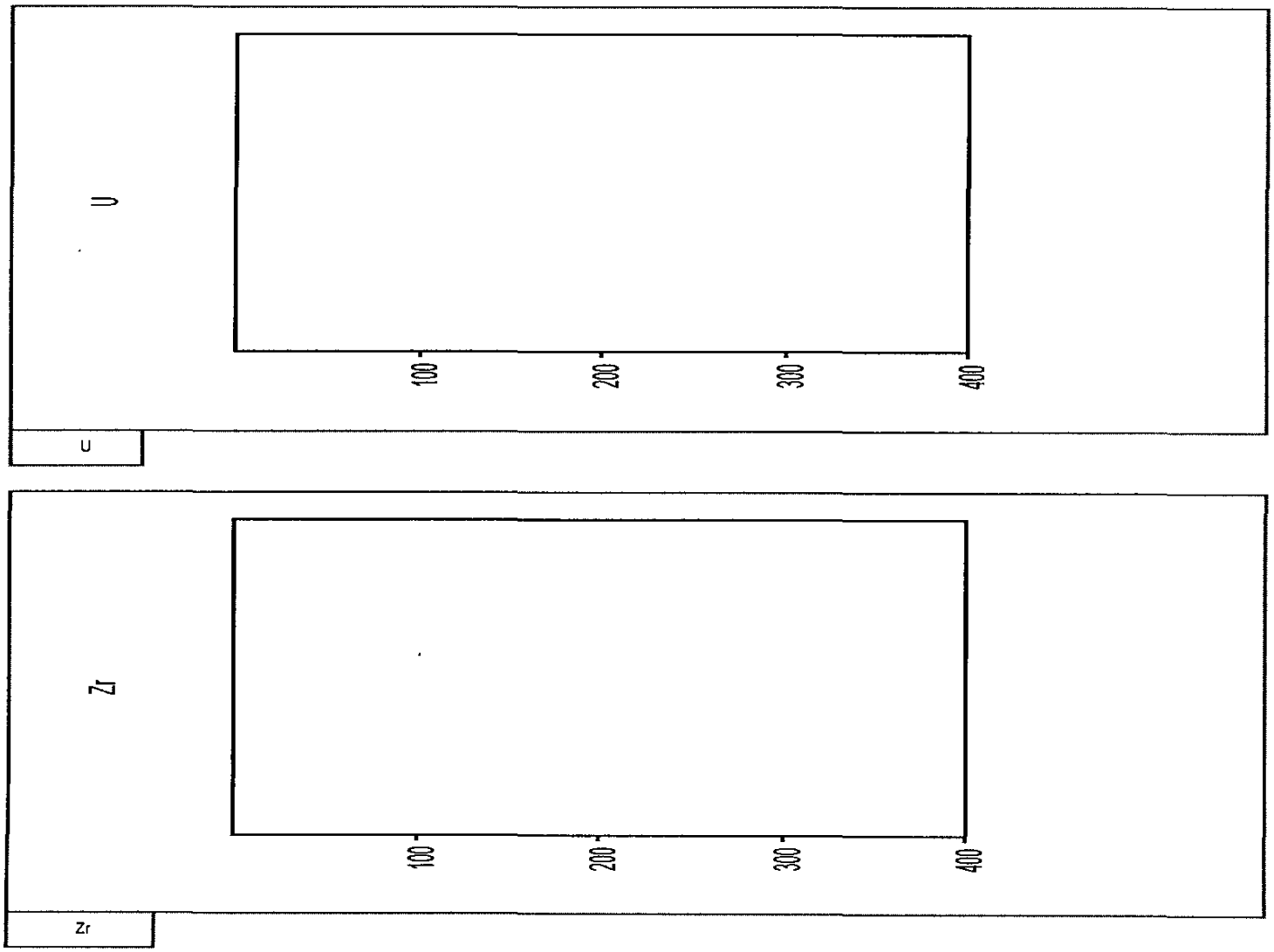


Plot A.4
SCREENED Blanks, SME FS Data
Shewhart Time Sequence Plots



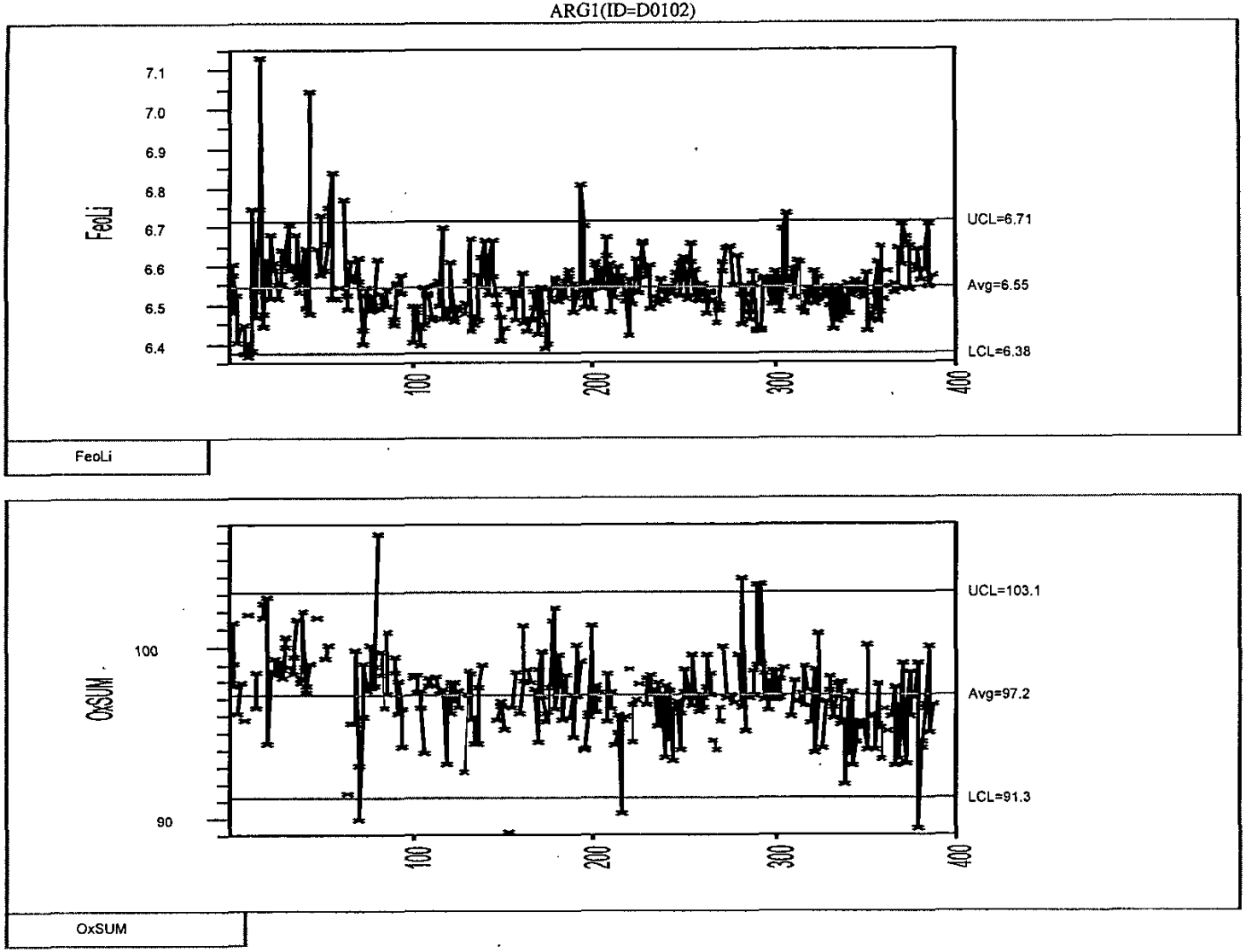


Plot A.4
SCREENED Blanks, SME FS Data
Shewhart Time Sequence Plots



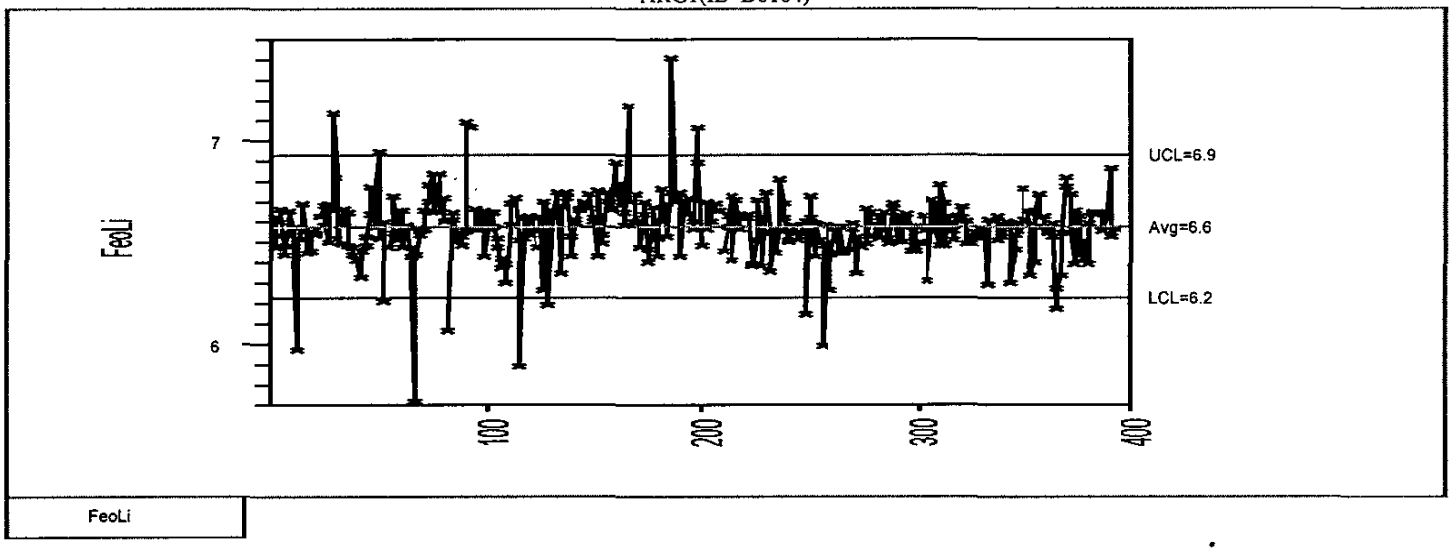
Plot B.1
SCREENED ARG-1, SME MA Data
Shewhart Time Sequence Plots

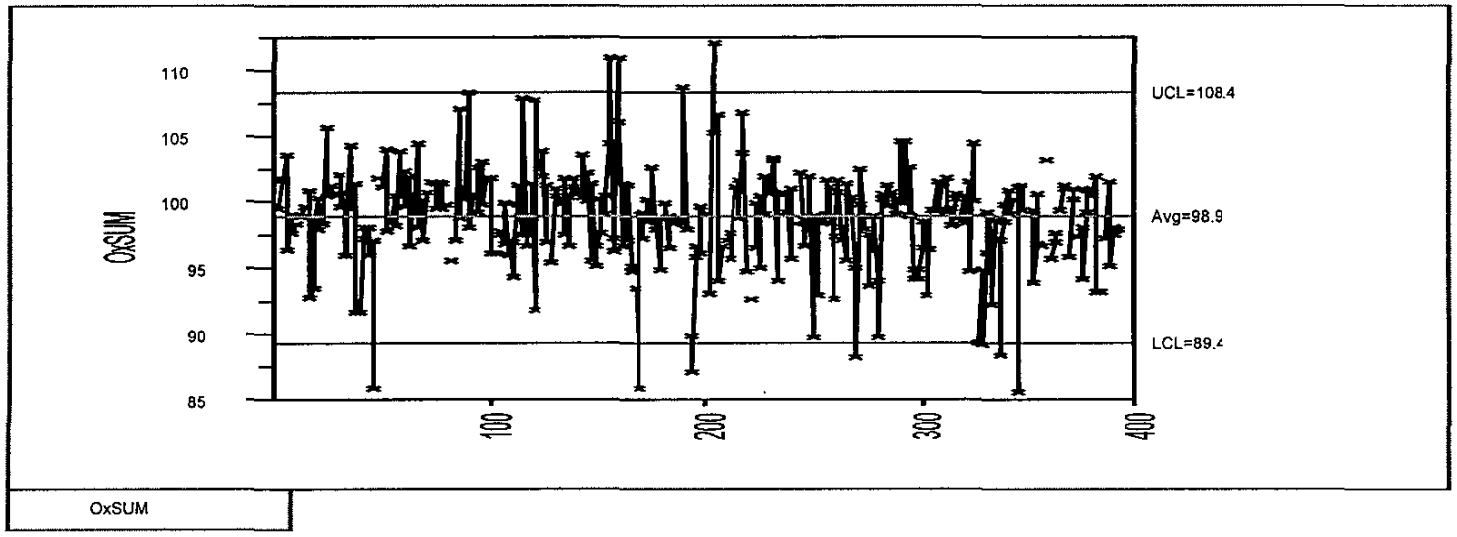
Fe/Li Ratios and Sum of Oxides
ARG1(ID=D0102)



Plot B.2
SCREENED ARG-1, SME FS Data
Shewhart Time Sequence Plot

Fe/Li Ratios and Sum of Oxides
ARG1(ID=D0104)





Plot C.2
(Screened Data)

Screened ARG-1, SME MA Data

Multivariate Control Chart

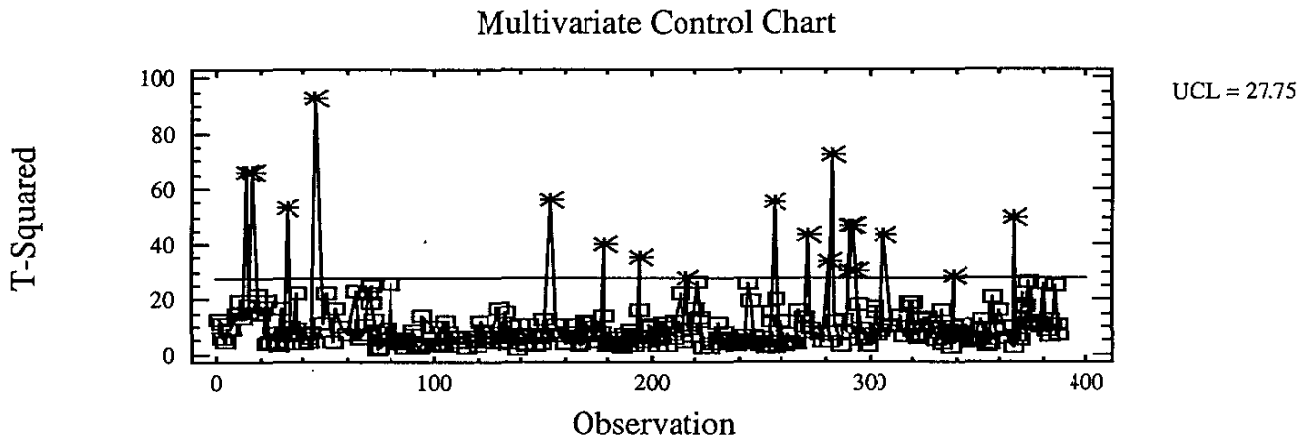
Analysis Summary

Data variables:
Al, Ca, Fe, K, Li, Mg, Mn, Na, Ni, Si, Ti

Number of complete cases = 325, 0 cases excluded

UCL: 27.7469 for alpha = 0.0027

19 points beyond limits



Plot C.2
(Screened Data)

Screened ARG-1, SME FS Data

Multivariate Control Chart

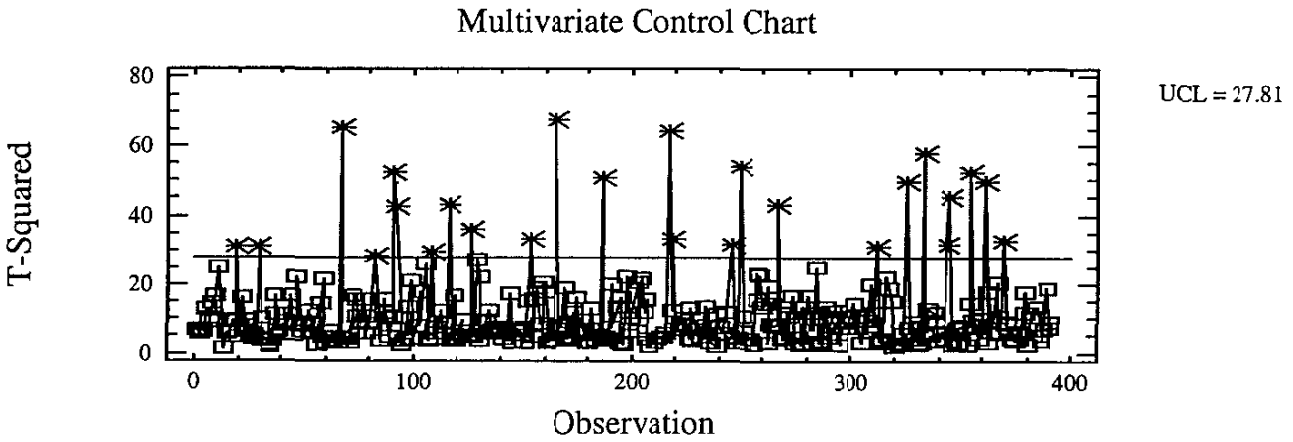
Analysis Summary

Data variables:
Al, B, Ca, Fe, K, Li, Mg, Mn, Ni, Si, Ti

Number of complete cases = 353, 0 cases excluded

UCL: 27.8075 for alpha = 0.0027

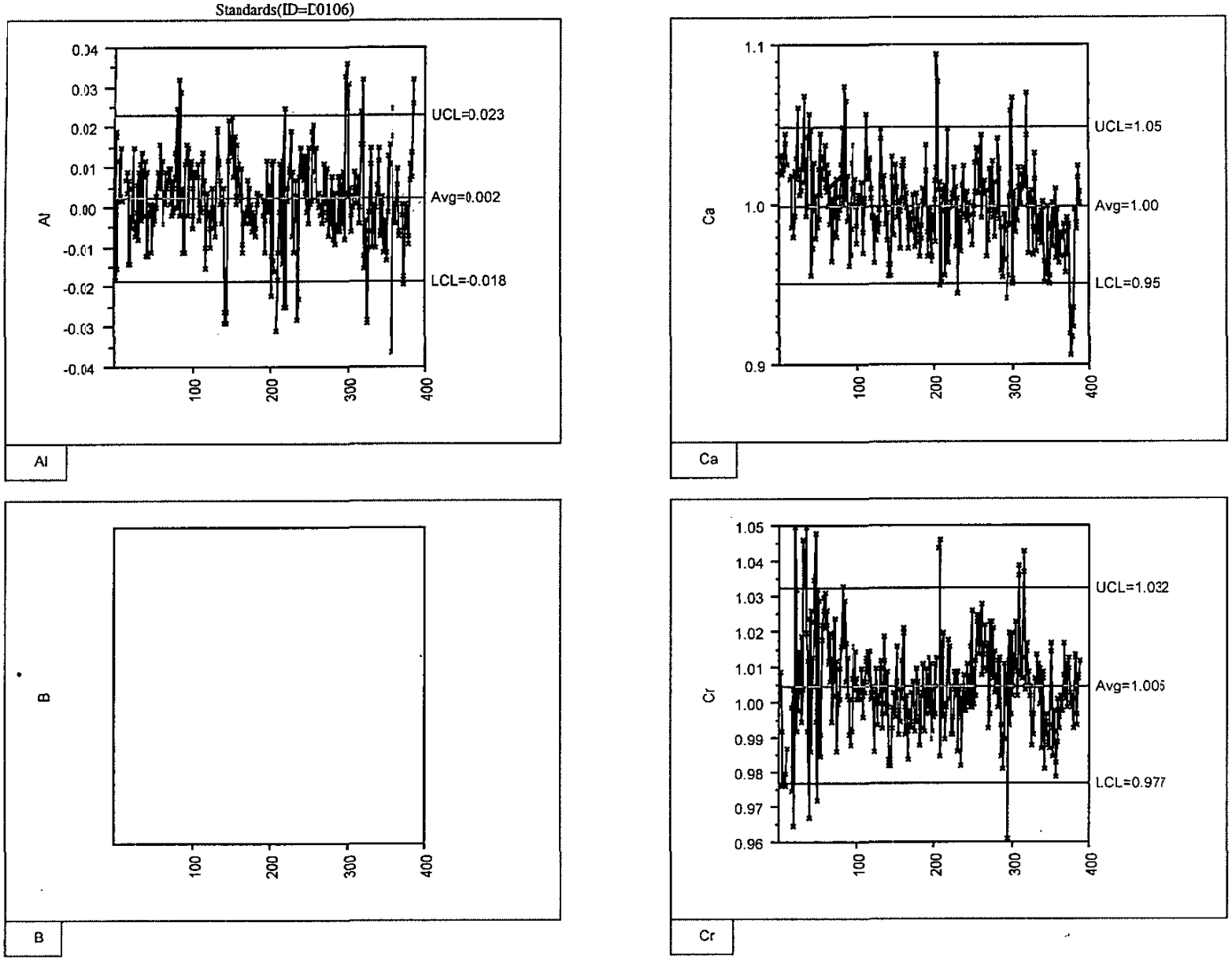
25 points beyond limits



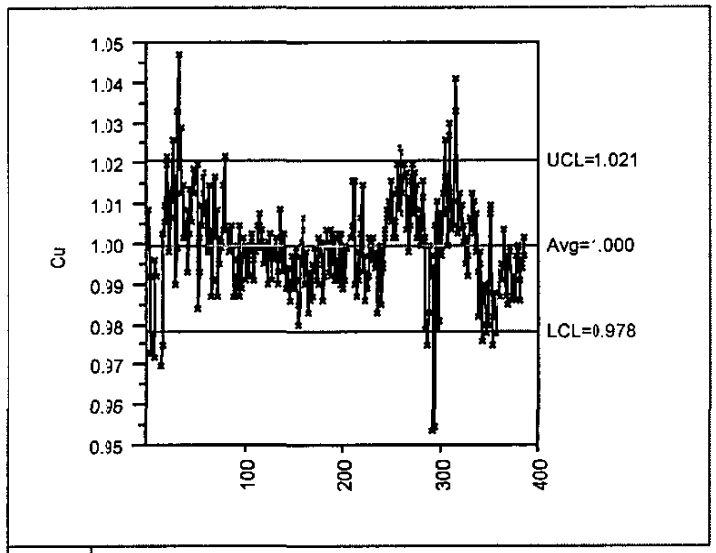
Plot D.1

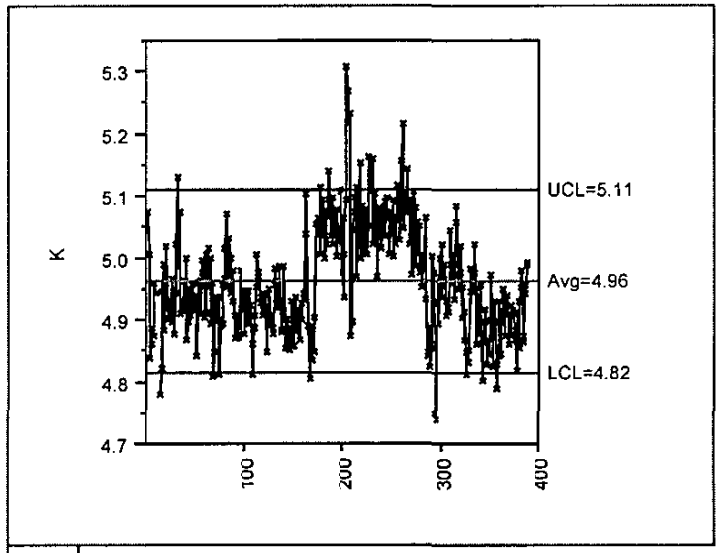
Screened Calibration Standard A, SME MA Data

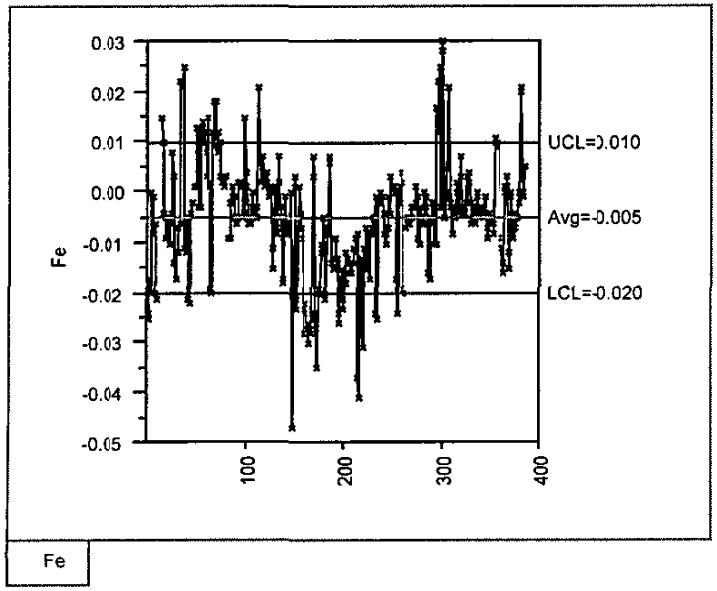
Shewhart Time Sequence Plots

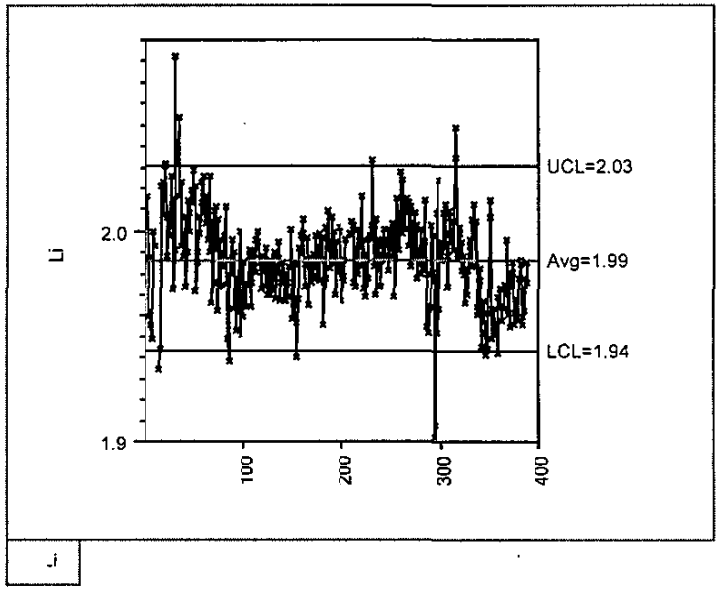


Plot D.1
Screened Calibration Standard A, SME MA Data
Shewhart Time Sequence Plots

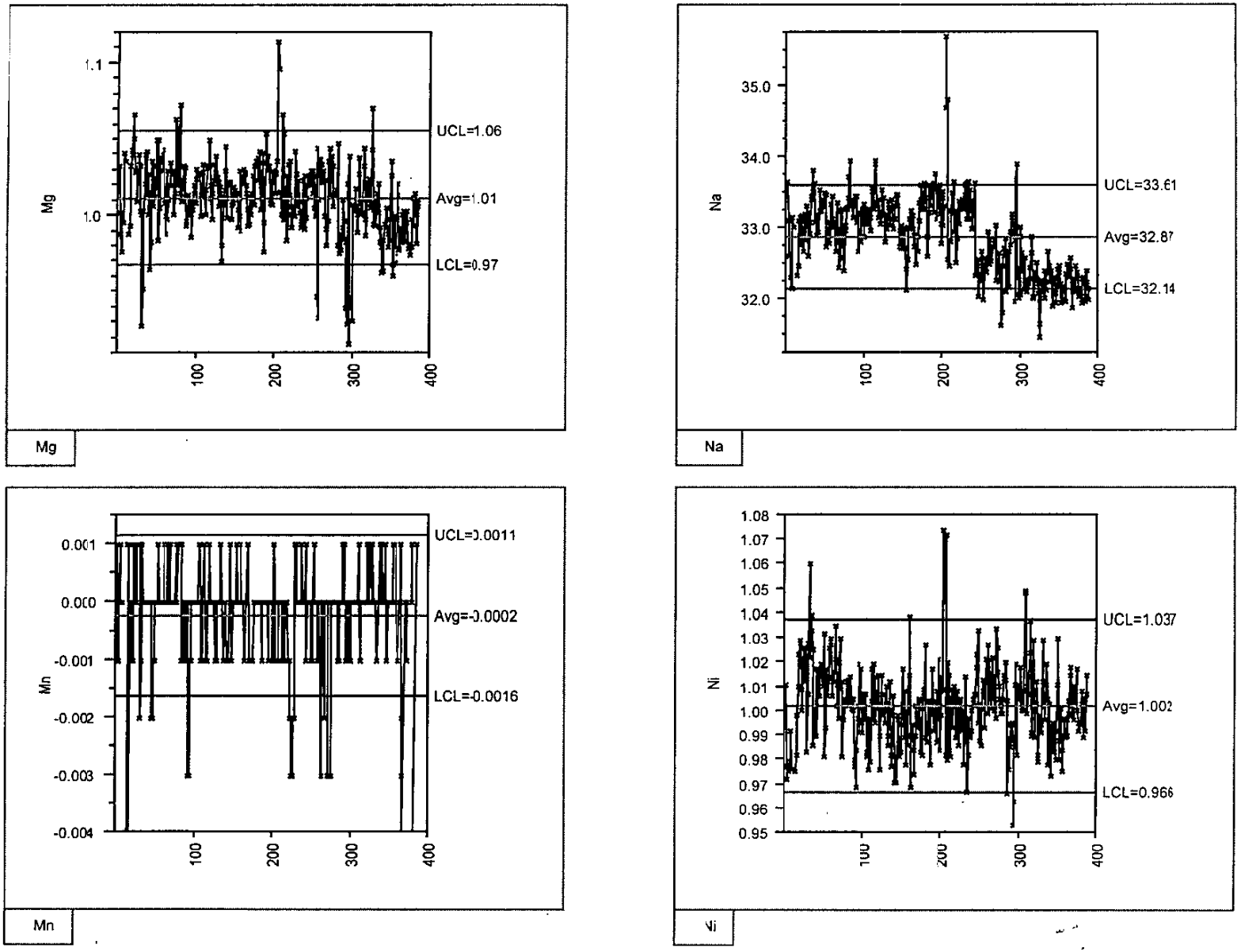




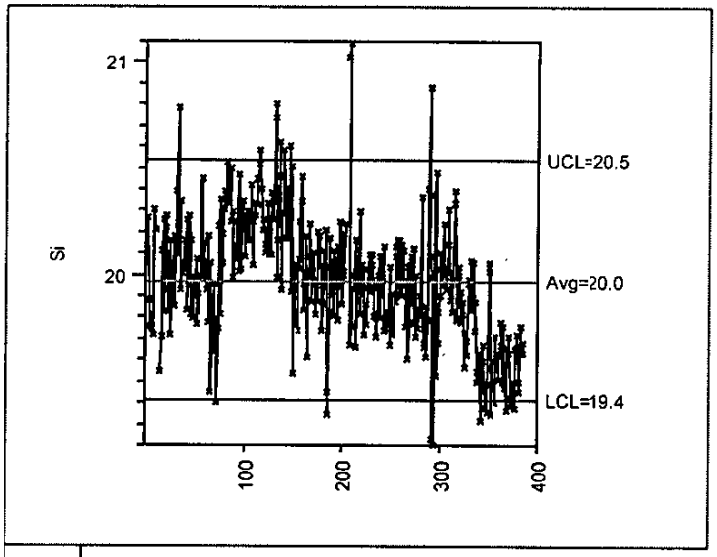


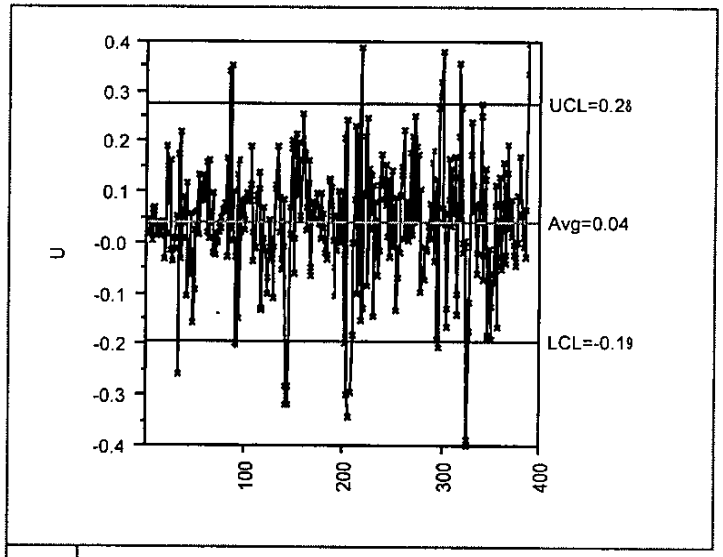


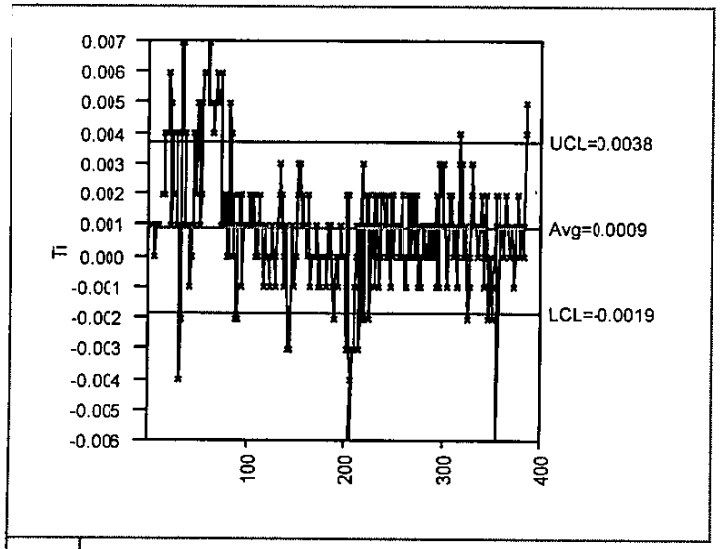
Plot D.1
Screened Calibration Standard A, SMI MA Data
Shewhart Time Sequence Plots

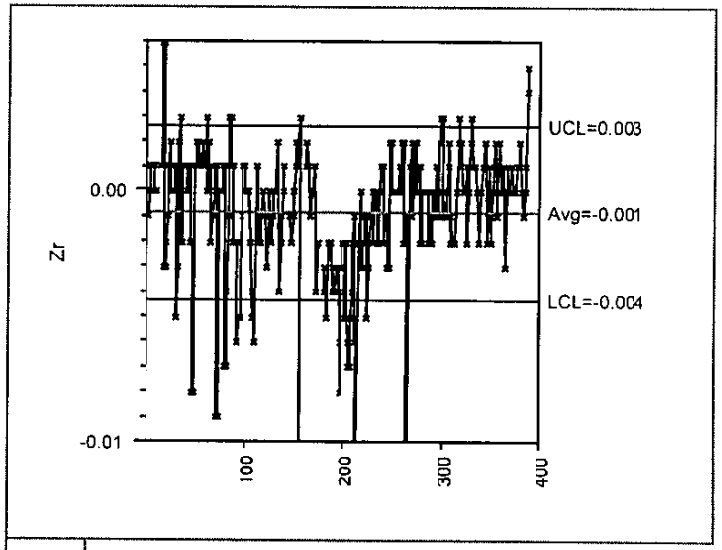


Plot D.1
Screened Calibration Standard A, SME MA Data
Shewhart Time Sequence Plots



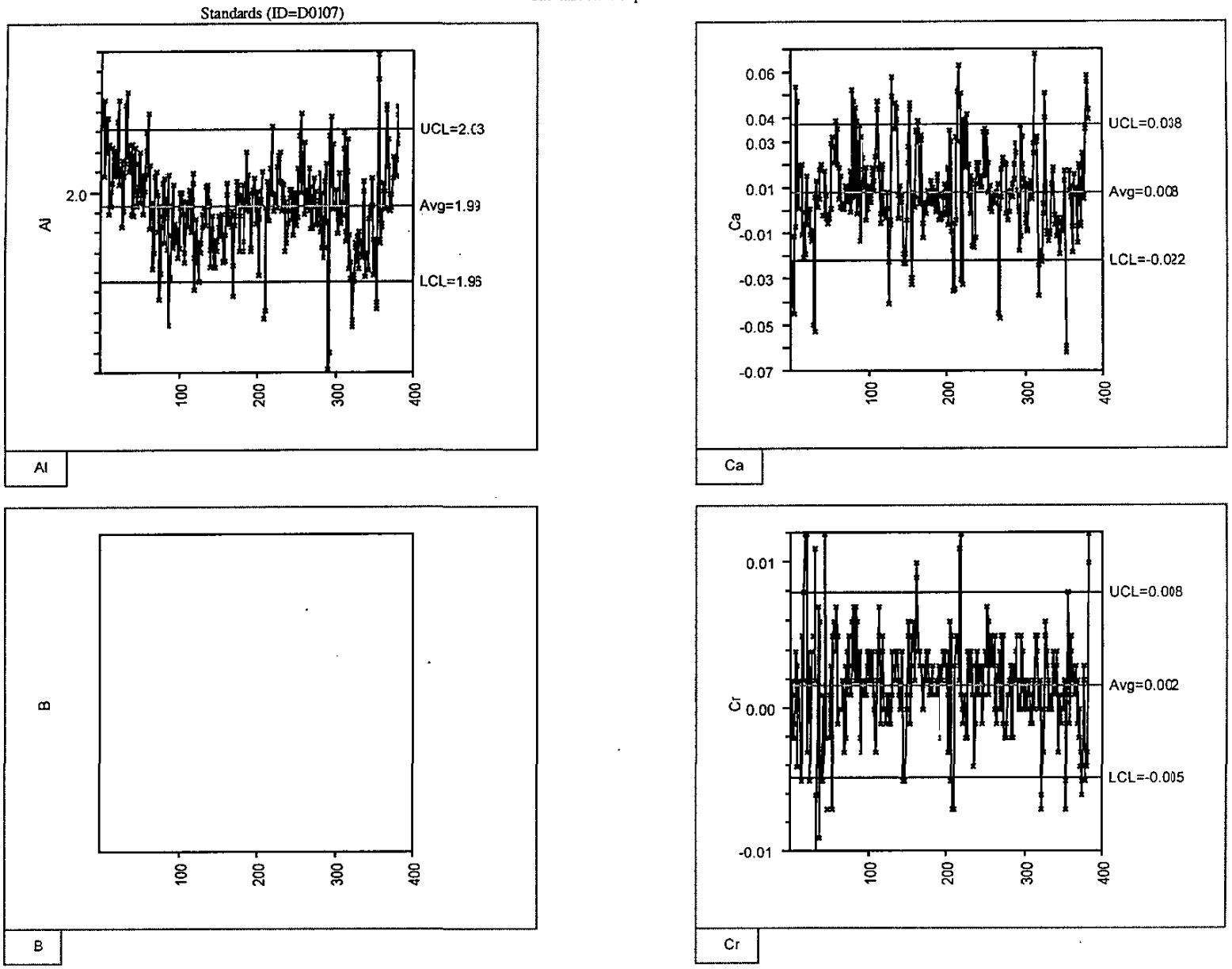




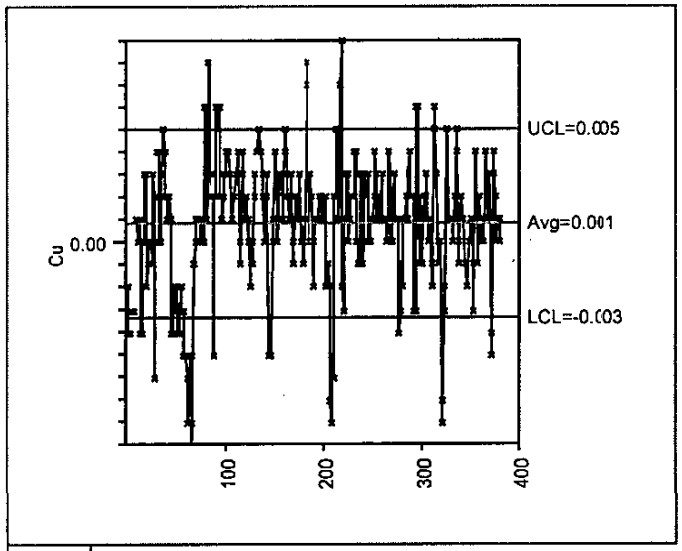


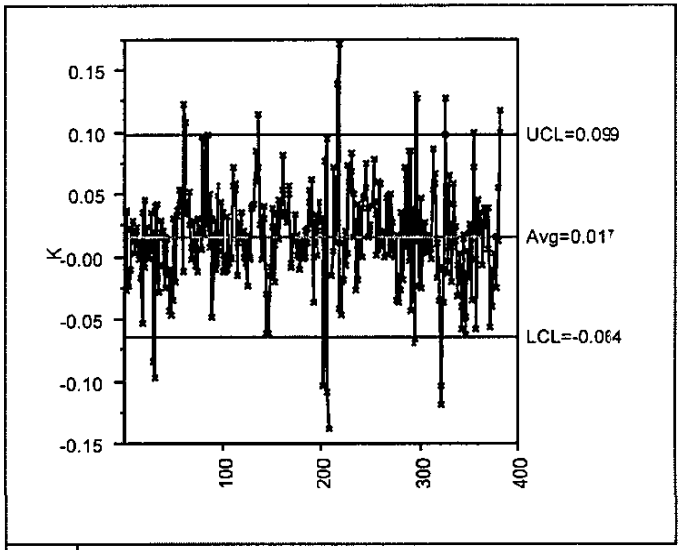
Plot D.2

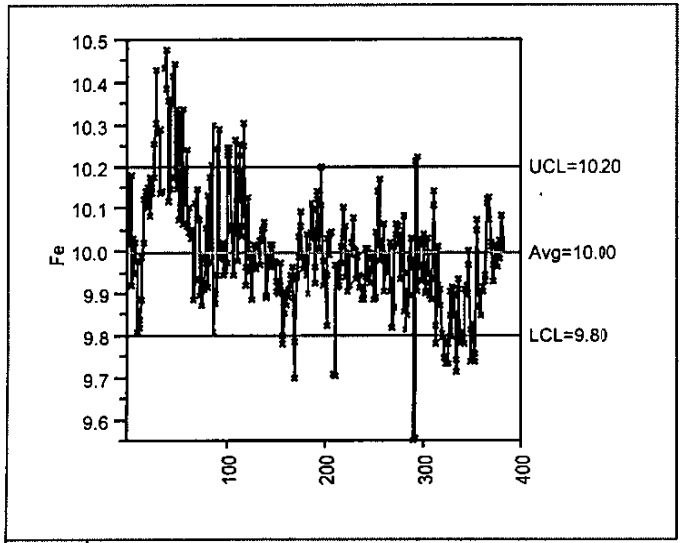
Screened Calibration Standard B, SME MA Data
Shewhart Time Sequence Plots

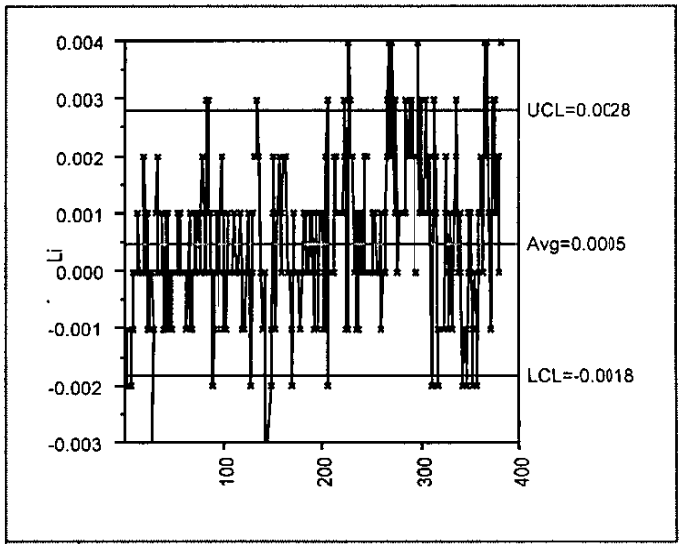


Plot D.2
Screened Calibration Standard B, SME MA Data
Shewhart Time Sequence Plots

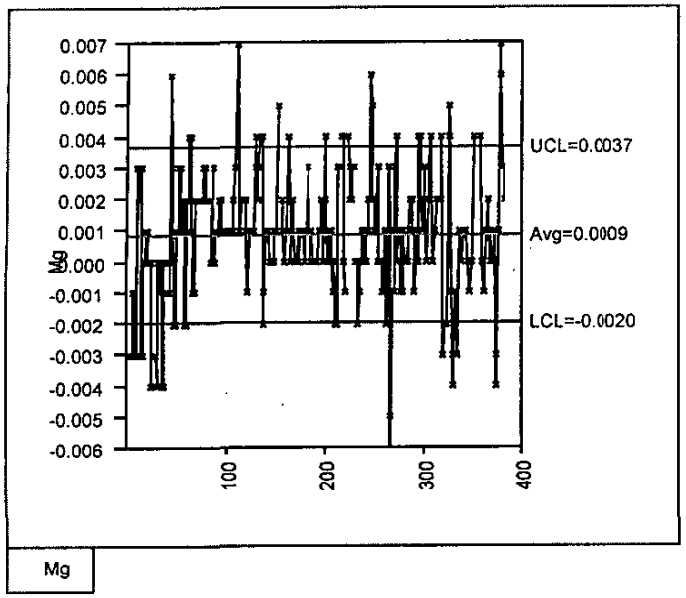


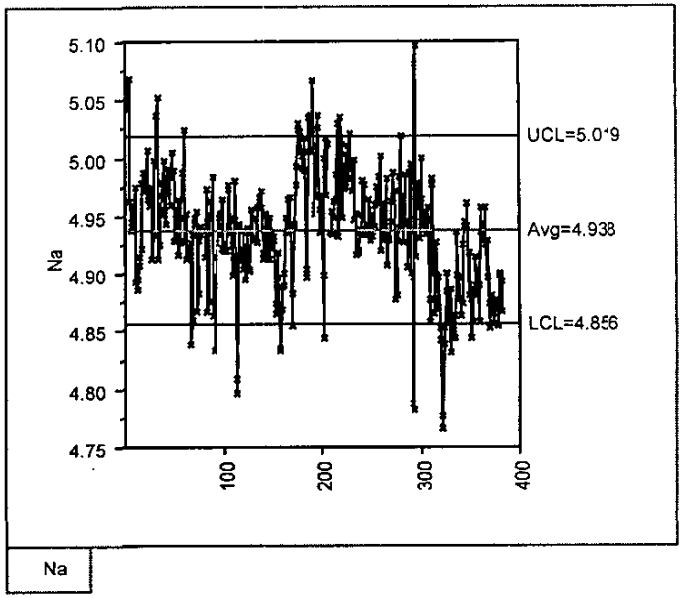


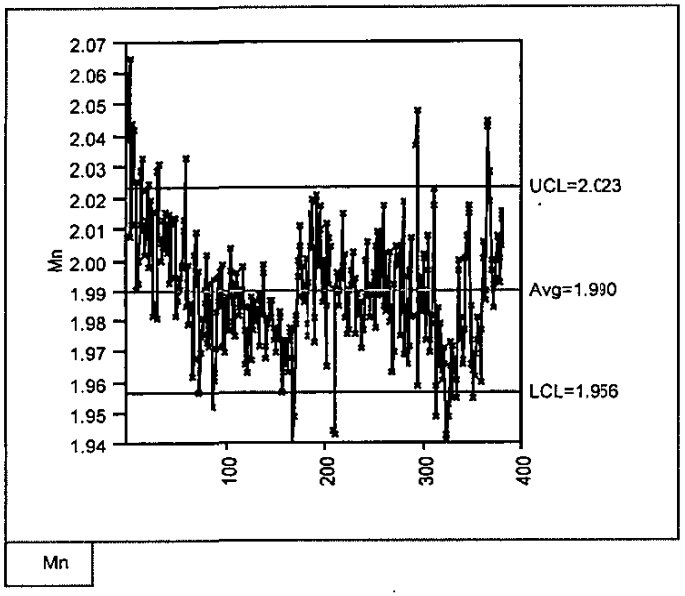


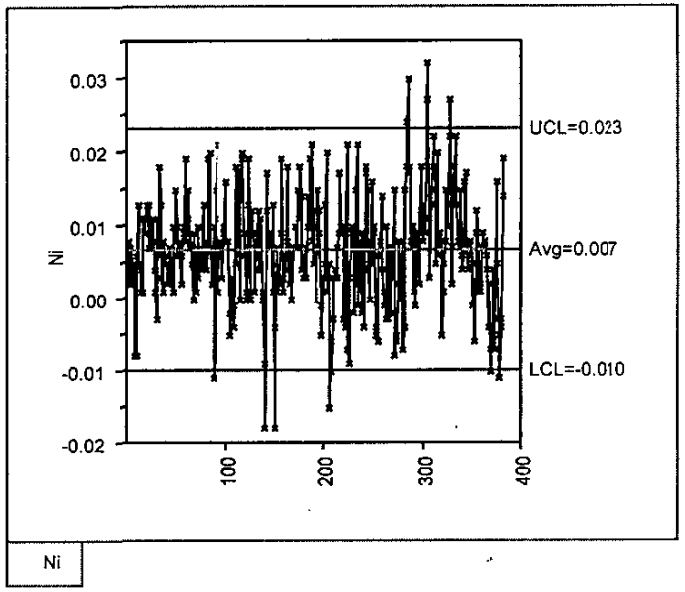


Plot D.2
Screened Calibration Standard B, SME MA Data
Shewhart Time Sequence Plots

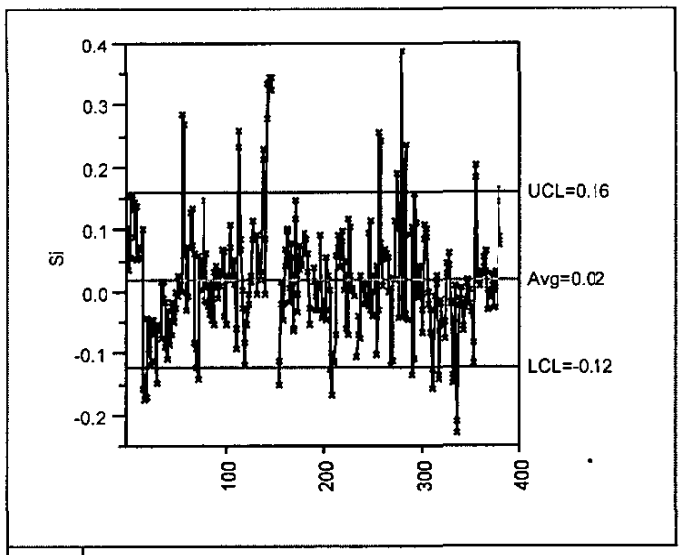


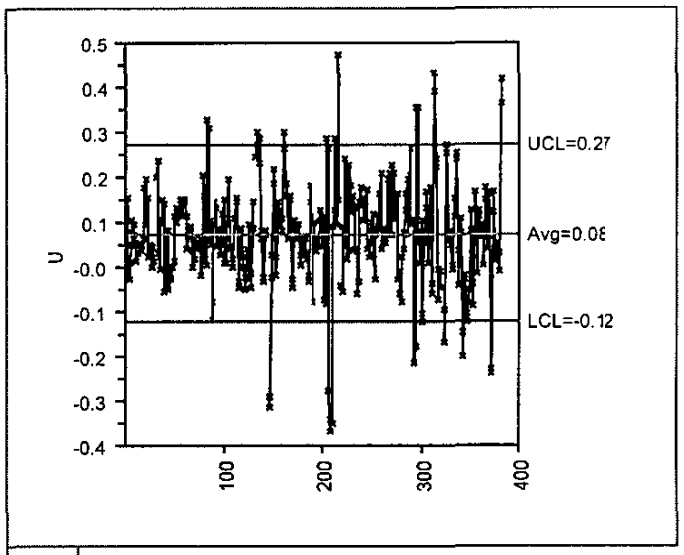


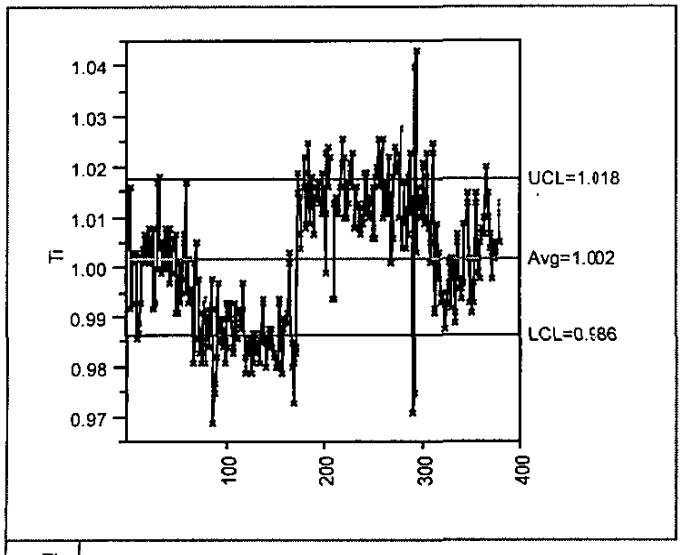


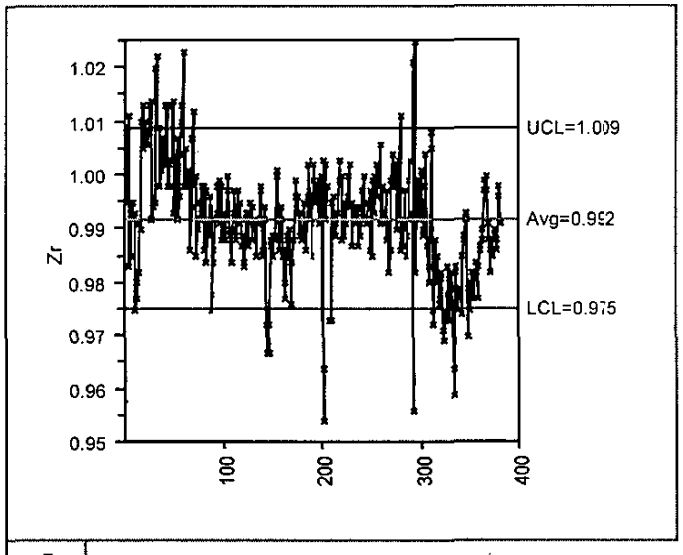


Plot D.2
Screened Calibration Standard B, SMEMA Data
Shewhart Time Sequence Plots

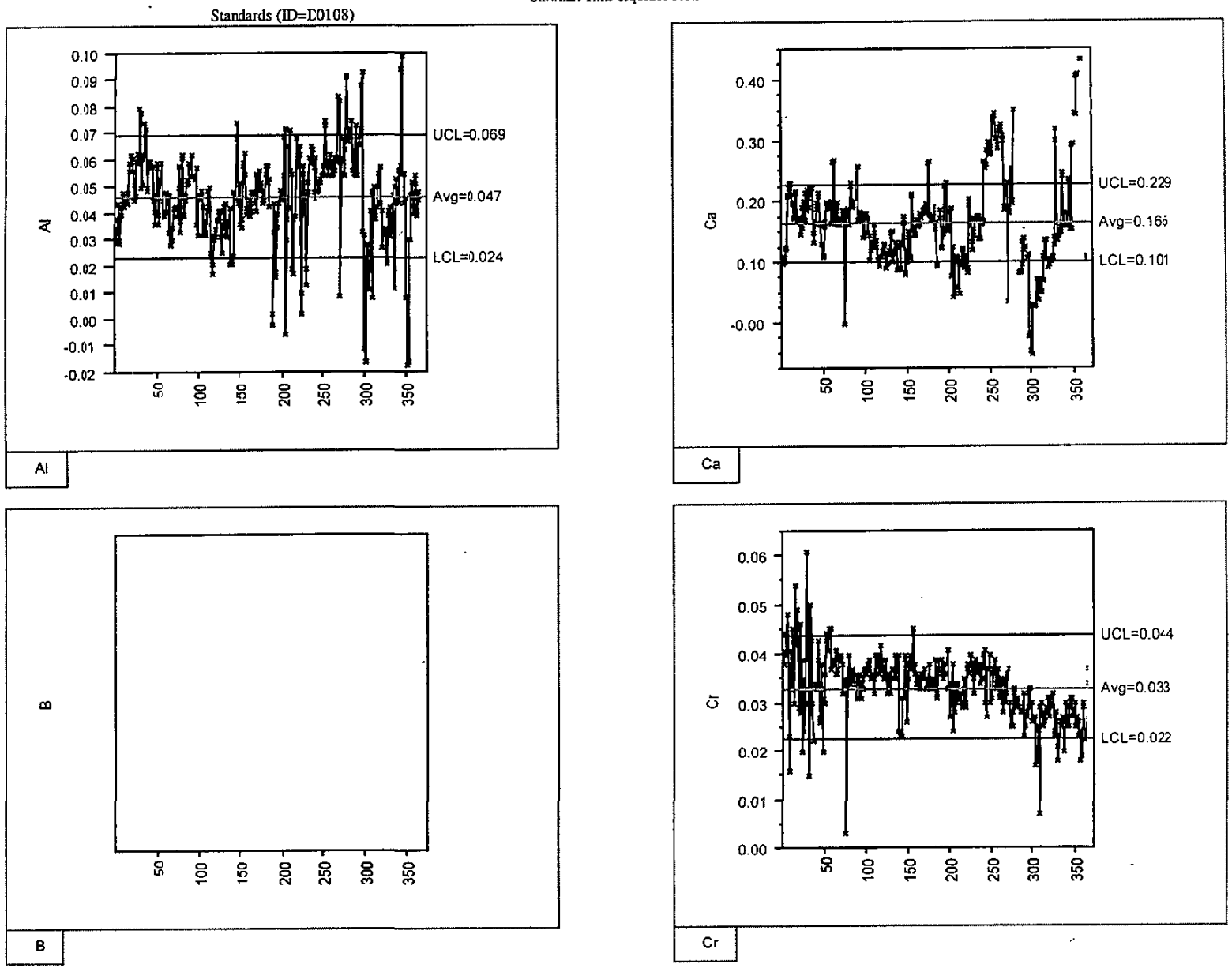




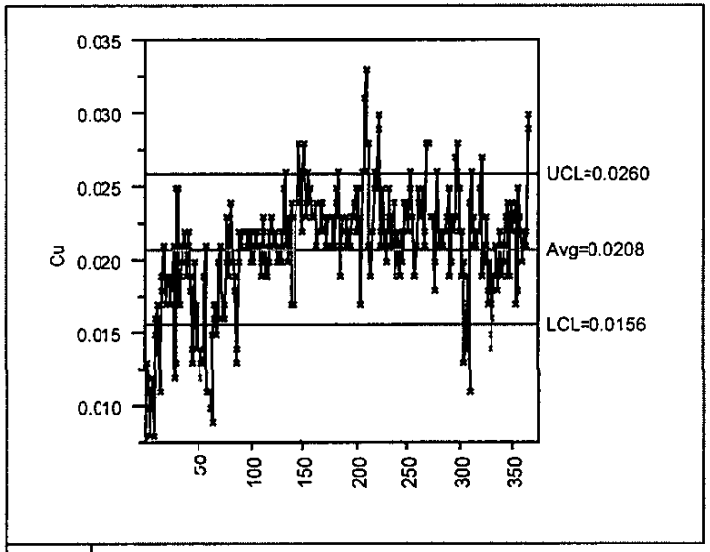


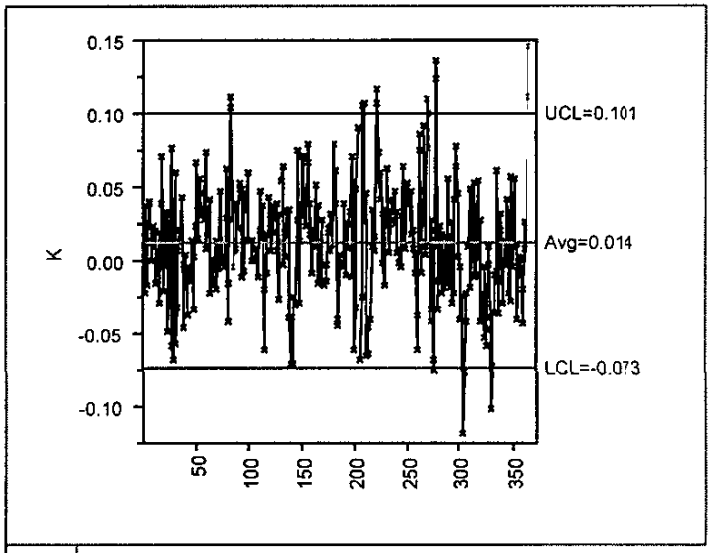


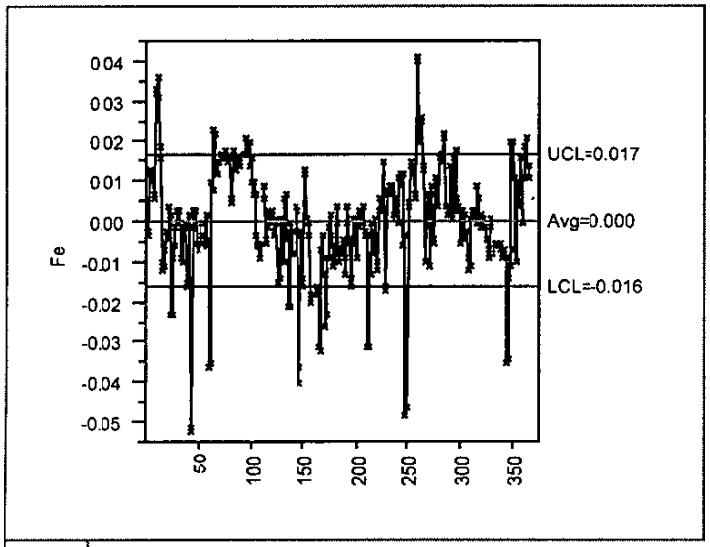
Plot D.3
Screened Calibration Standard C, SMEMA Data
Shewhart Time Sequence Plots

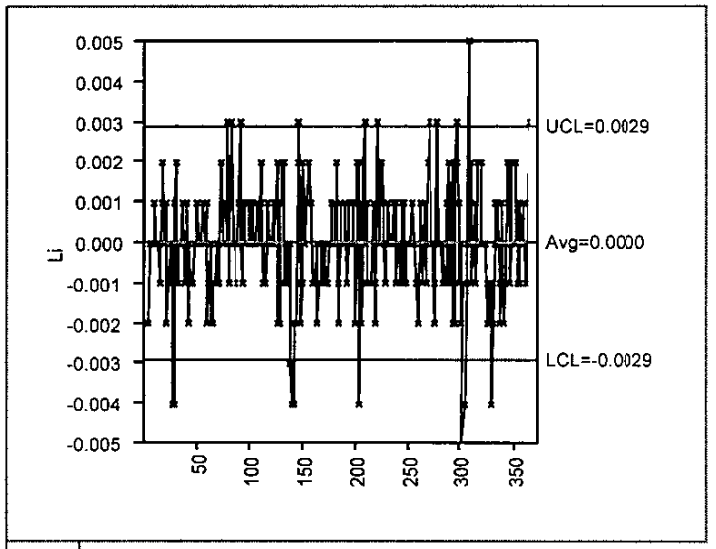


Plot D.3
Screened Calibration Standard C, SME MA Data
Shewhart Time Sequence Plots

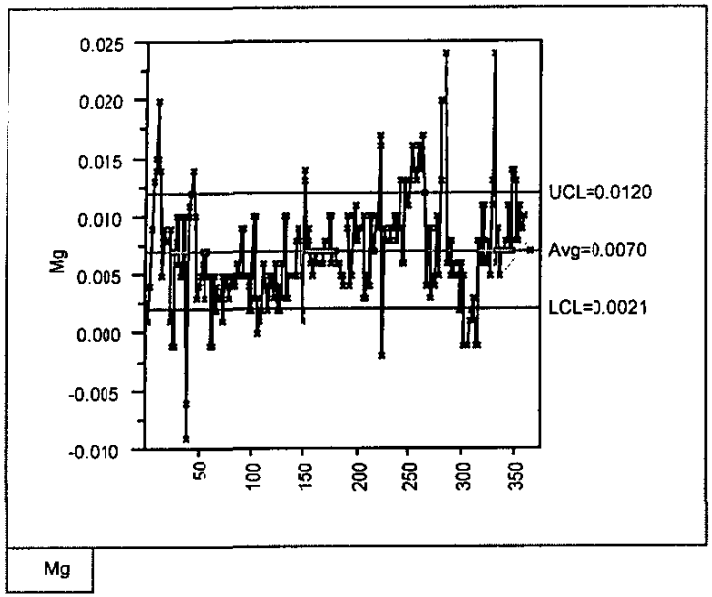


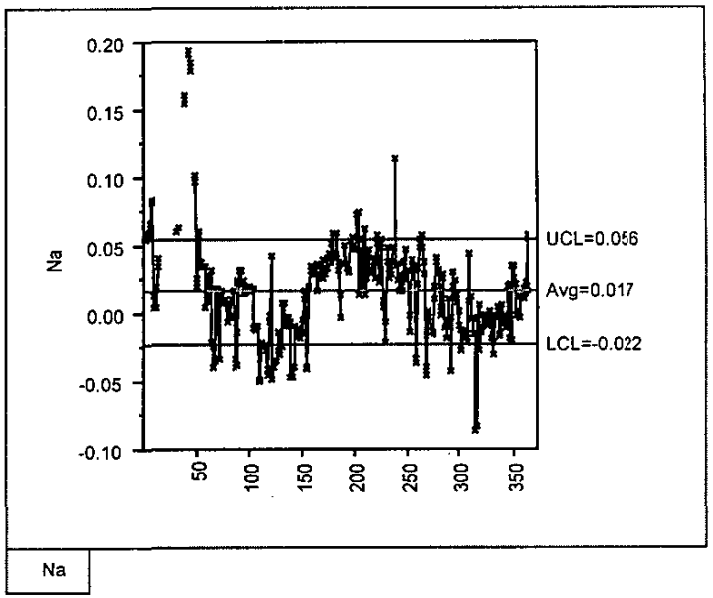


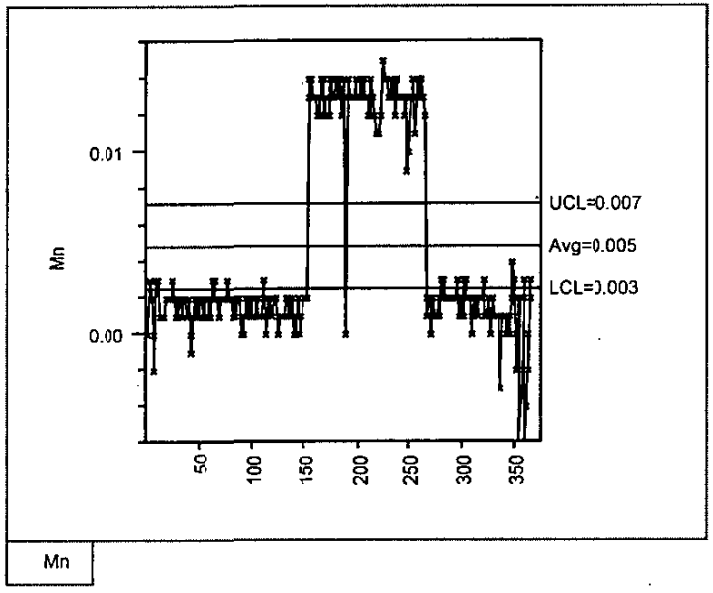


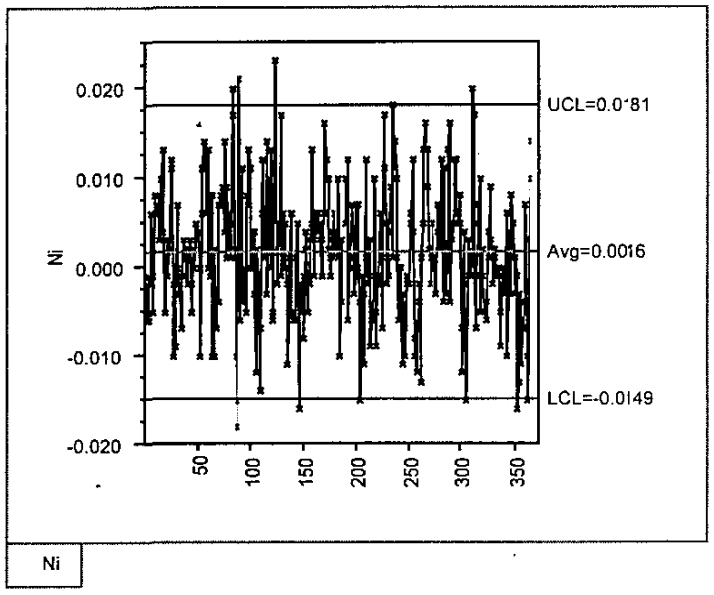


Plot D.3
Screened Calibration Standard C, SME MA Data
Shewhart Time Sequence Plots

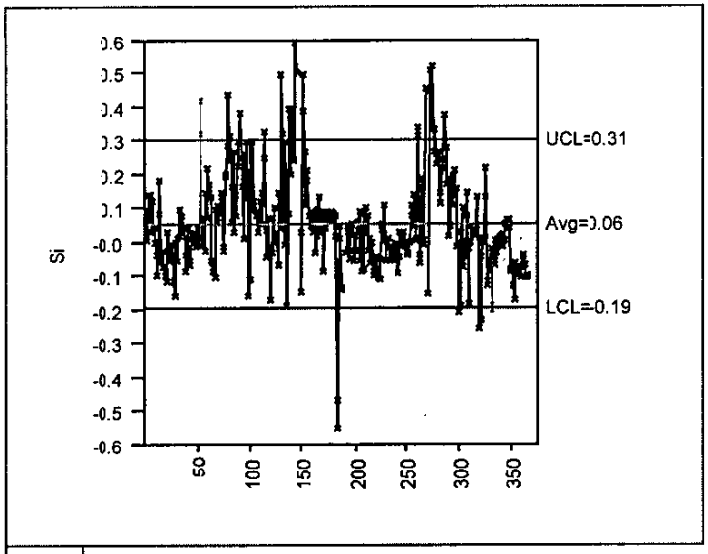


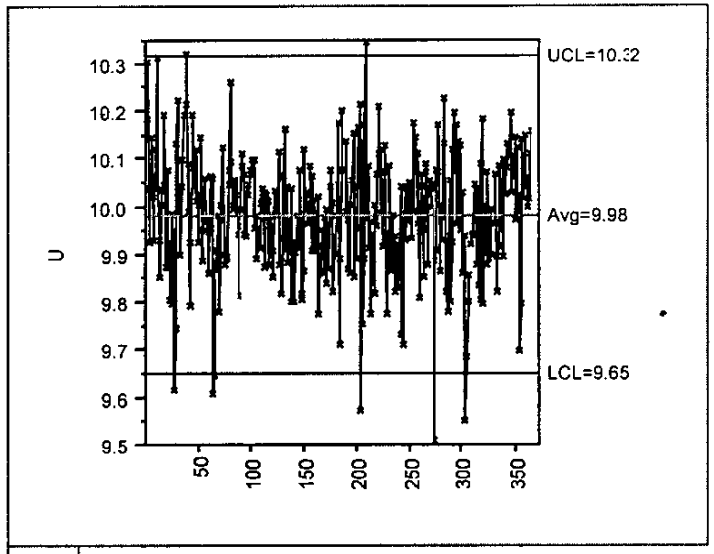


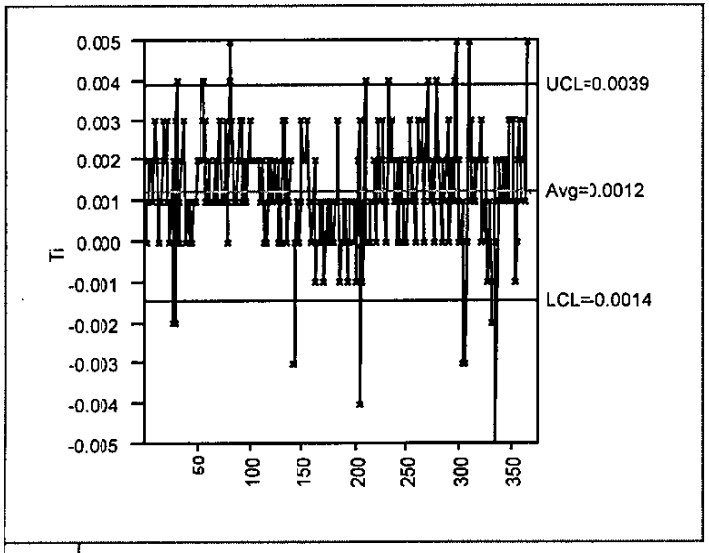


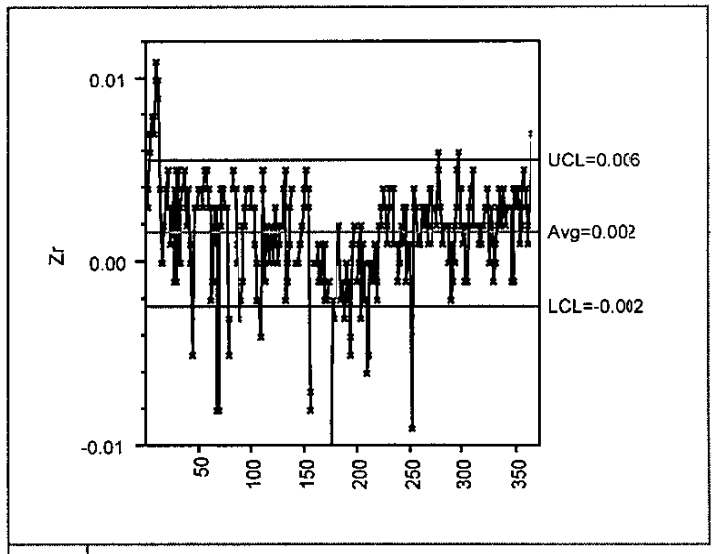


Plot D.3
Screened Calibration Standard C, SME MA Data
Shewhart Time Sequence Plots



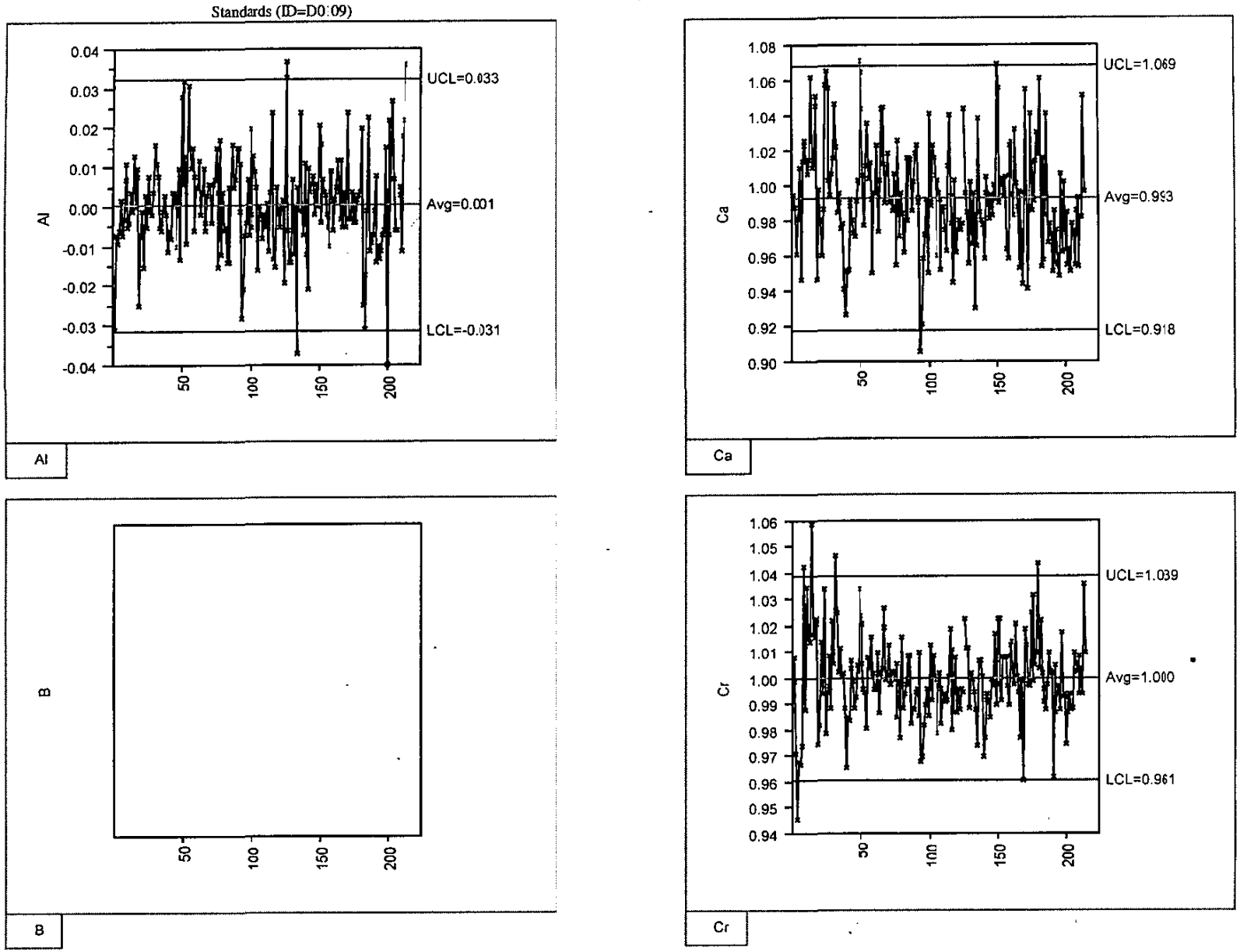




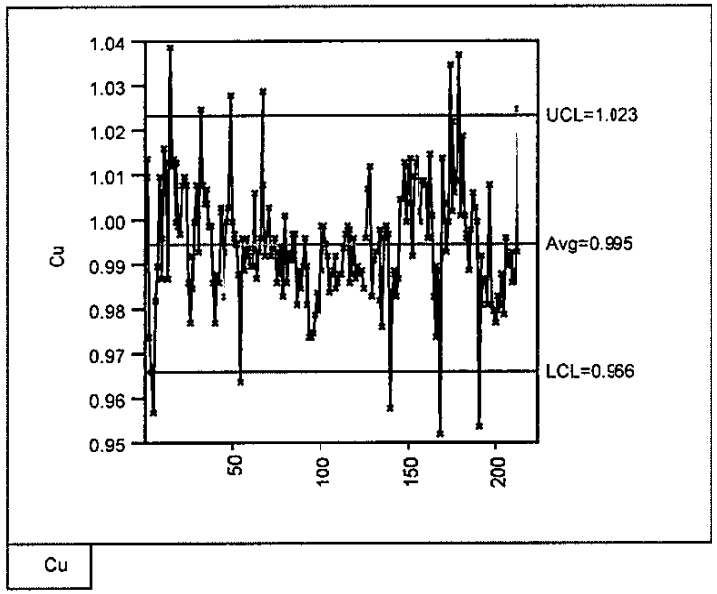


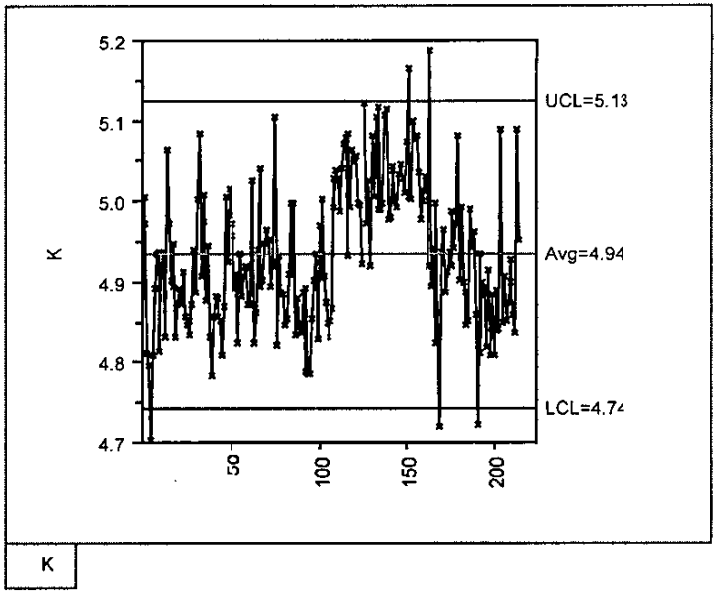
Plot D.4

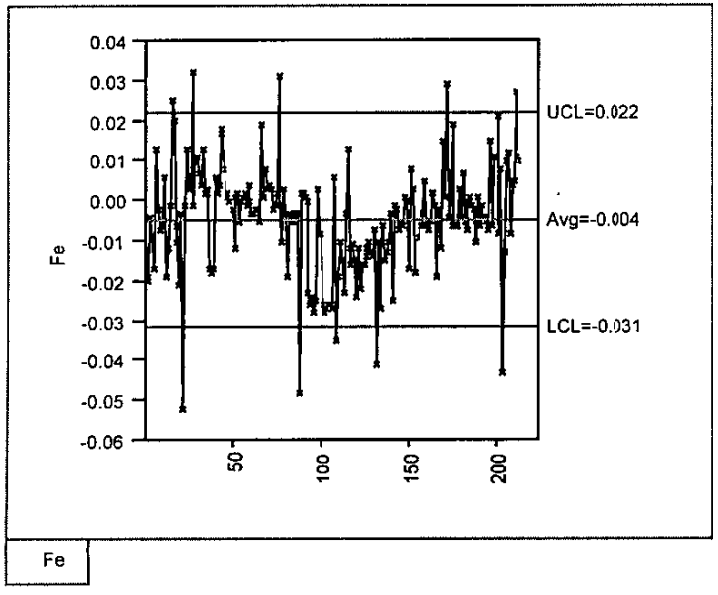
Screened Bench Standard A, SME MA Data
Shewhart Time Sequence Plots

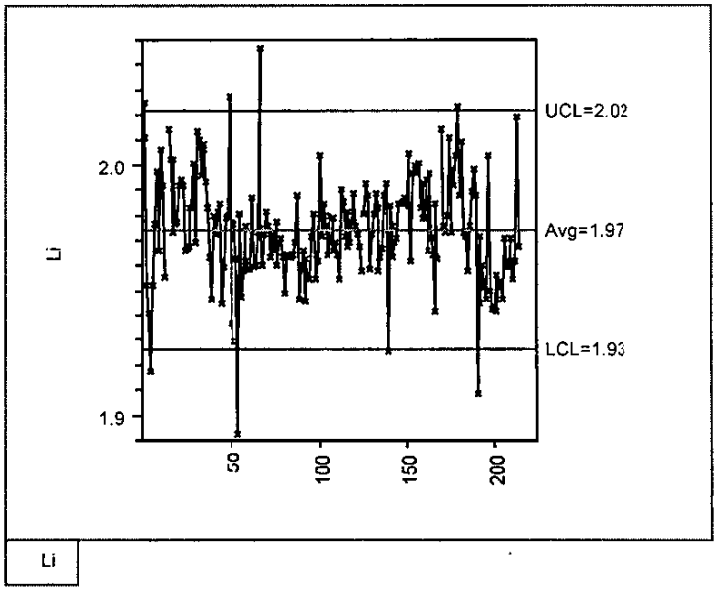


Plot D.4
Screened Bench Standard A, SME MA Data
Shewhart Time Sequence Plots

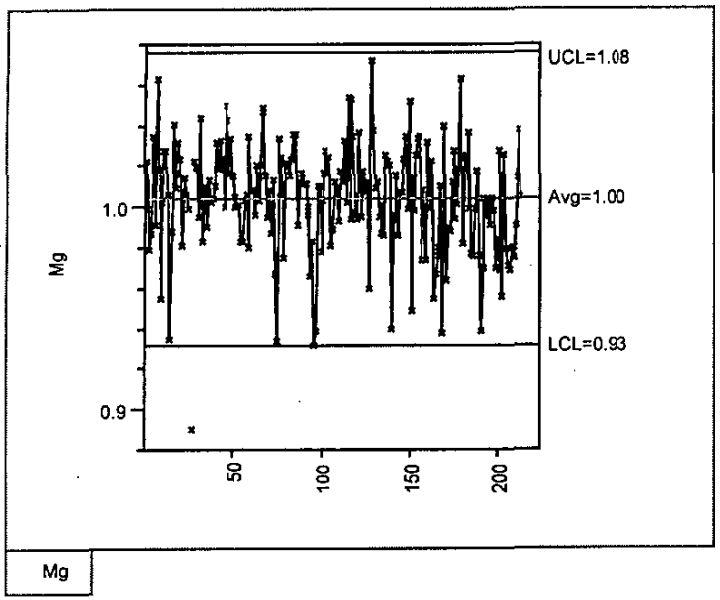


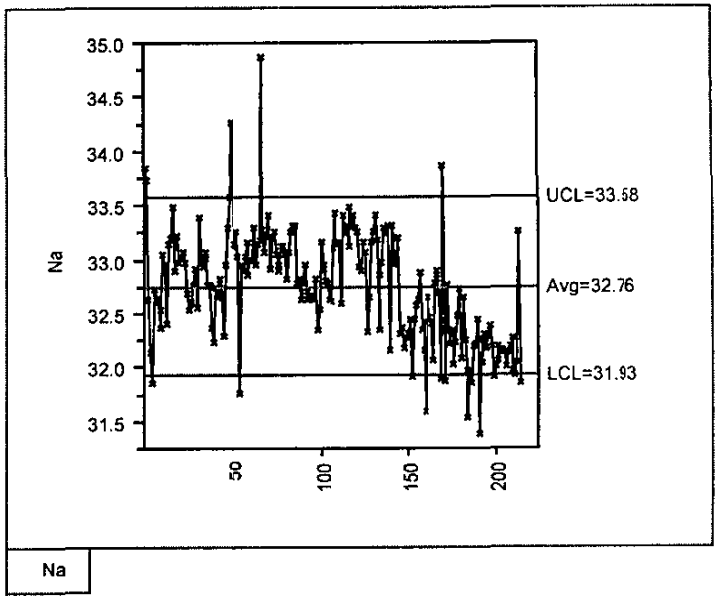


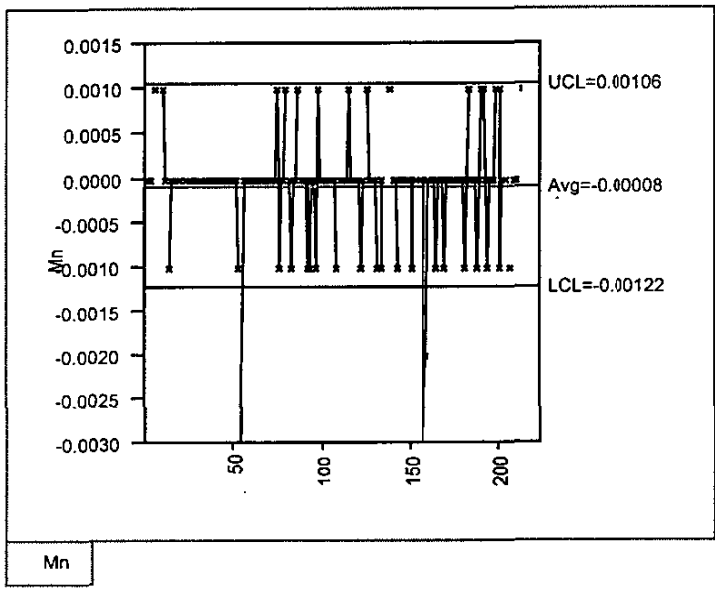


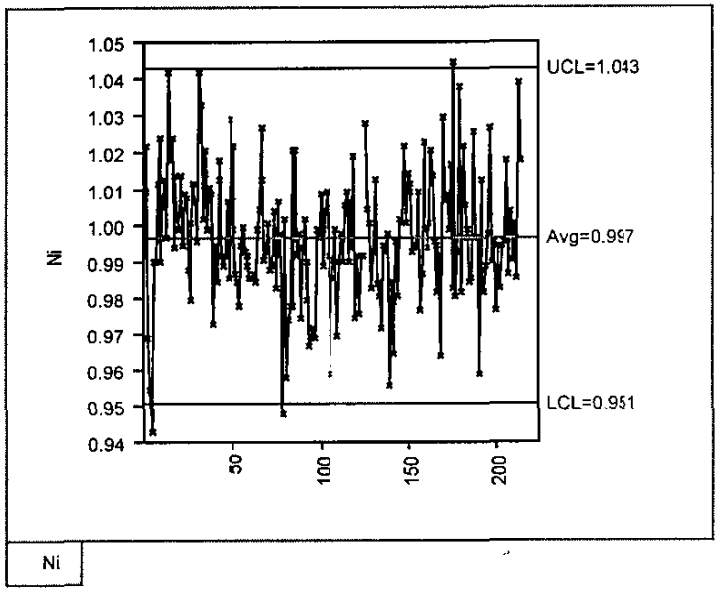


Plot D.4
Screened Bench Standard A, SME MA Data
Shewhart Time Sequence Plots

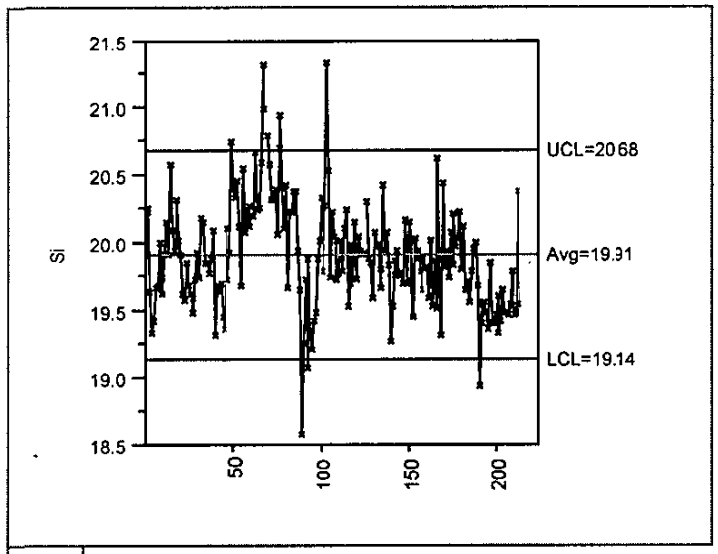


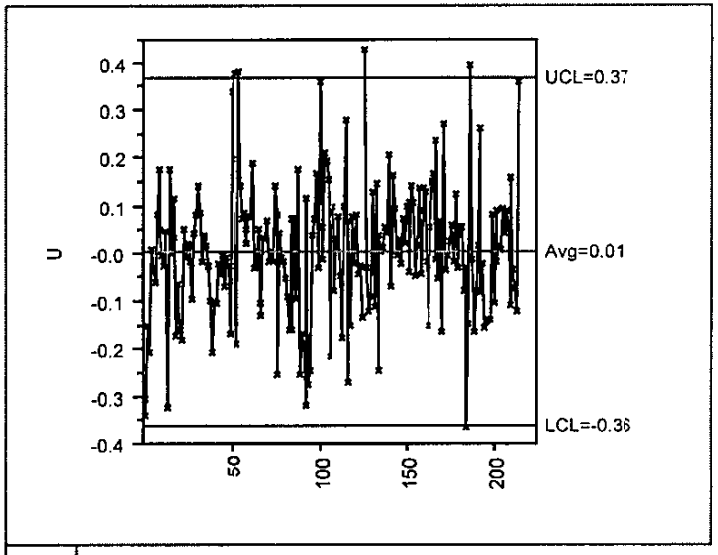


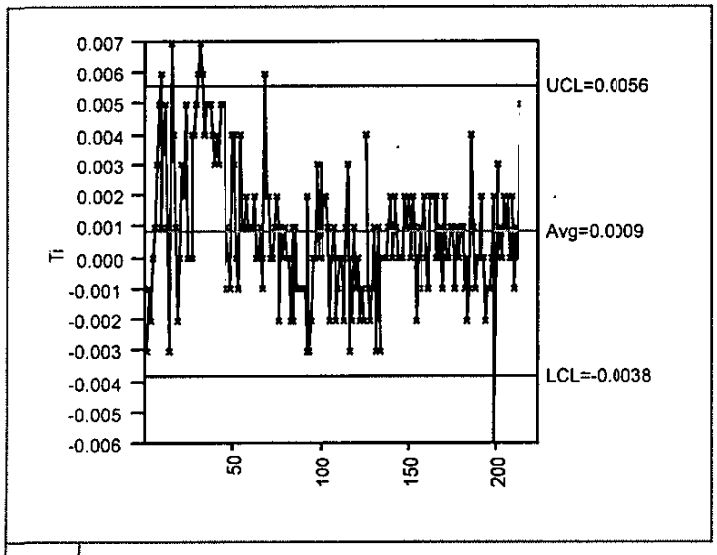


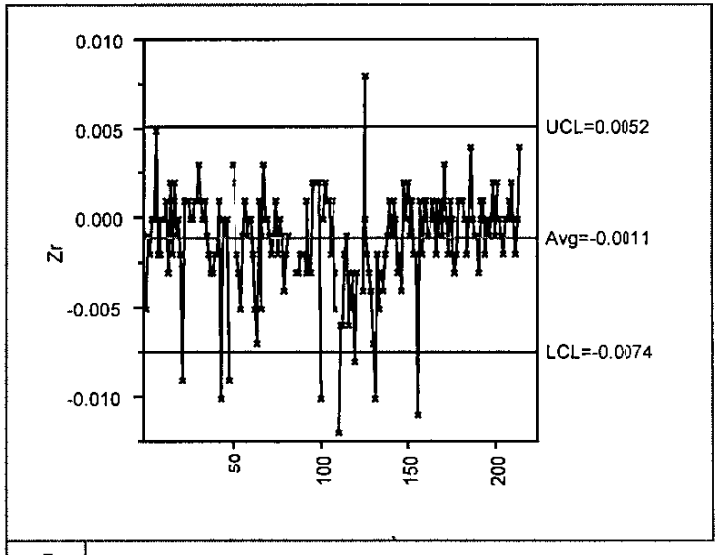


Plot D.4
Screened Bench Standard A, SME MA Data
Shewhart Time Sequence Plots

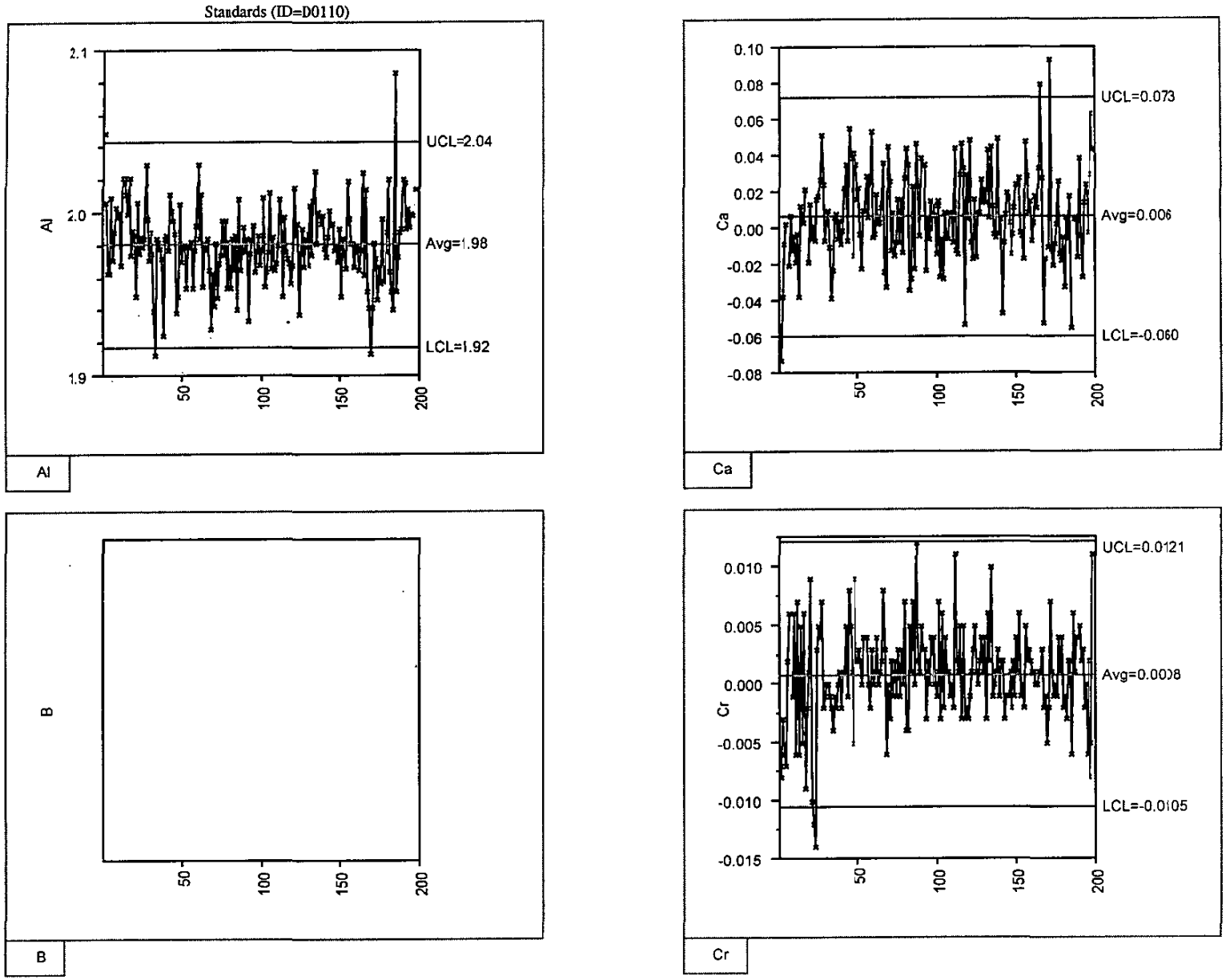




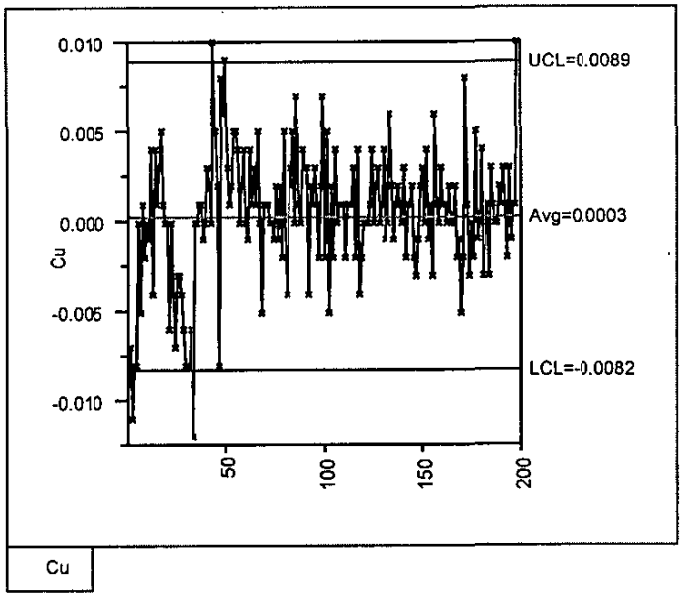


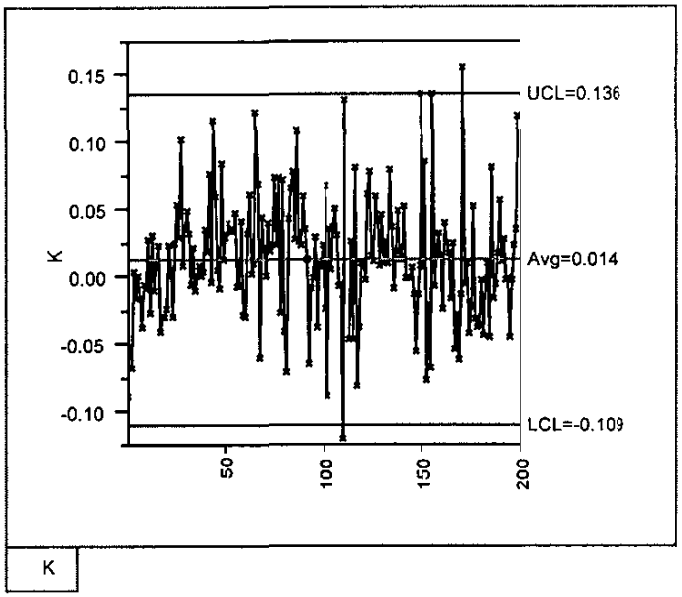


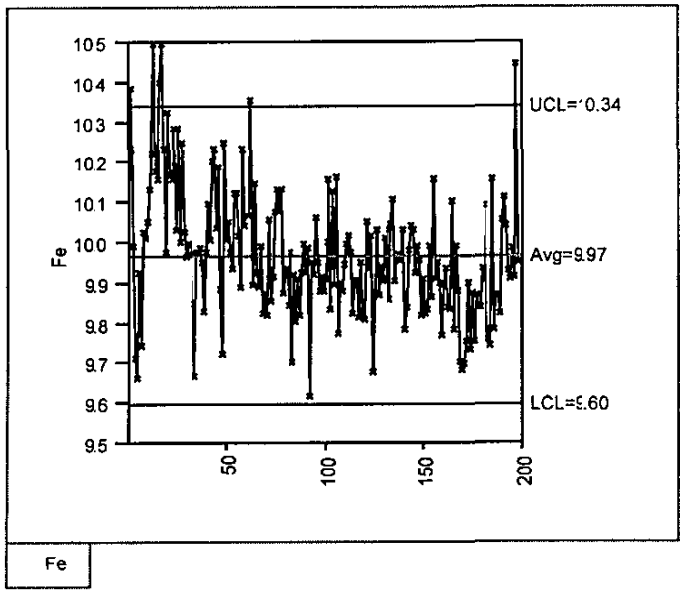
Plot D.5
Screened Bench Standard B, SME MA Data
Shewhart Time Sequence Plots

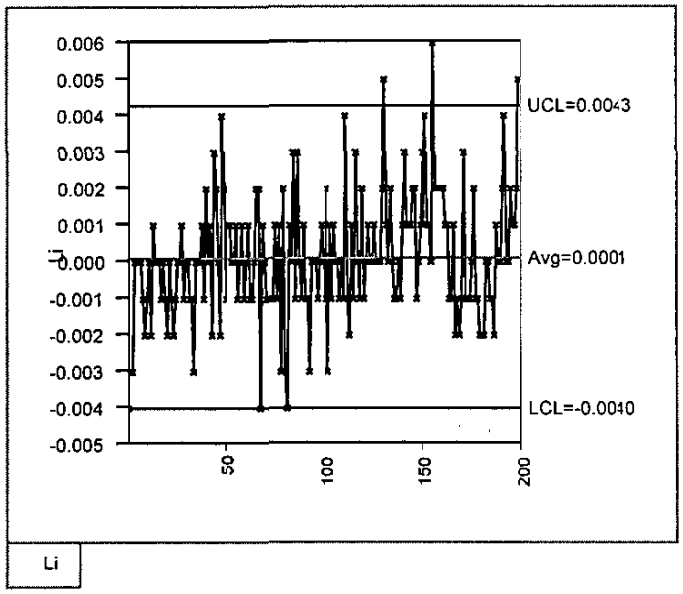


Plot D.5
Screened Bench Standard B, SME MA Data
Shewhart Time Sequence Plots

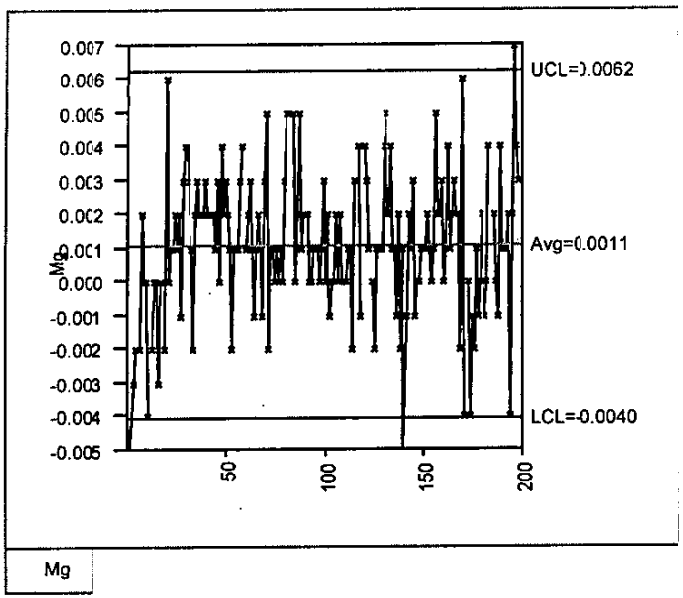


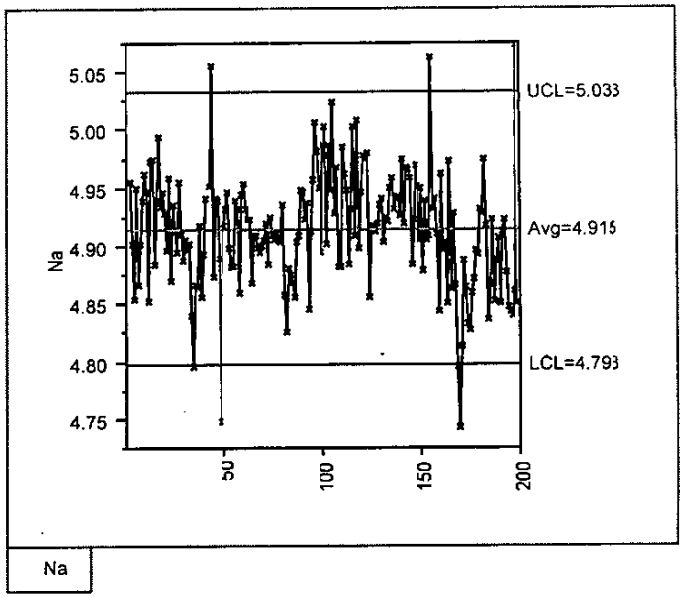


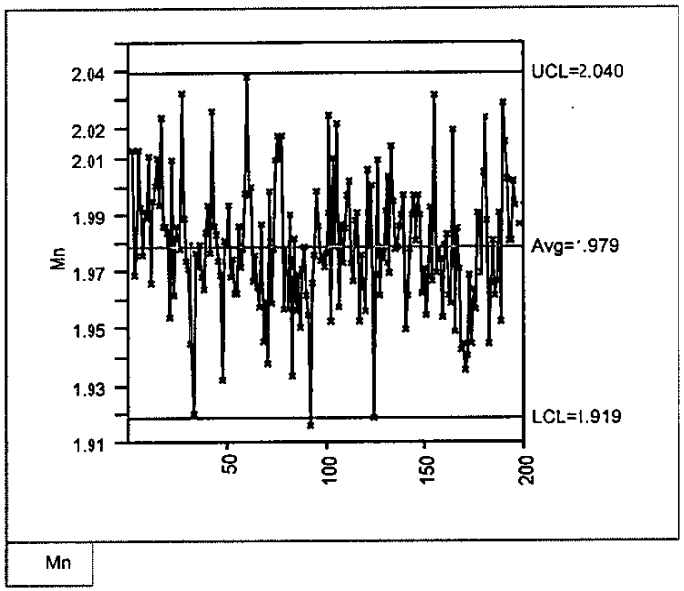


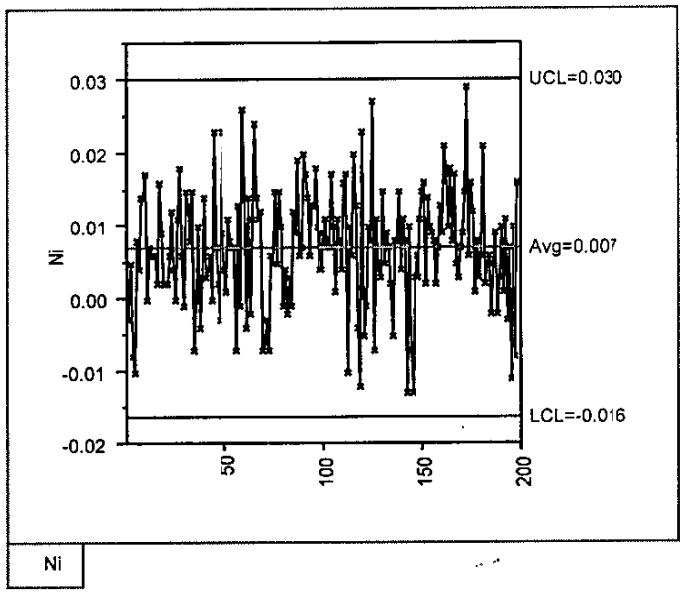


Plot D.5
Screened Bench Standard B, SME MA Data
Shewhart Time Sequence Plots

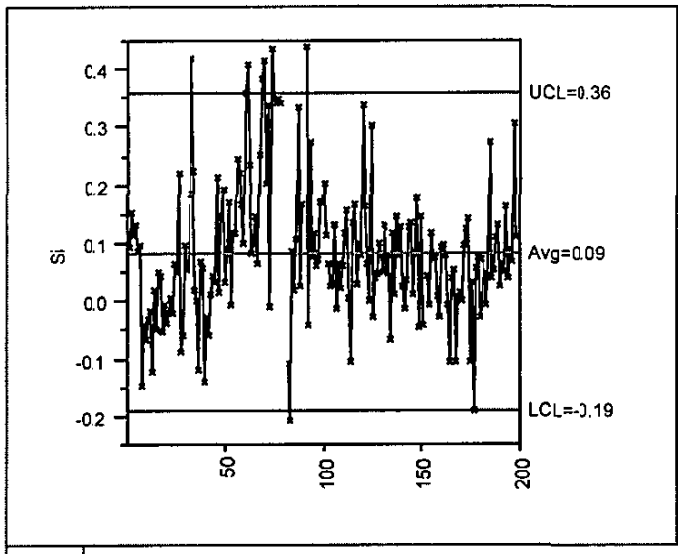


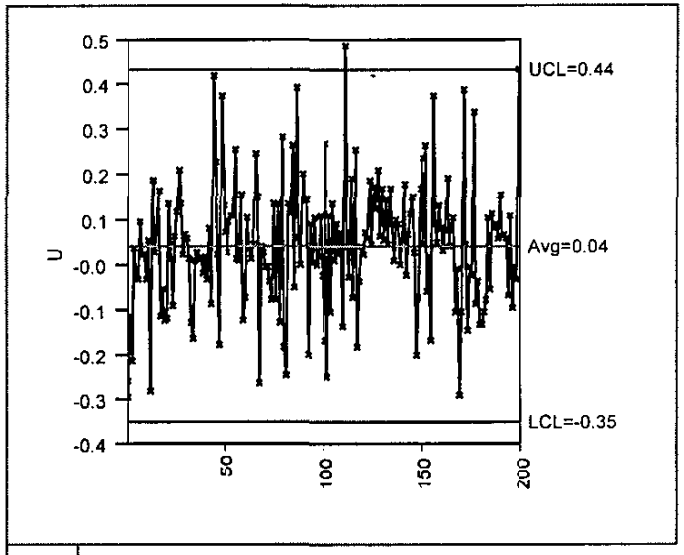


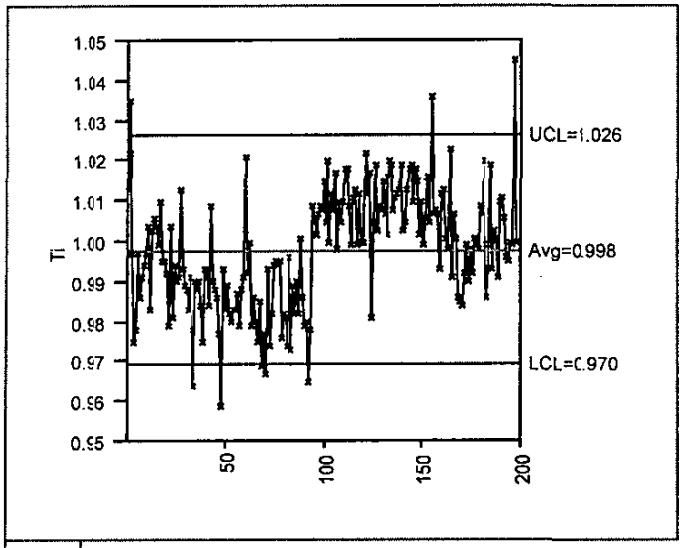


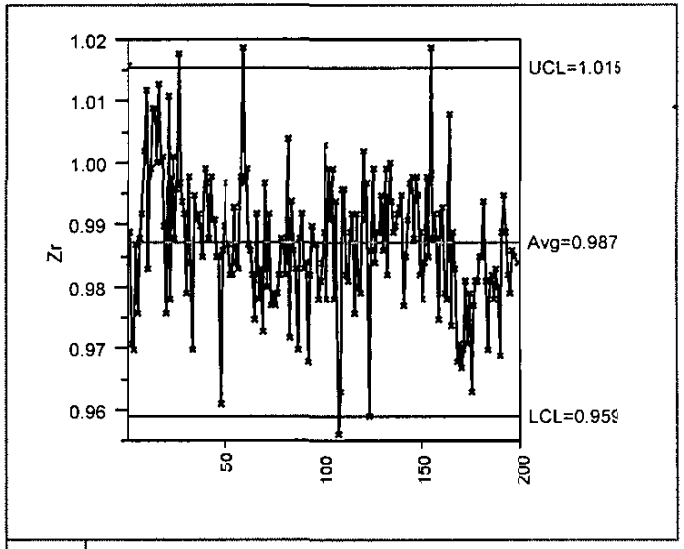


Plot D.5
Screened Bench Standard B, SME MA Data
Shewhart Time Sequence Plots

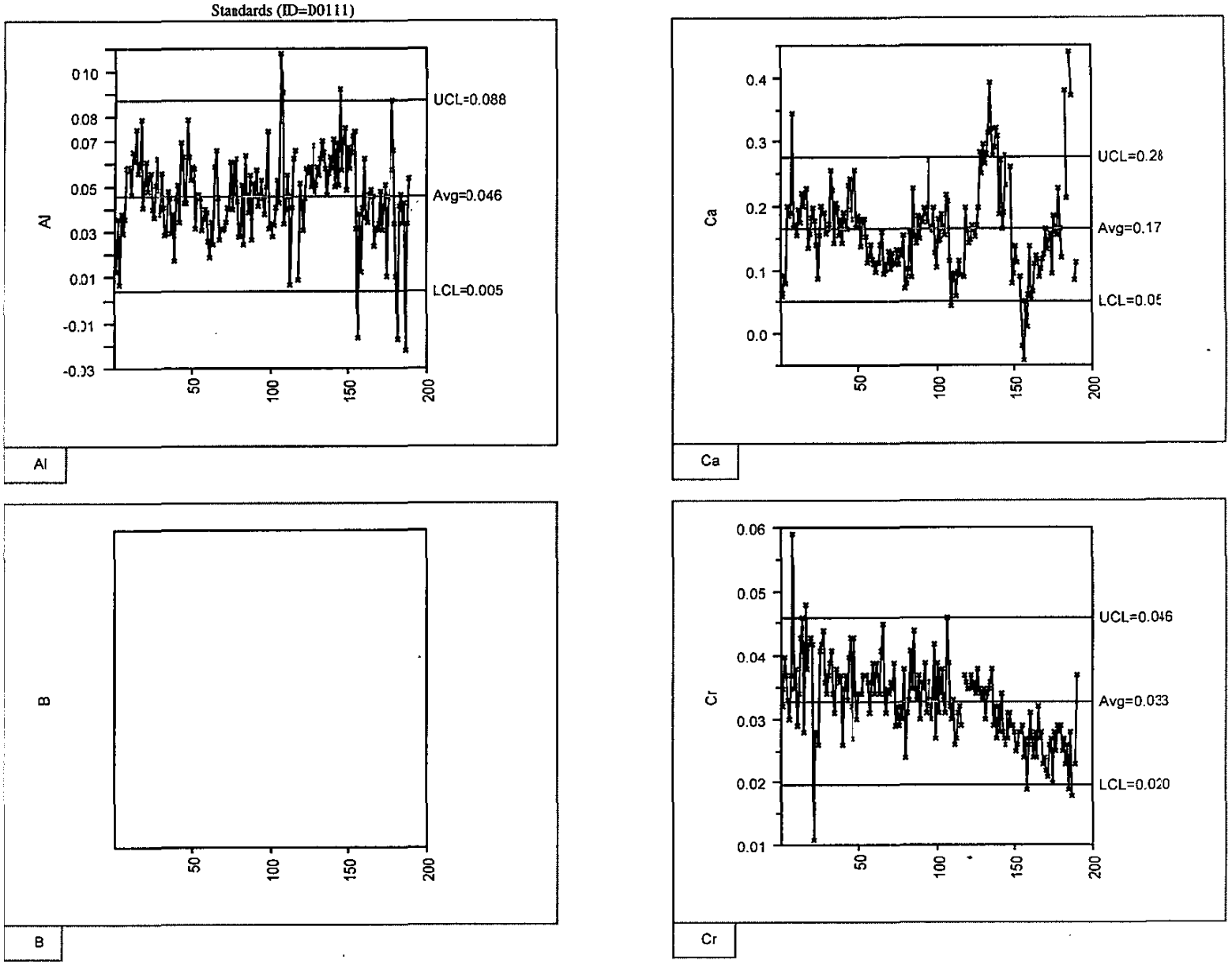




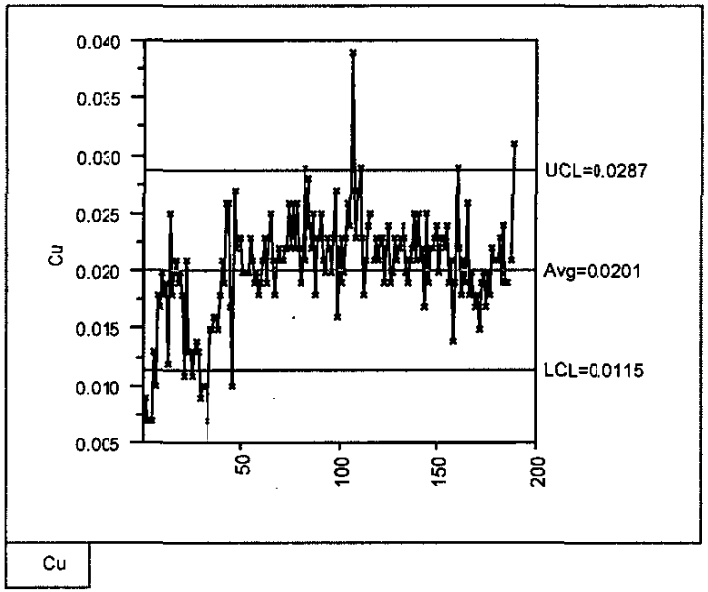


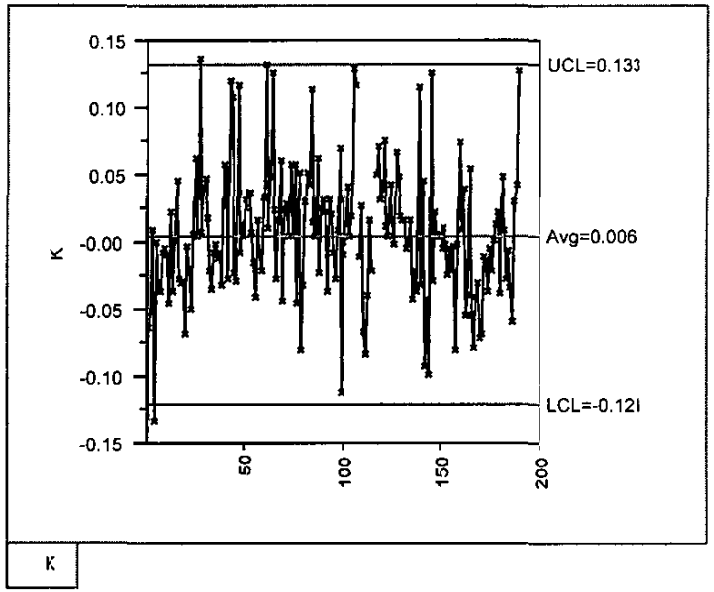


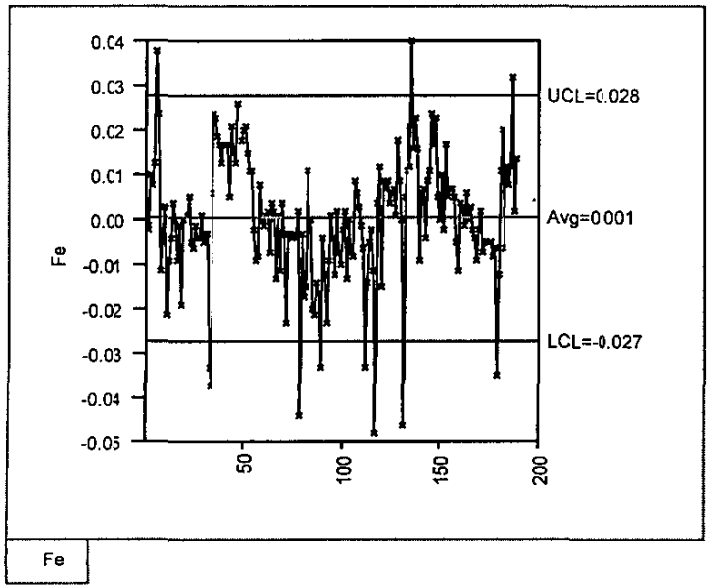
Plot D .6
Screened Bench Standard C, SME MA Data
Shewhart Time Sequence Plots

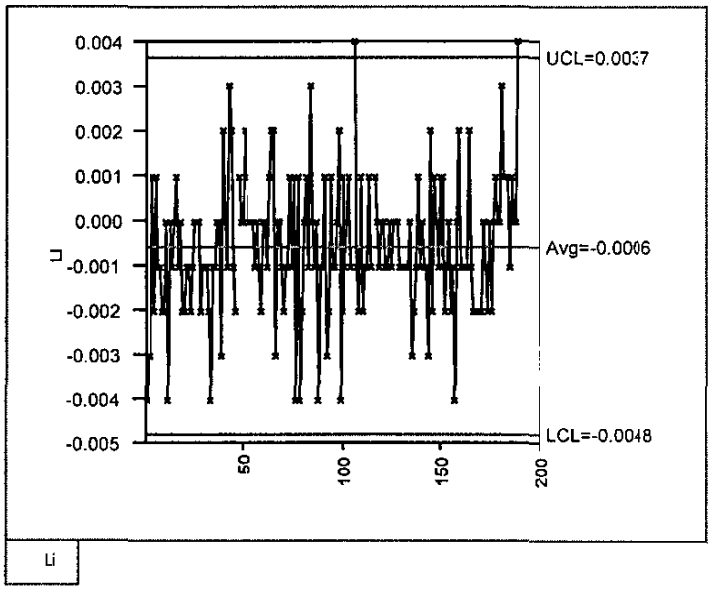


Plot D .6
Screened Bench Standard C, SME MA Data
Shewhart Time Sequence Plots

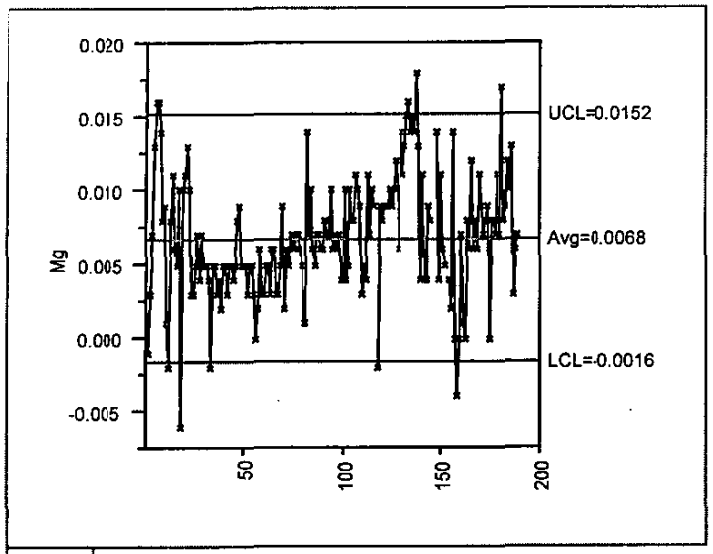


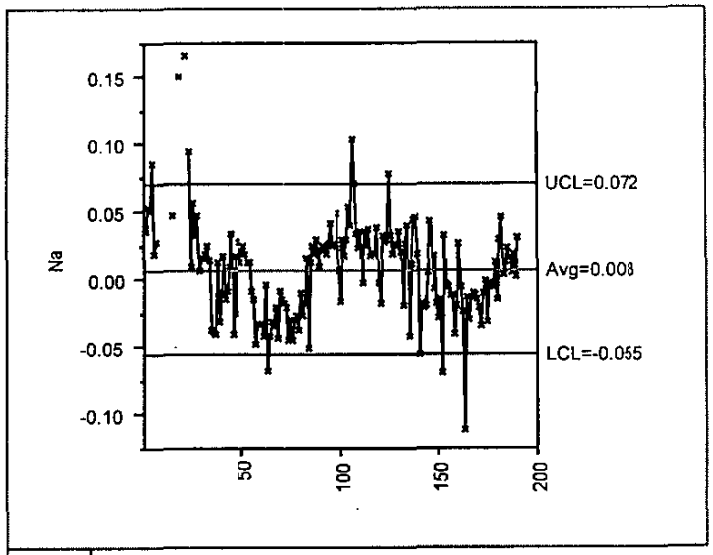


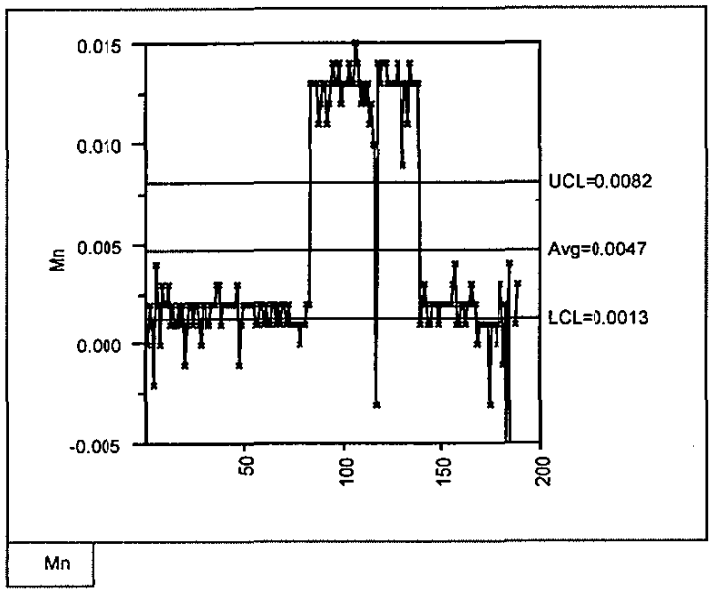


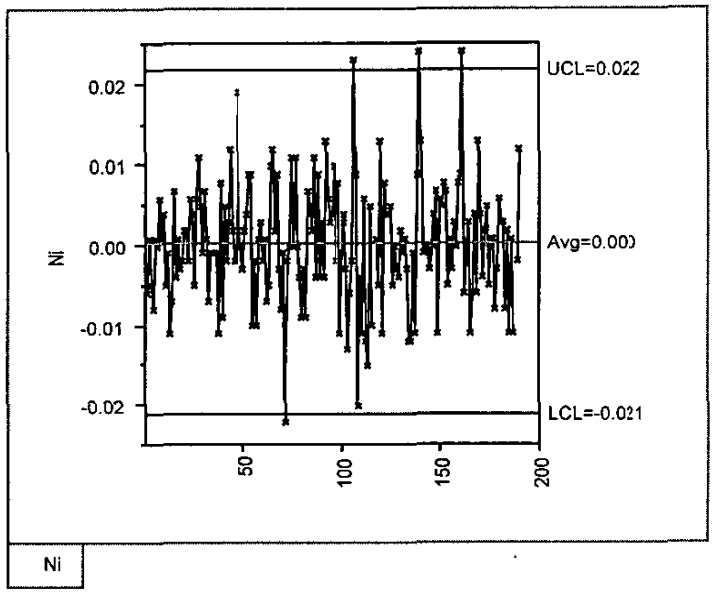


Plot D .6
Screened Bench Standard C, SME MA Data
Shewhart Time Sequence Plots

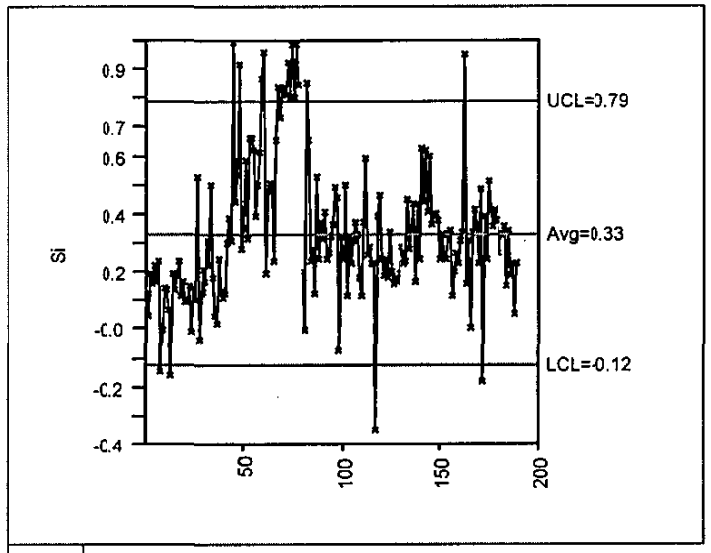


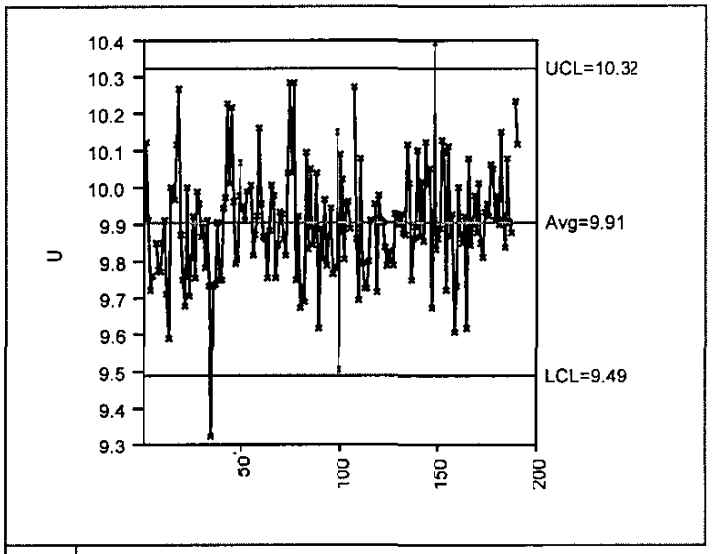


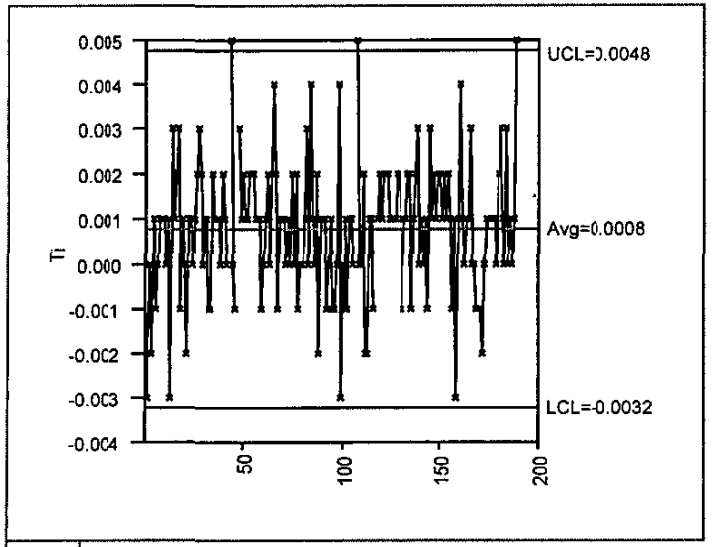


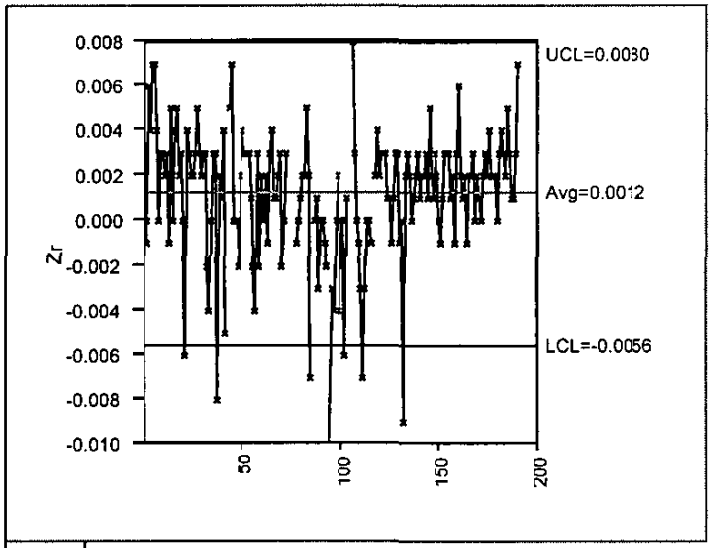


Plot D .6
Screened Bench Standard C, SME MA Data
Shewhart Time Sequence Plots

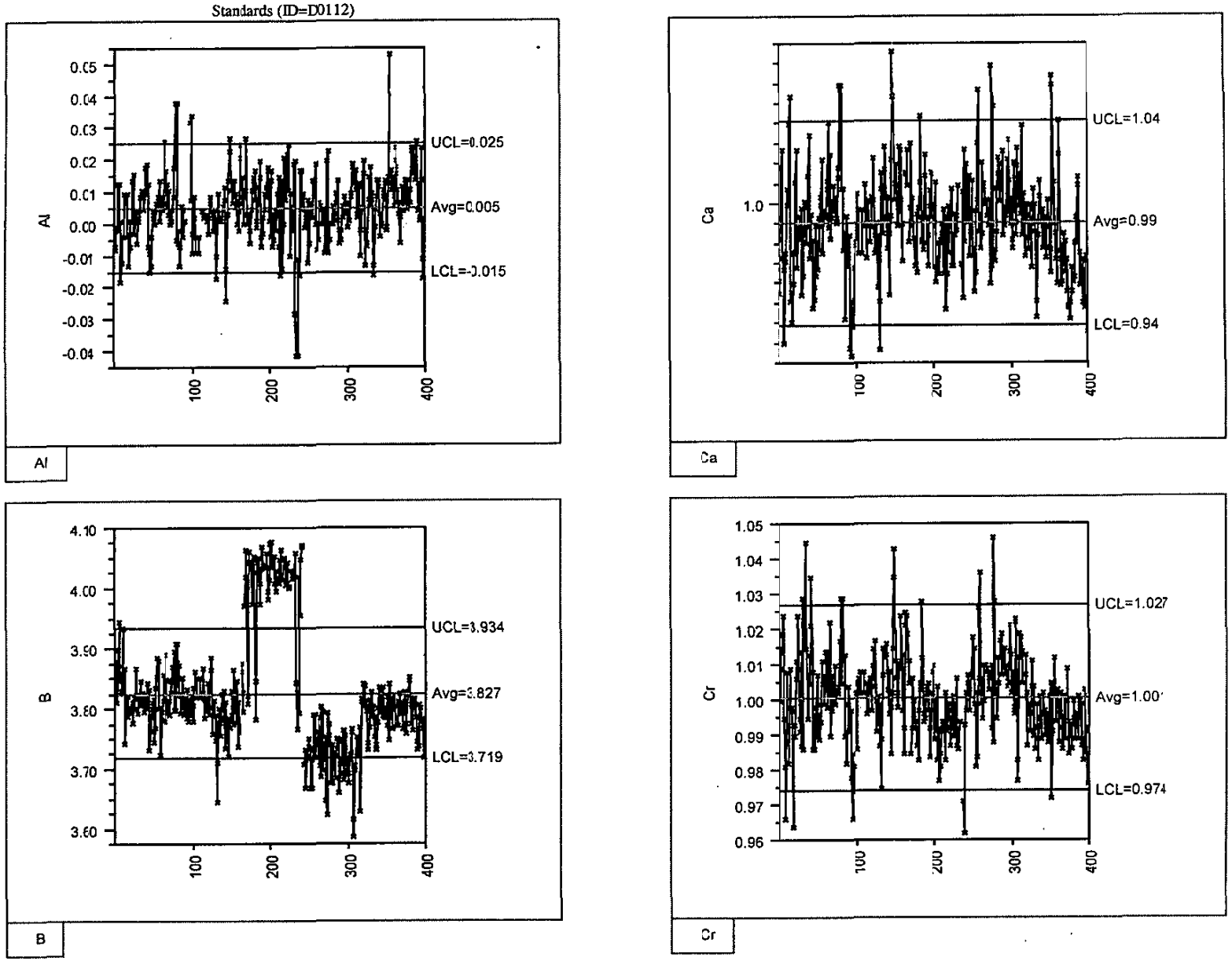




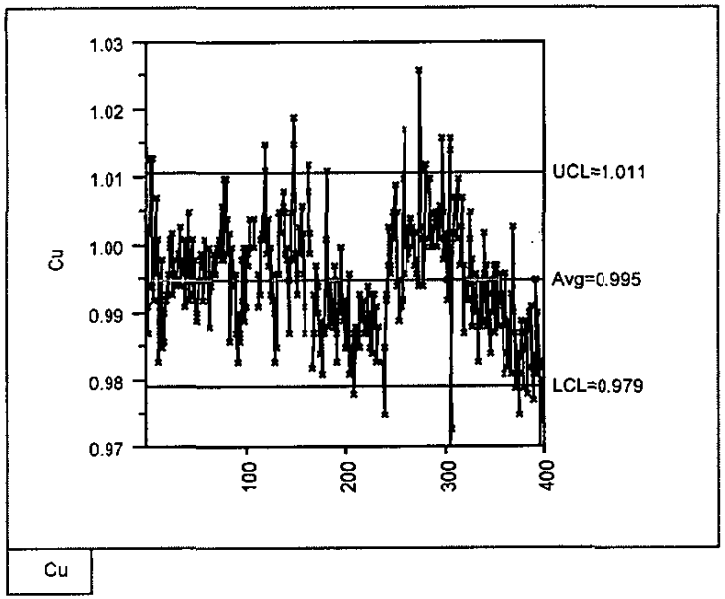


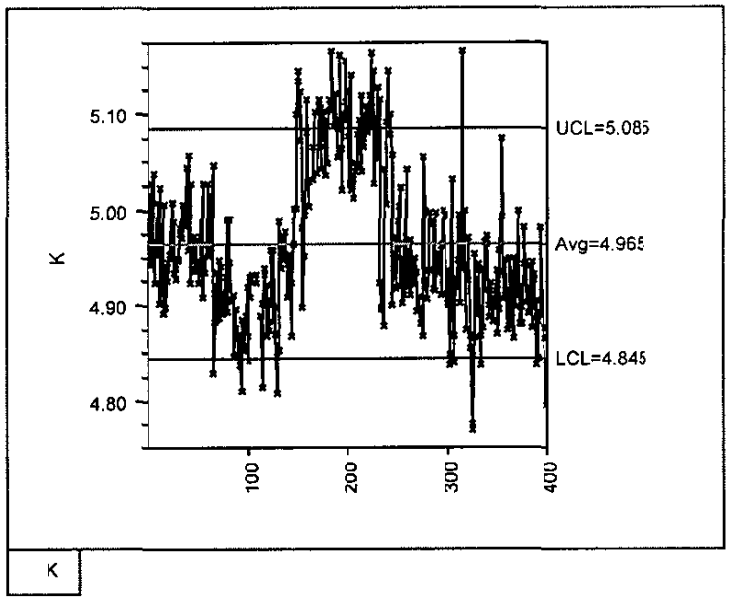


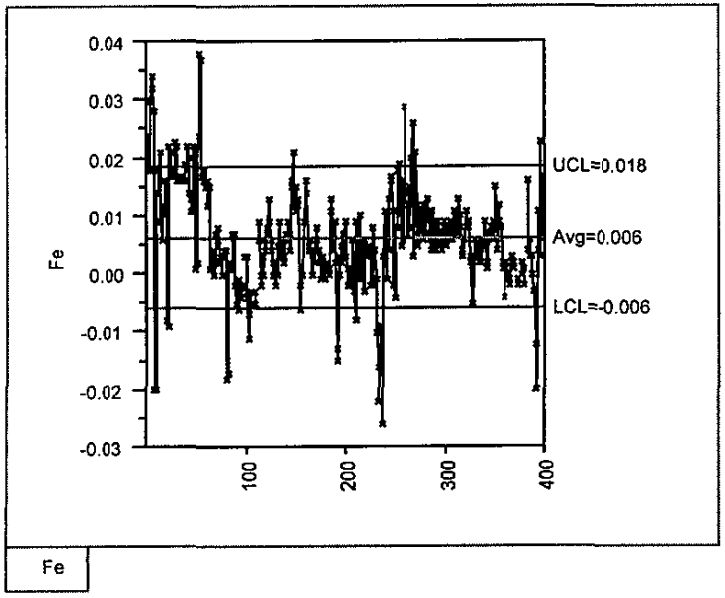
Plot D.7
Screened Calibration Standard A, SME FS Data
Shewhart Time Sequence Plots

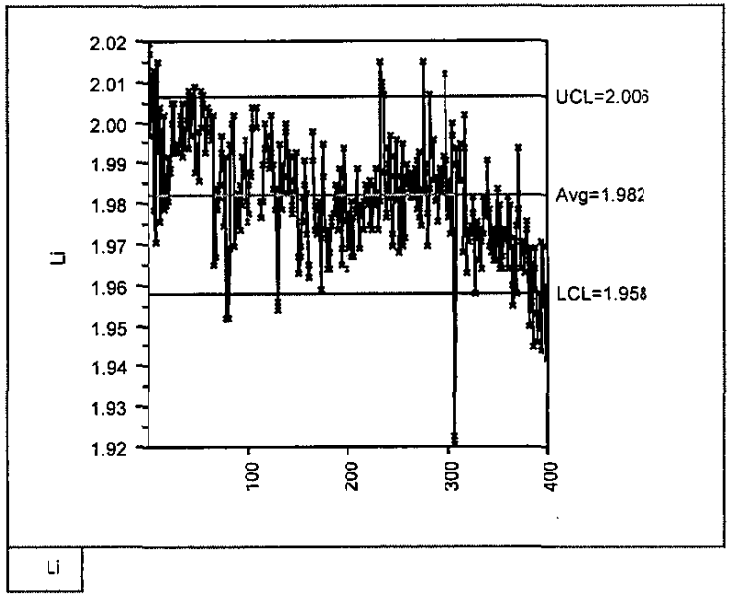


Plot D.7
Screened Calibration Stardard A, SME FS Data
Shewhart Time Sequence Plots

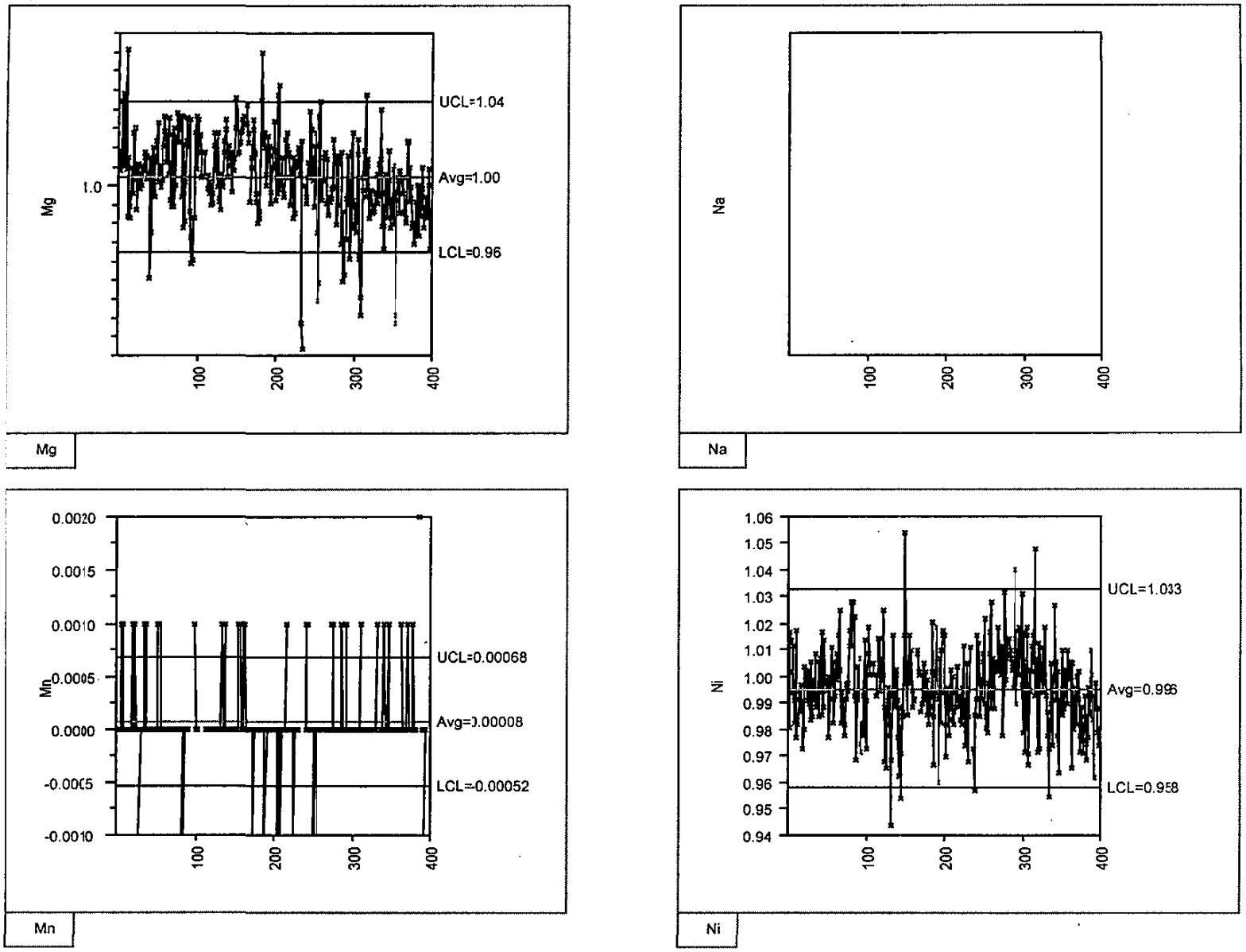




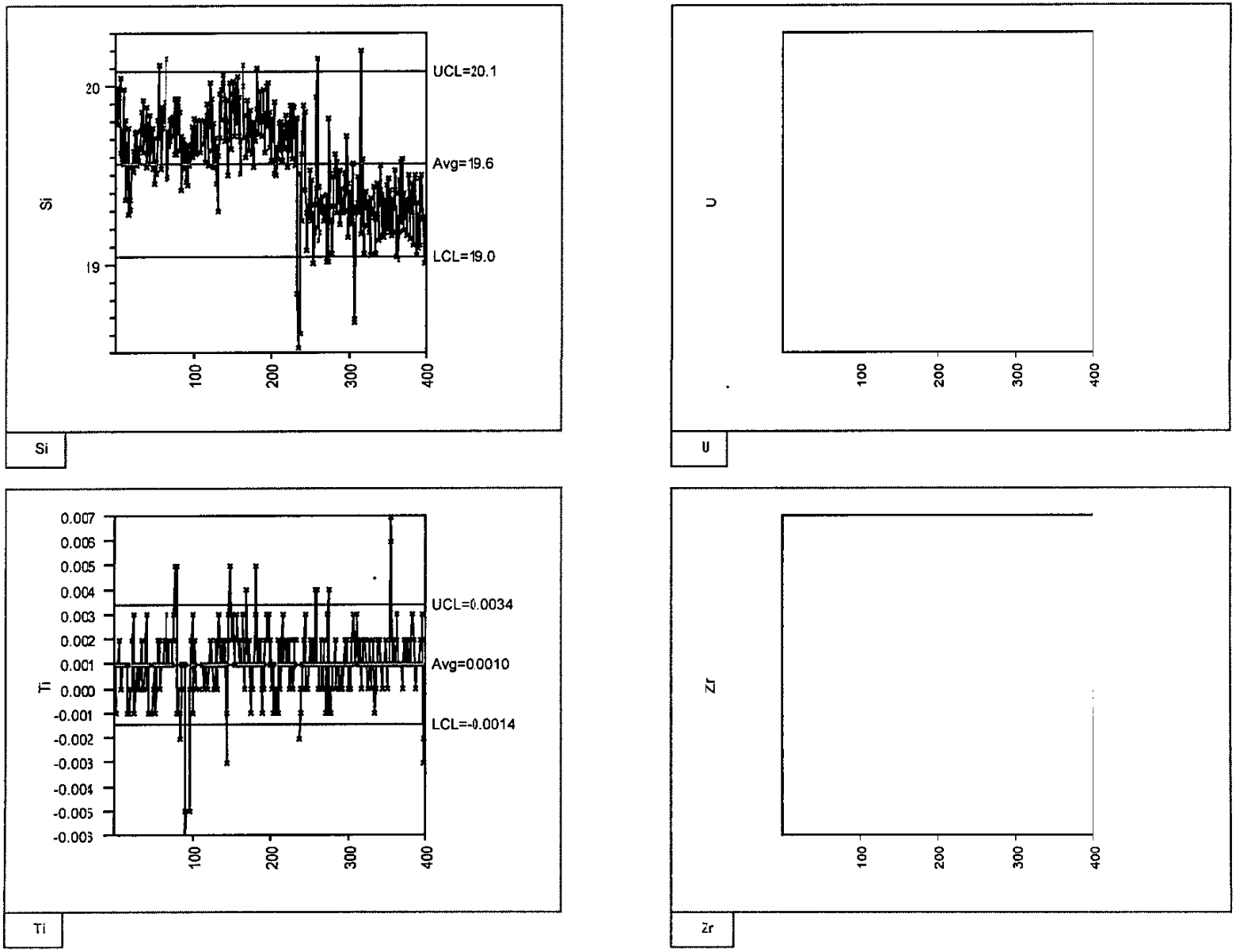




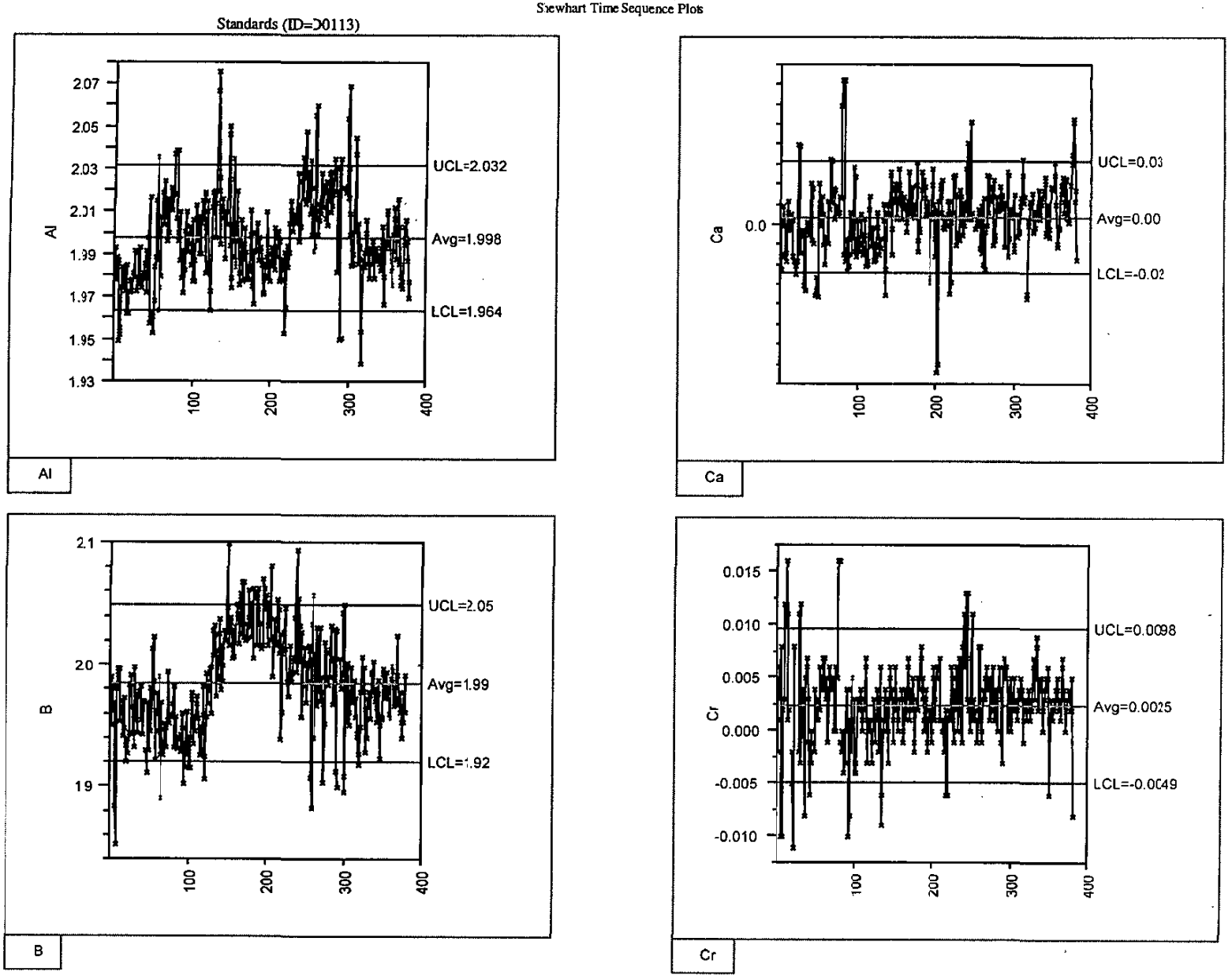
Plot D.7
Screened Calibration Standard A, SME FS Data
Shewhart Time Sequence Plots



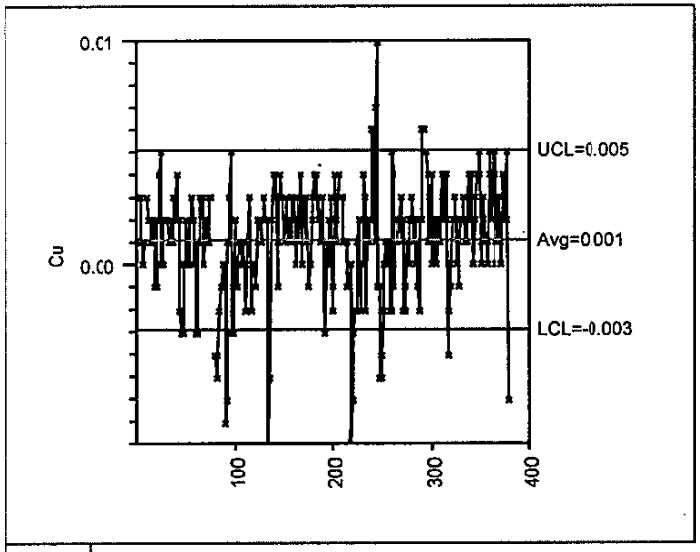
Plot D.7
Screened Calibration Standard A, SME FS Data
Shewhart Time Sequence Plots

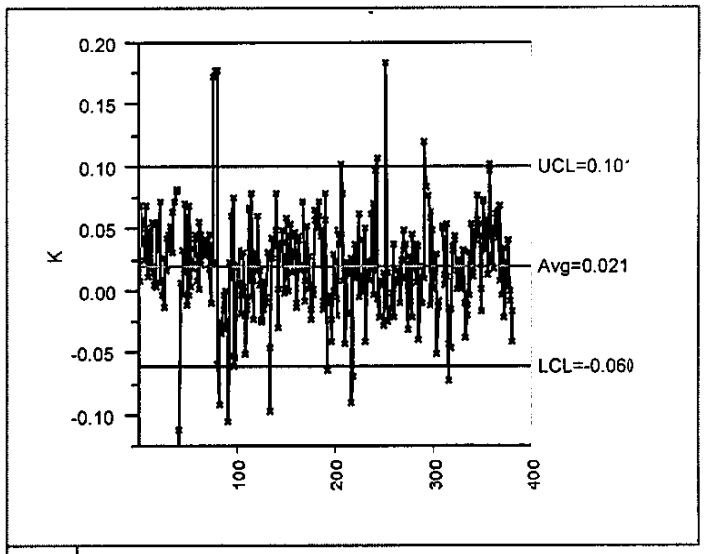


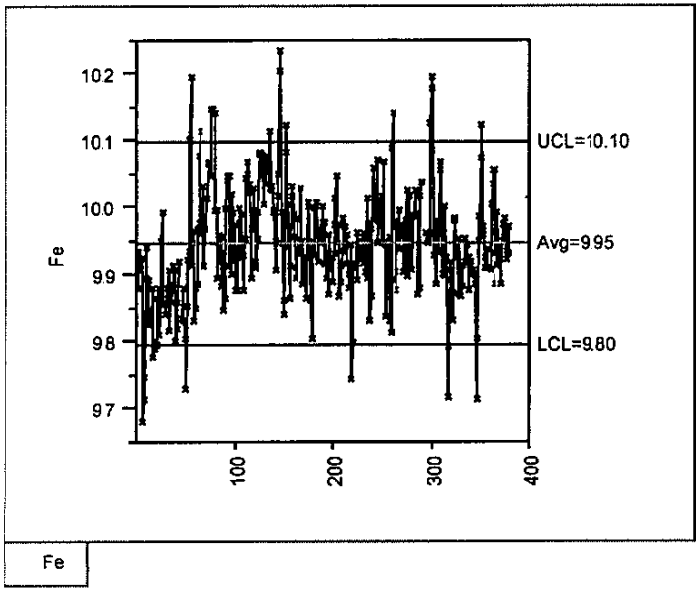
Plot D.8
Screened Calibration Standard B, SME FS Data
Shewhart Time Sequence Plots

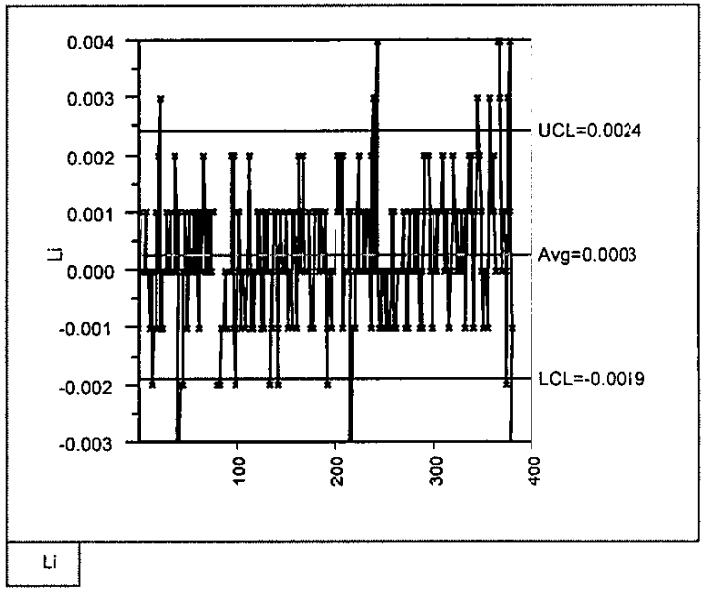


Plot D.8
Screened Calibration Standard B, SME FS Data
Shewhart Time Sequence Plots

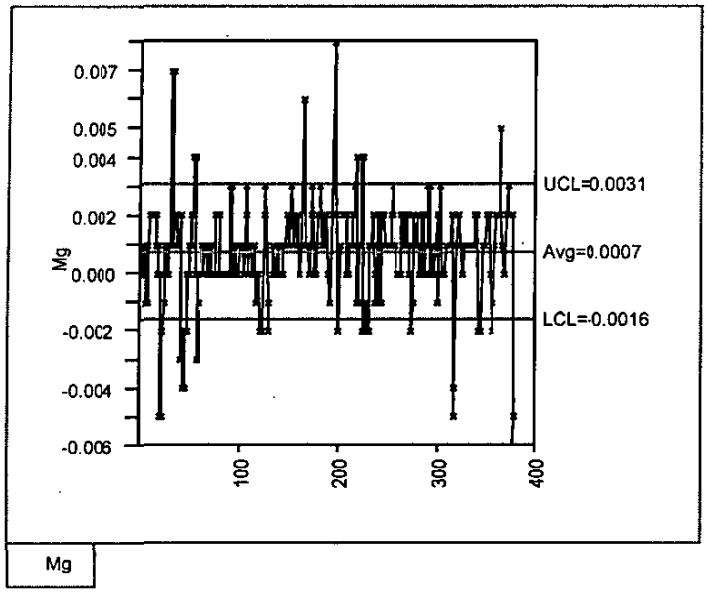


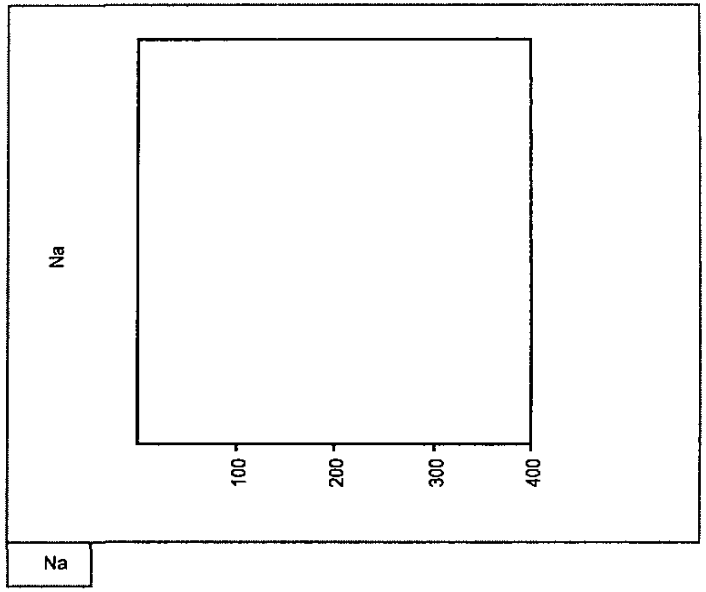


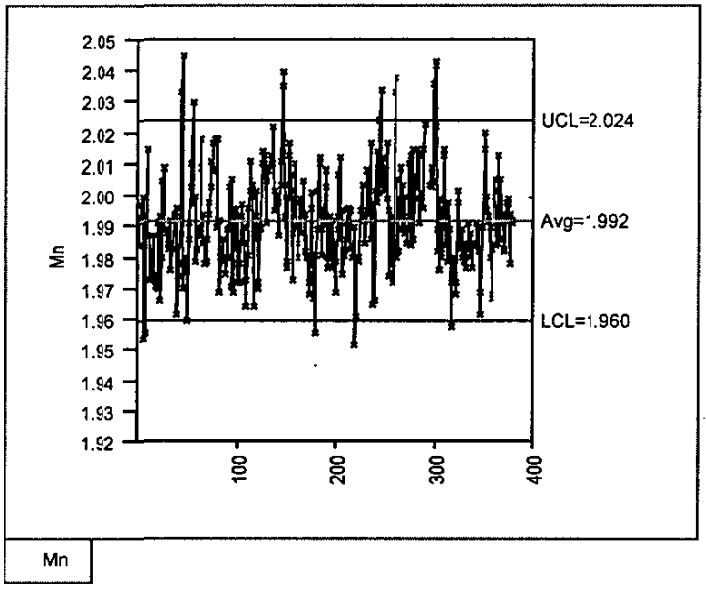


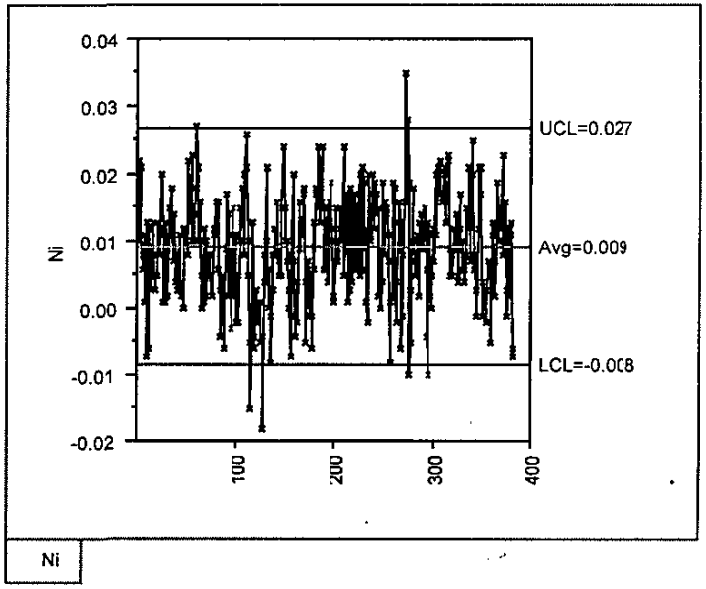


Plot D.8
Screened Calibration Standard B, SME FS Data
Shewhart Time Sequence Plot

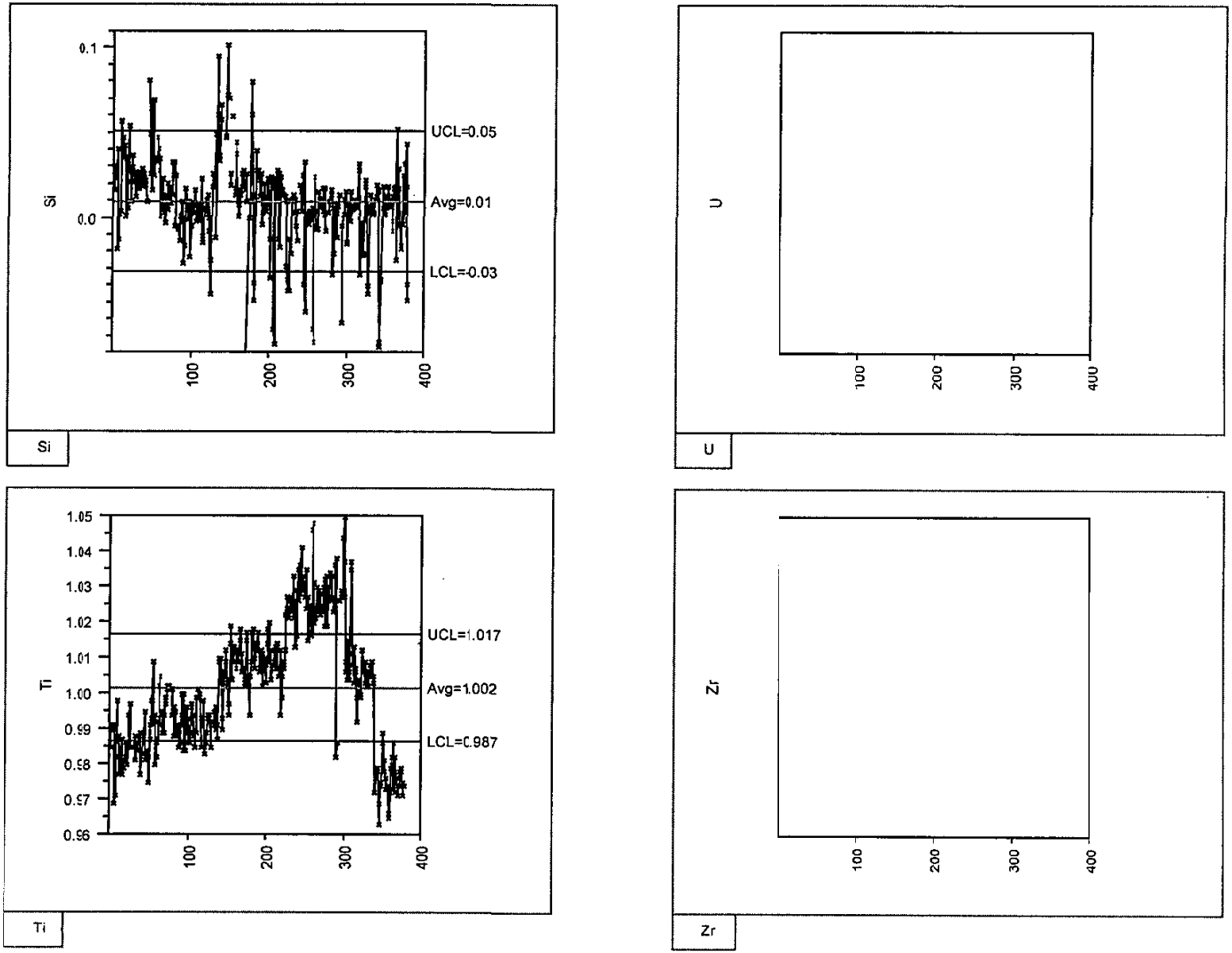




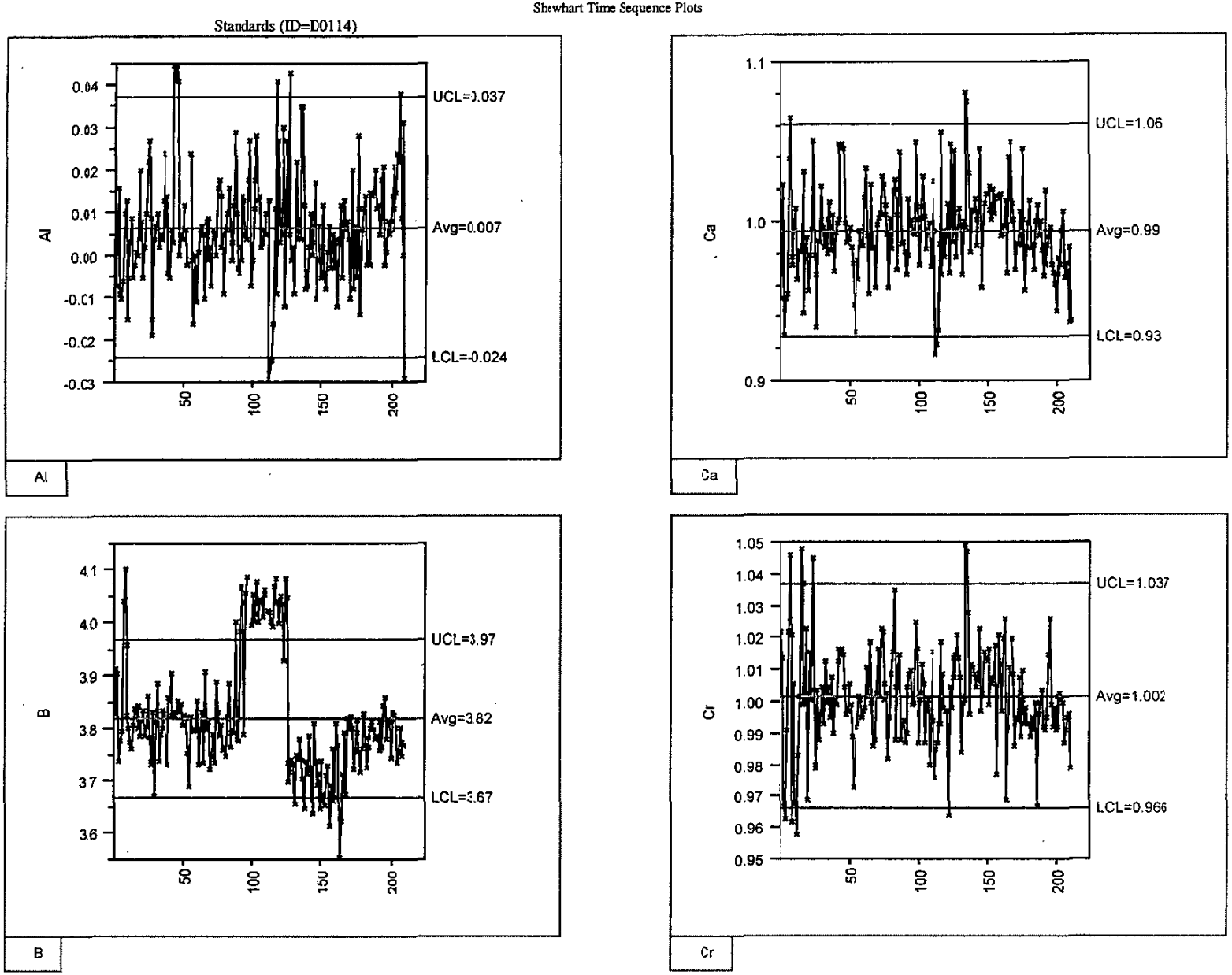




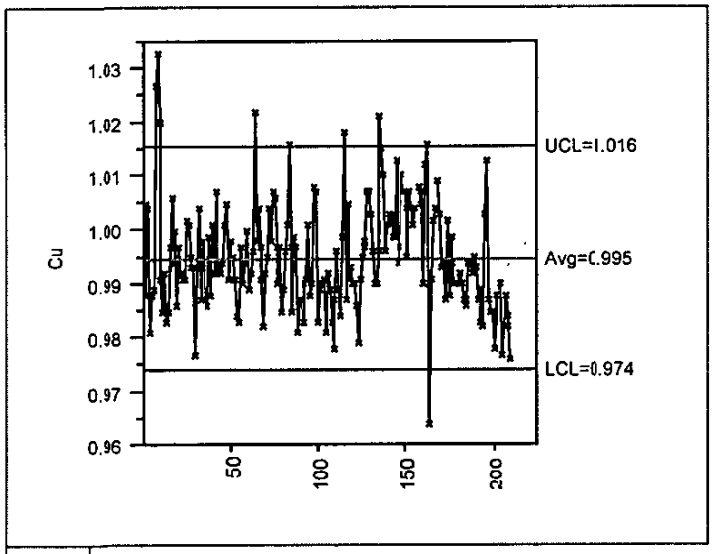
Plot D.8
Screened Calibration Standard B, SME FS Data
Shewhart Time Sequence Plot

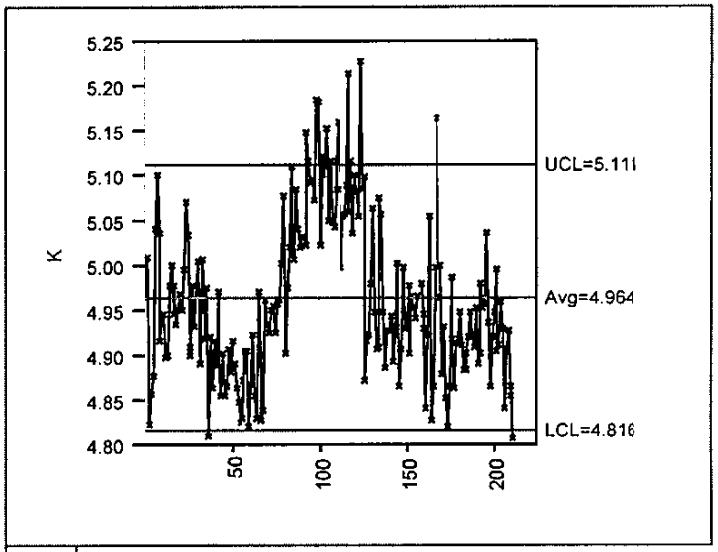


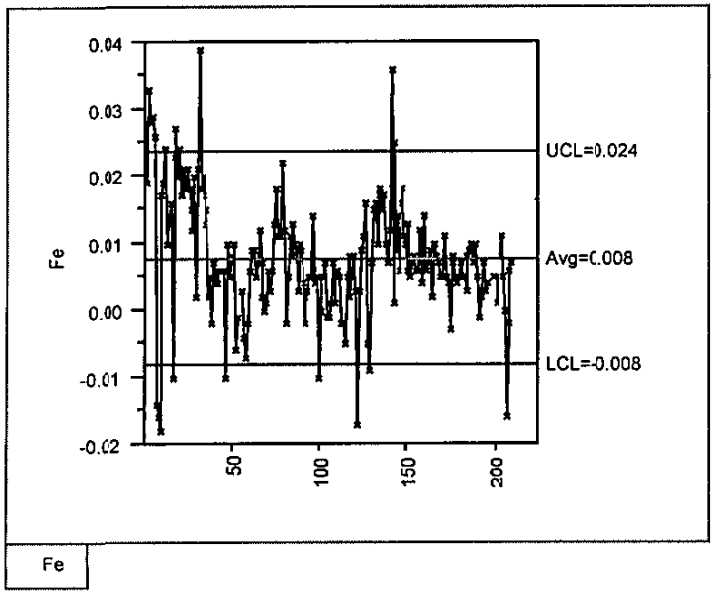
Plot D.9
Screened Bench Standard A, SME IS Data
Shewhart Time Sequence Plots

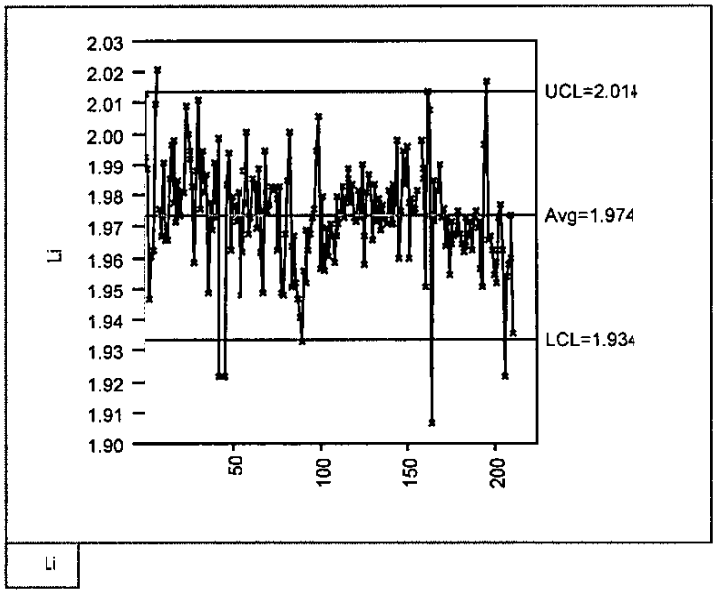


Plot D.9
Screened Bench Standard A, SME FS Data
Shewhart Time Sequence Plots

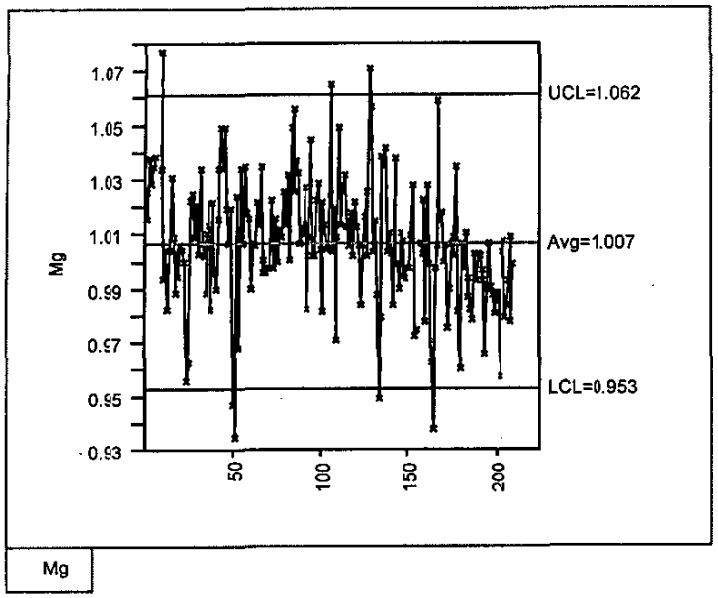


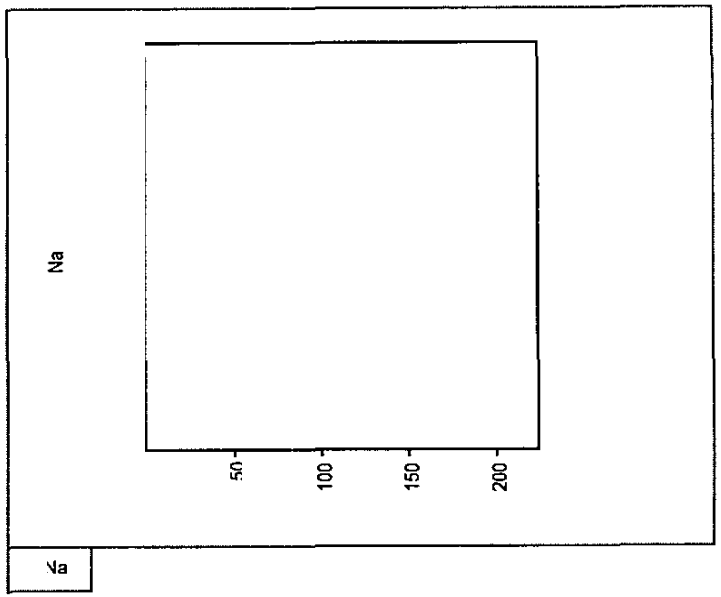


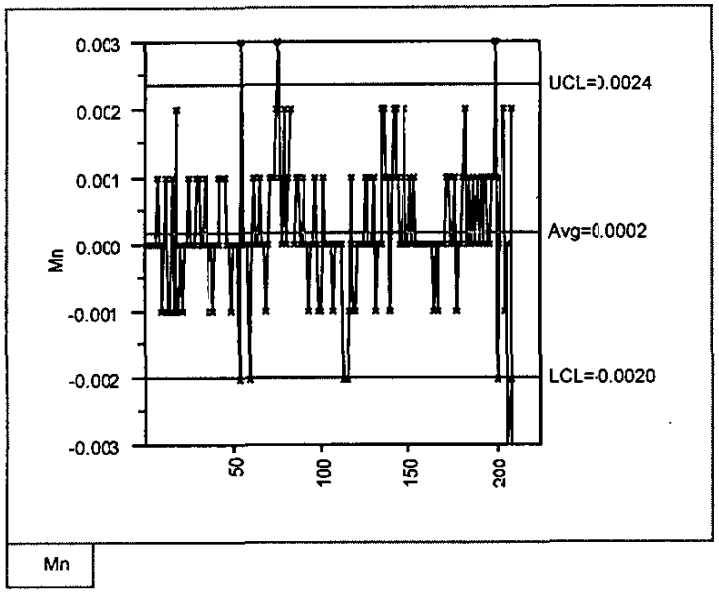


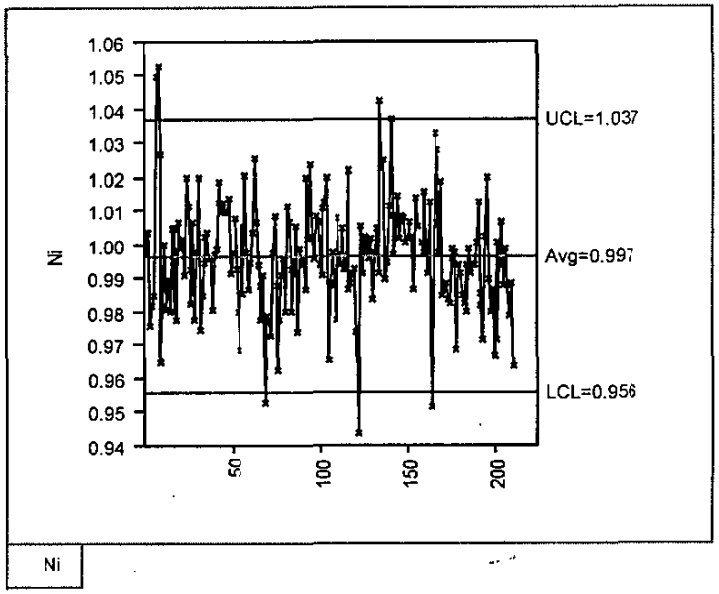


Plot D.9
Screened Bench Standard A, SME FS Data
Shewhart Time Sequence Plots

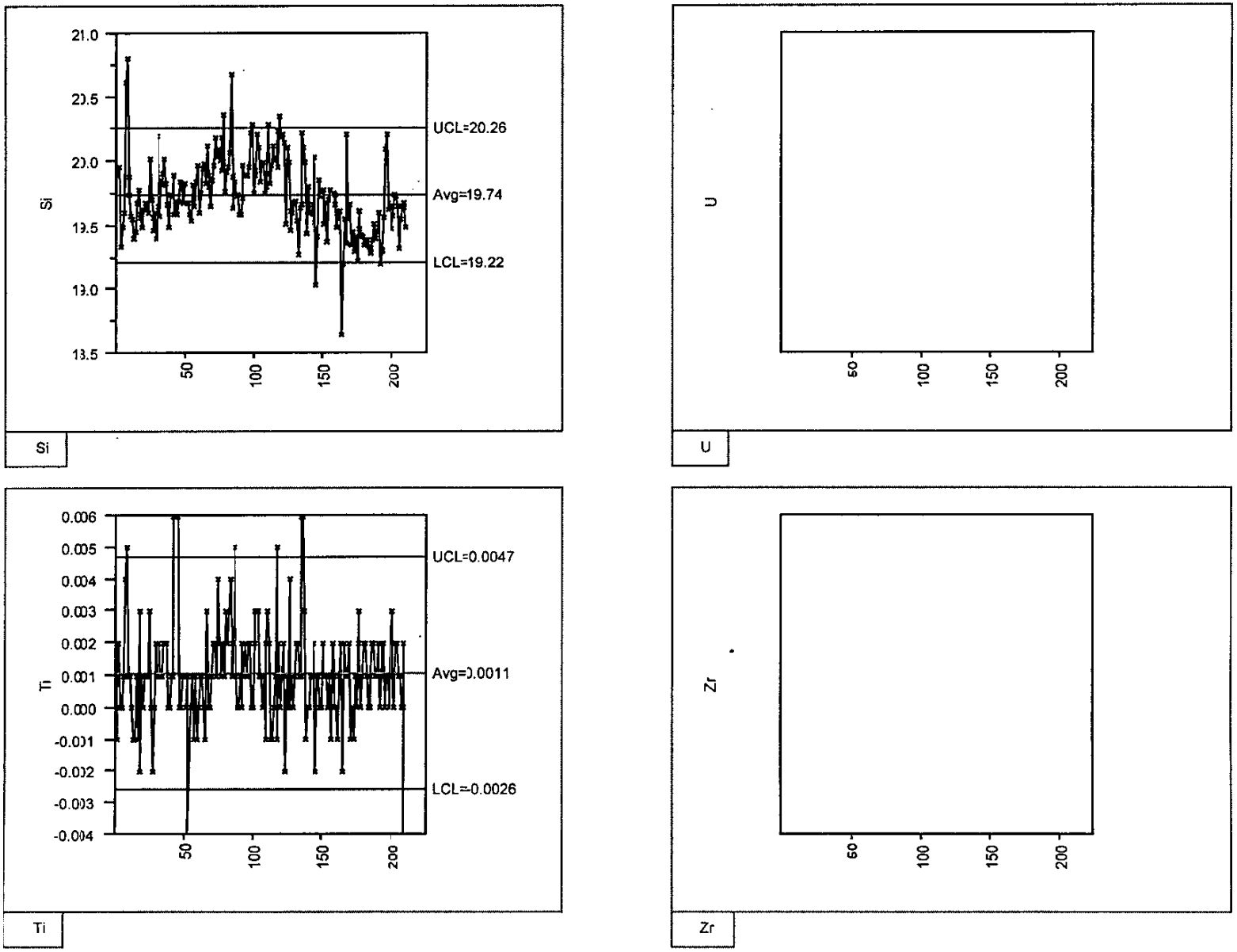






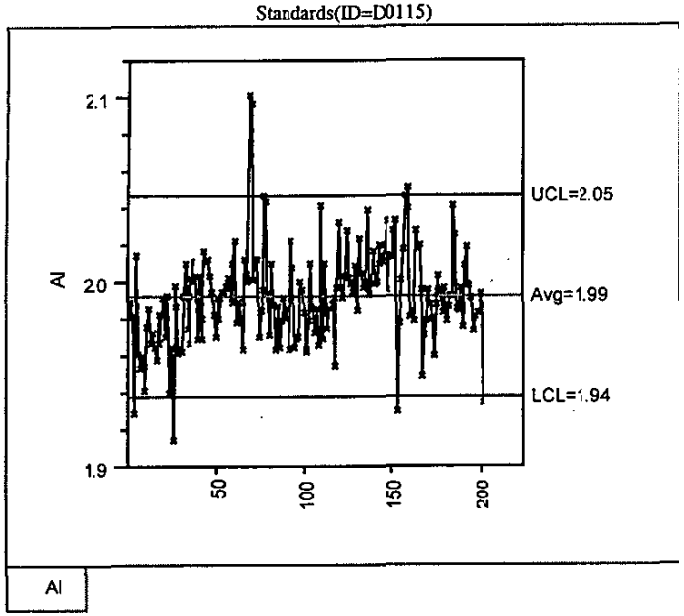


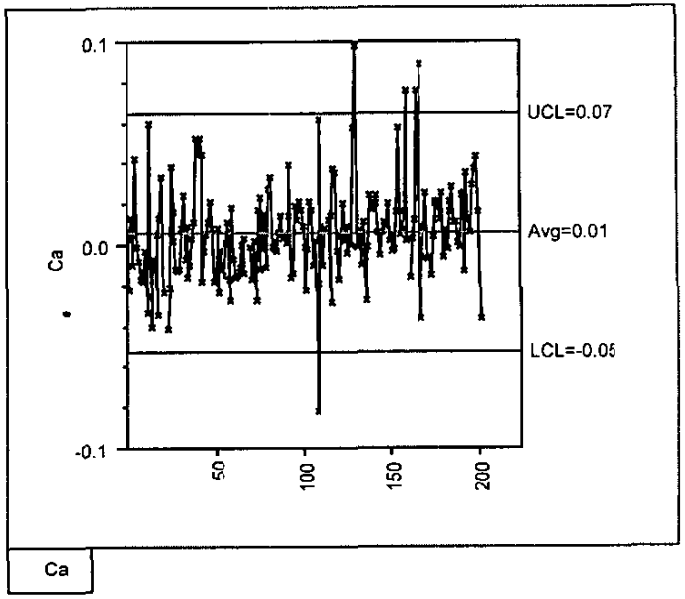
Plot D.9
Screened Bench Standard A, SME FS Data
Shewhart Time Sequence Plot

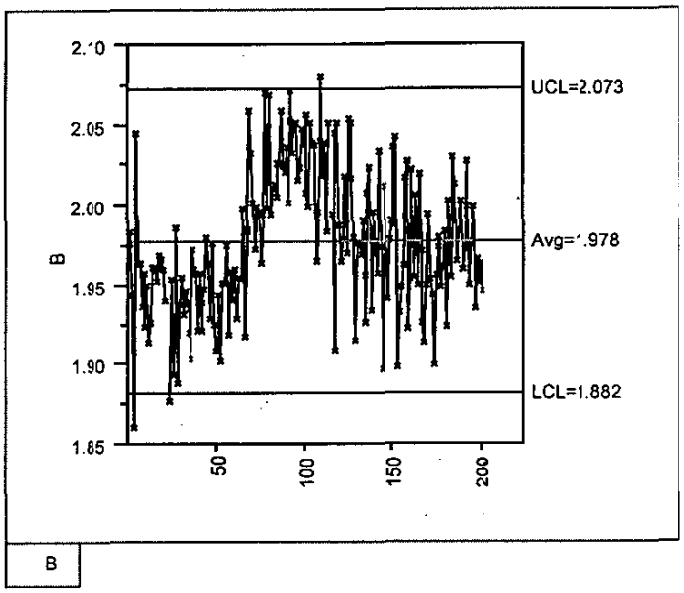


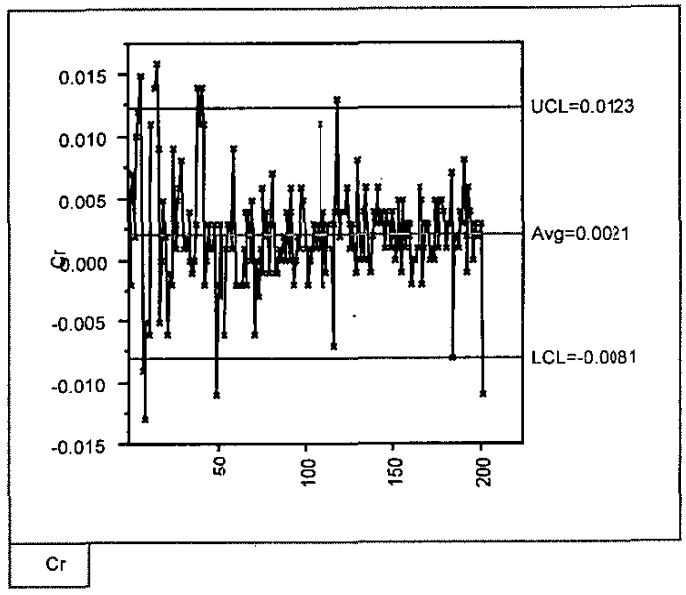
Plot D.10
Screened Bench Standard B, SME FS Data
Shewhart Time Sequence Plots

Standards(ID=D0115)

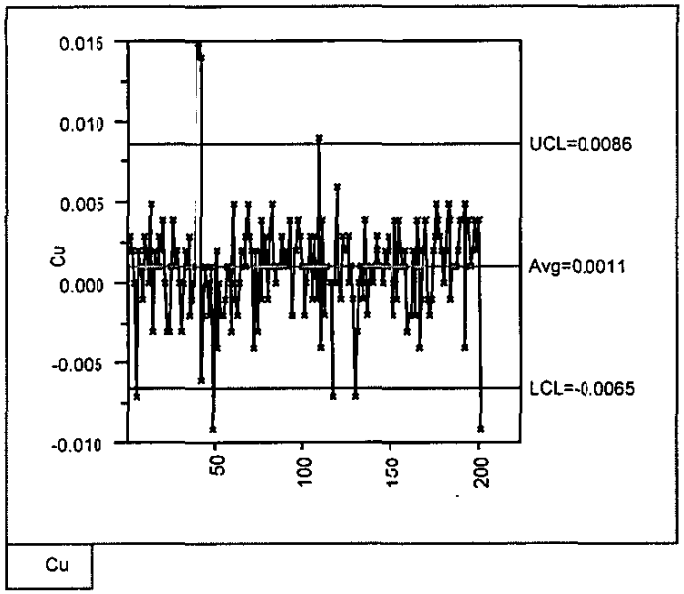


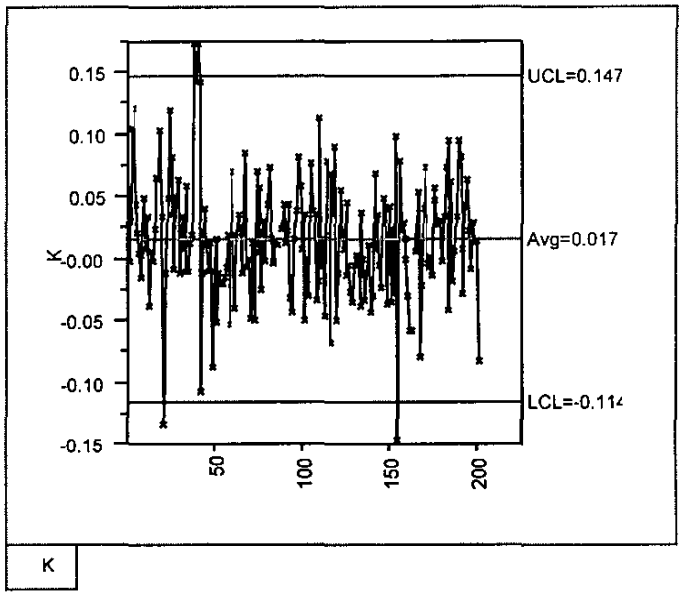


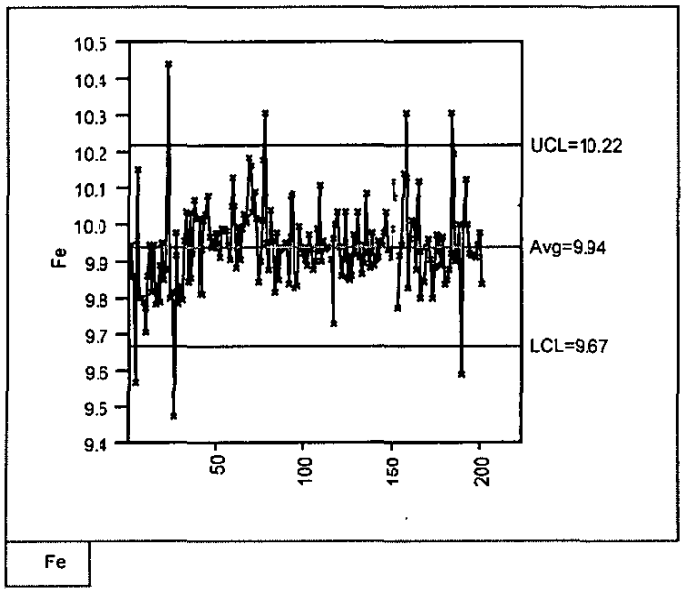


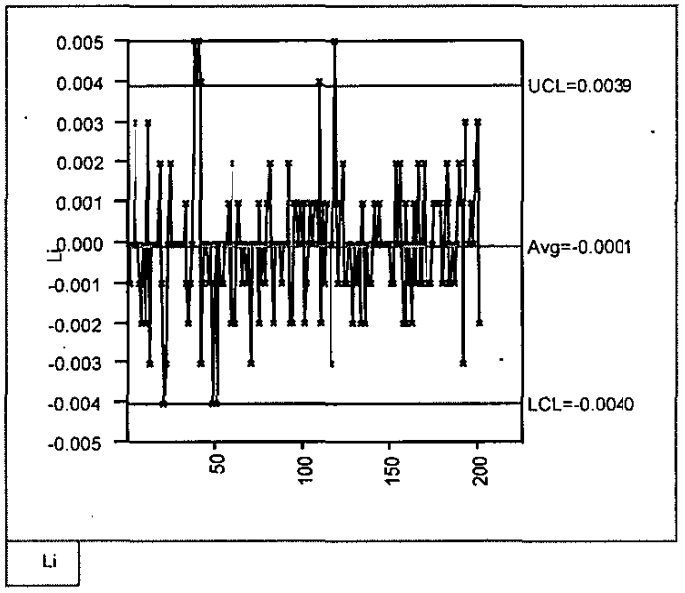


Plot D.10
Screened Bench Standard B, SME FS Data
Shewhart Time Sequence Plots

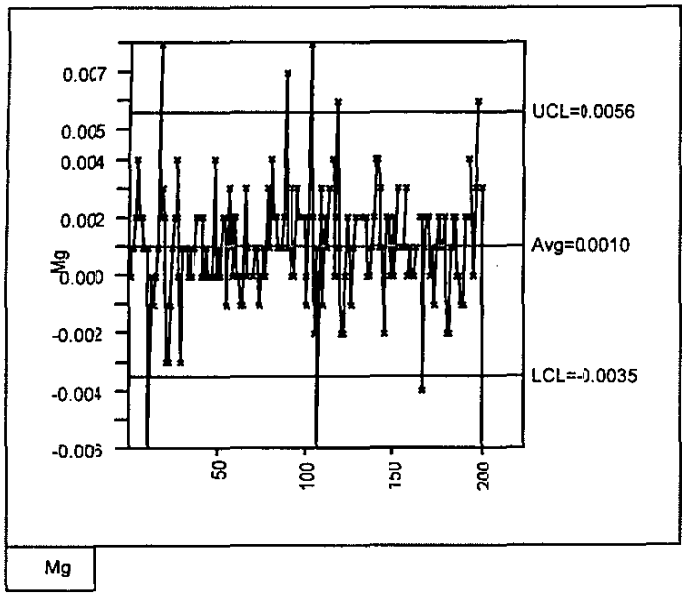


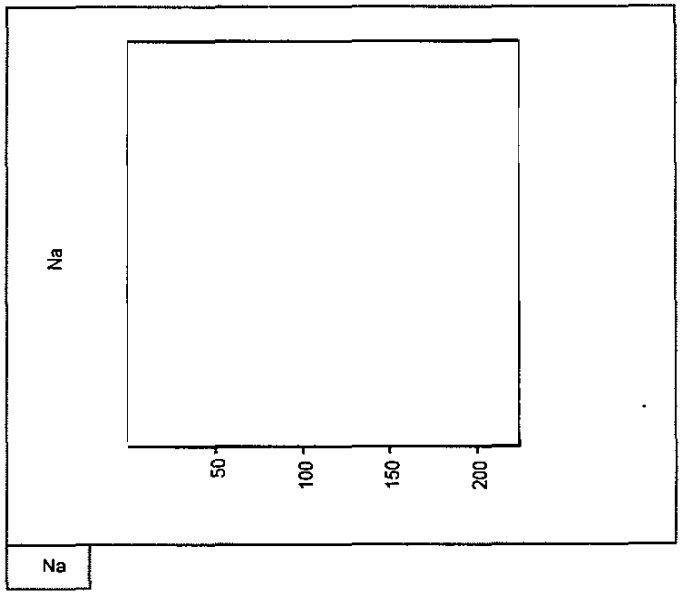


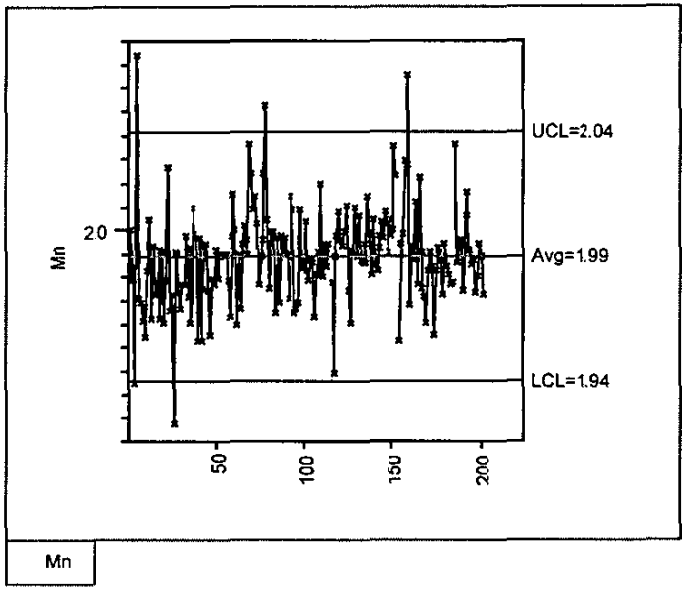


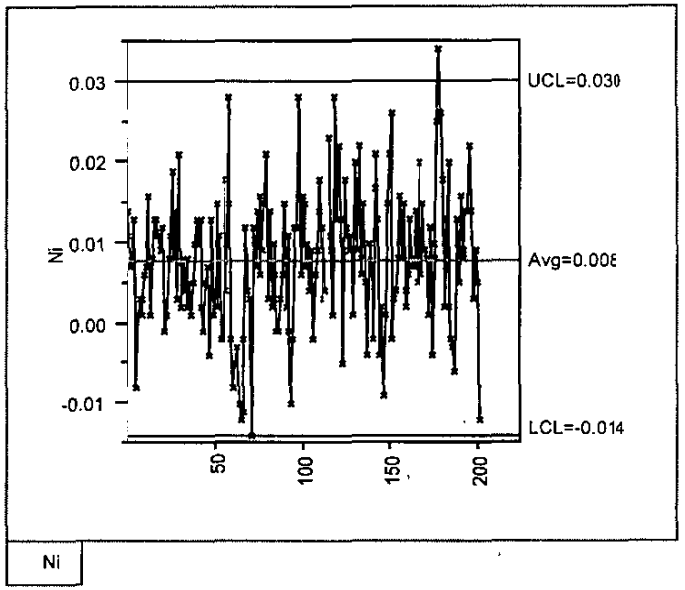


Plot D.10
Screened Bench Standard B, SME FS Data
Shewhart Time Sequence Plots

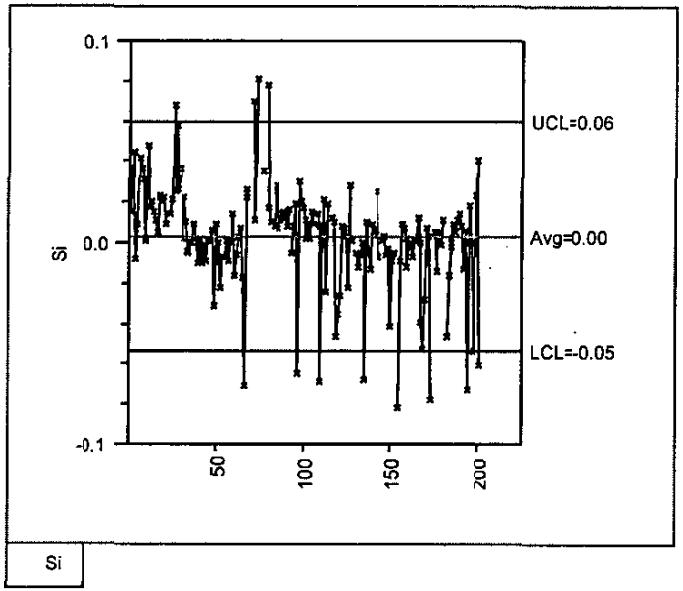


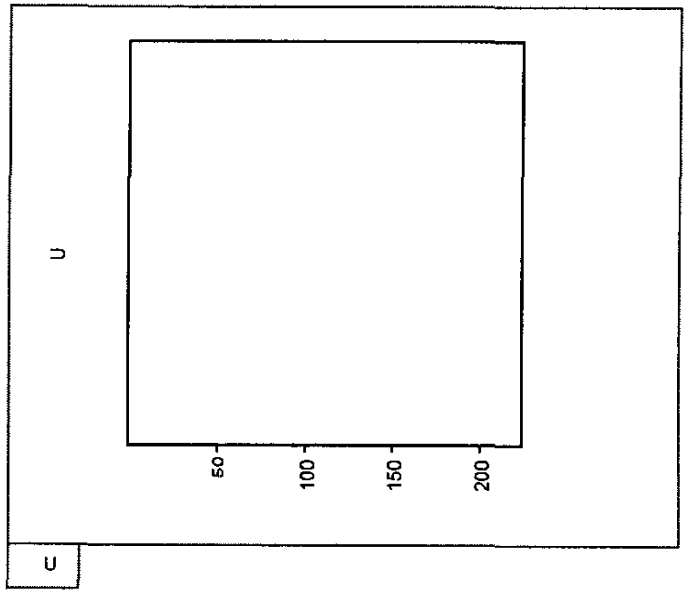


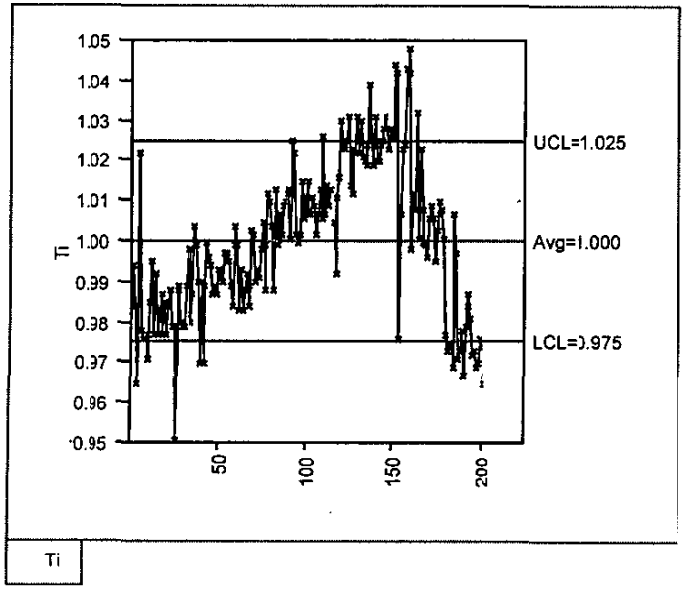


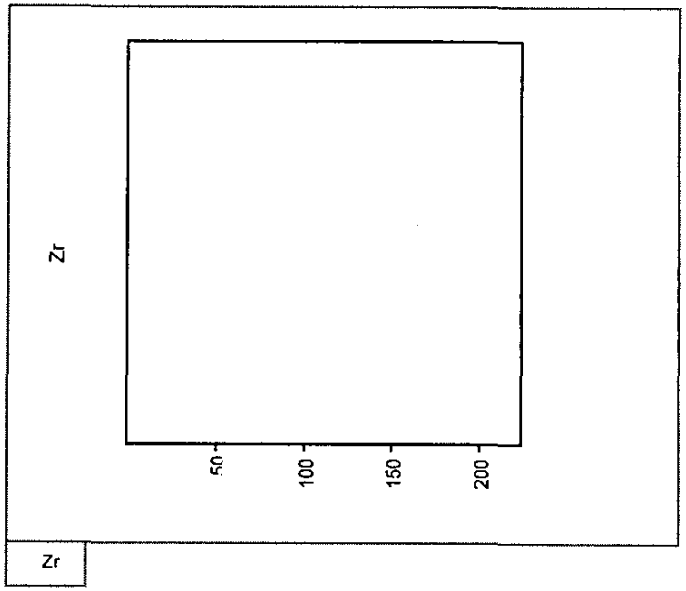


Plot D.10
Screened Bench Standard B, SME FS Data
Shewhart Time Sequence Plots









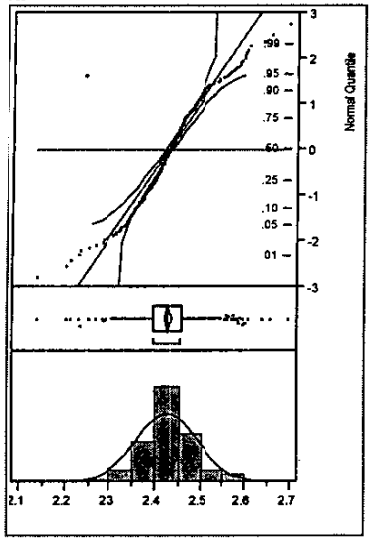
Appendix 1.1

SCREENED ARG-1, SME MA Data

Probability Plots and Sample Statistics

ARG1(ID=D(102)

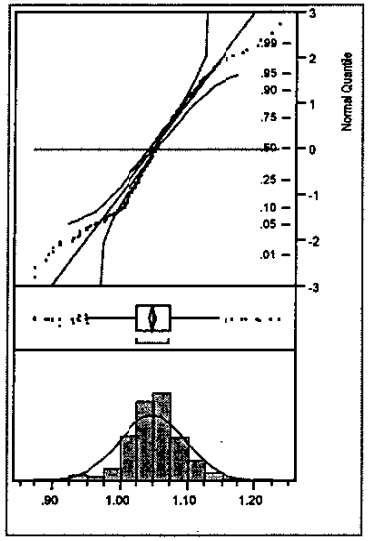
Al



Quantiles		
maximum	100.0%	2.6970
	99.5%	2.6642
	97.5%	2.5890
	90.0%	2.5040
quartile	75.0%	2.4590
median	50.0%	2.4290
quartile	25.0%	2.3970
	10.0%	2.3540
	2.5%	2.2820
	0.5%	2.1884
minimum	0.0%	2.1380

Moments	
Mean	2.4295
Std Dev	0.0678
Std Error Mean	0.0036
Upper 95% Mean	2.4366
Lower 95% Mean	2.4225
N	359.0000
Sum Weights	359.0000

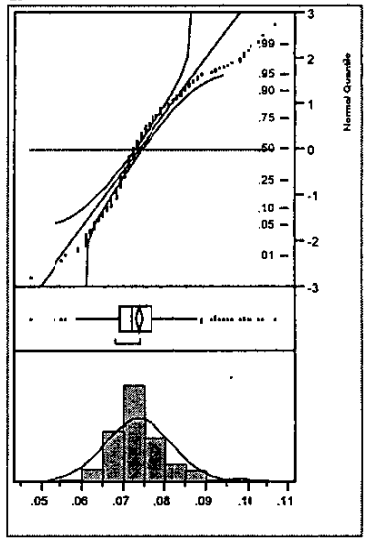
Ca



Quantiles		
maximum	100.0%	1.2340
	99.5%	1.2237
	97.5%	1.1530
	90.0%	1.1069
quartile	75.0%	1.0750
median	50.0%	1.0505
quartile	25.0%	1.0260
	10.0%	0.9980
	2.5%	0.9283
	0.5%	0.8740
minimum	0.0%	0.8740

Moments	
Mean	1.0493
Std Dev	0.0503
Std Error Mean	0.0026
Upper 95% Mean	1.0545
Lower 95% Mean	1.0442
N	370.0000
Sum Weights	370.0000

Cr



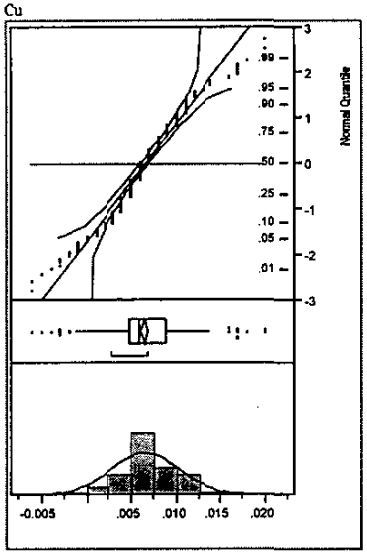
Quantiles		
maximum	100.0%	0.10700
	99.5%	0.10460
	97.5%	0.09800
	90.0%	0.08400
quartile	75.0%	0.07700
median	50.0%	0.07200
quartile	25.0%	0.06900
	10.0%	0.06600
	2.5%	0.06100
	0.5%	0.05180
minimum	0.0%	0.04700

Moments	
Mean	0.0738
Std Dev	0.0081
Std Error Mean	0.0004
Upper 95% Mean	0.0746
Lower 95% Mean	0.0730
N	359.0000
Sum Weights	359.0000

Appendix 1.1

SCREENED ARG-1, SME MA Data
Probability Plots and Sample Statistics

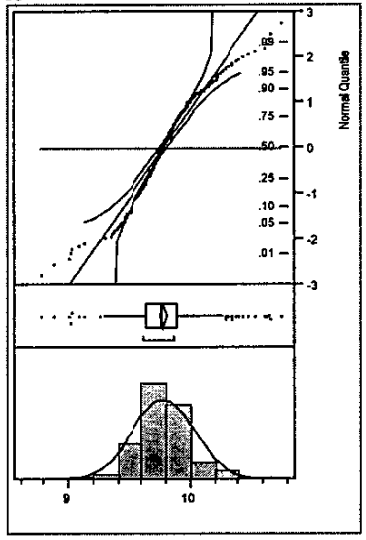
Cu



Quantiles		
maximum	100.0%	0.02000
	99.5%	0.02000
	97.5%	0.01672
	90.0%	0.01100
quartile	75.0%	0.00900
median	50.0%	0.00600
quartile	25.0%	0.00500
	10.0%	0.00300
	2.5%	-0.002
	0.5%	-0.006
minimum	0.0%	-0.006

Moments	
Mean	0.0066
Std Dev	0.0039
Std Error Mean	0.0002
Upper 95% Mean	0.0070
Lower 95% Mean	0.0062
N	370.0000
Sum Weights	370.0000

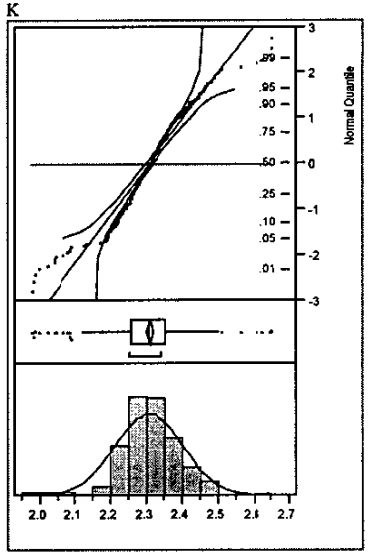
Fe



Quantiles		
maximum	100.0%	10.751
	99.5%	10.678
	97.5%	10.401
	90.0%	10.103
quartile	75.0%	9.900
median	50.0%	9.772
quartile	25.0%	9.648
	10.0%	9.512
	2.5%	9.302
	0.5%	8.861
minimum	0.0%	8.782

Moments	
Mean	9.7844
Std Dev	0.2592
Std Error Mean	0.0136
Upper 95% Mean	9.8111
Lower 95% Mean	9.7576
N	362.0000
Sum Weights	362.0000

K



Quantiles		
maximum	100.0%	2.6530
	99.5%	2.6513
	97.5%	2.4945
	90.0%	2.4192
quartile	75.0%	2.3590
median	50.0%	2.3090
quartile	25.0%	2.2585
	10.0%	2.2164
	2.5%	2.0726
	0.5%	1.9807
minimum	0.0%	1.9790

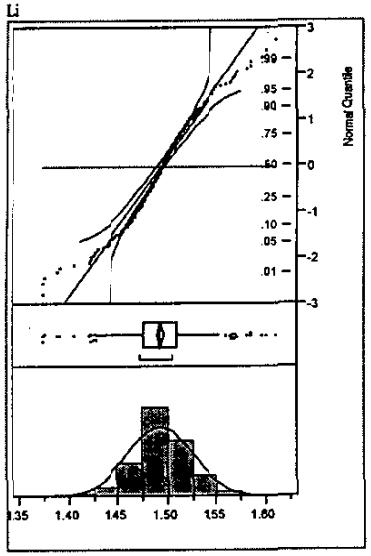
Moments	
Mean	2.3103
Std Dev	0.0949
Std Error Mean	0.0049
Upper 95% Mean	2.3200
Lower 95% Mean	2.3006
N	373.0000
Sum Weights	373.0000

Appendix 1.1

SCREENED ARG-1, SME MA Data

Probability Plots and Sample Statistics

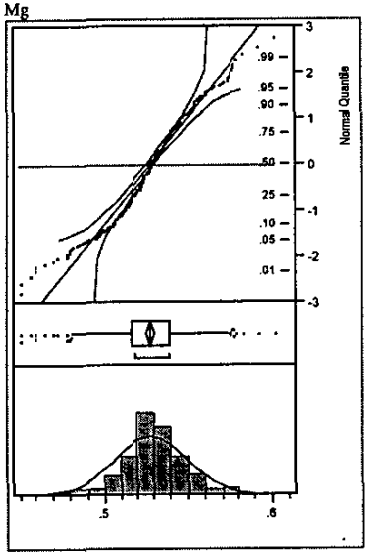
Li



Quantiles		
maximum	100.0%	1.6110
	99.5%	1.6030
	97.5%	1.5690
	90.0%	1.5330
quartile	75.0%	1.5100
median	50.0%	1.4940
quartile	25.0%	1.4770
	10.0%	1.4600
	2.5%	1.4220
	0.5%	1.3740
minimum	0.0%	1.3740

Moments	
Mean	1.4940
Std Dev	0.0329
Std Error Mean	0.0017
Upper 95% Mean	1.4974
Lower 95% Mean	1.4906
N	359.0000
Sum Weights	359.0000

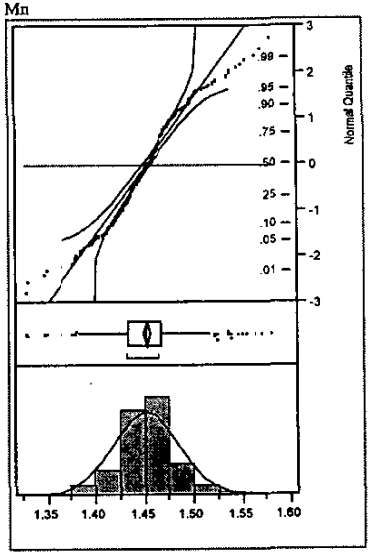
Mg



Quantiles		
maximum	100.0%	0.60200
	99.5%	0.59444
	97.5%	0.57580
	90.0%	0.55500
quartile	75.0%	0.54000
median	50.0%	0.52900
quartile	25.0%	0.51700
	10.0%	0.50500
	2.5%	0.47900
	0.5%	0.45000
minimum	0.0%	0.45000

Moments	
Mean	0.5286
Std Dev	0.0217
Std Error Mean	0.0011
Upper 95% Mean	0.5308
Lower 95% Mean	0.5264
N	367.0000
Sum Weights	367.0000

Mn



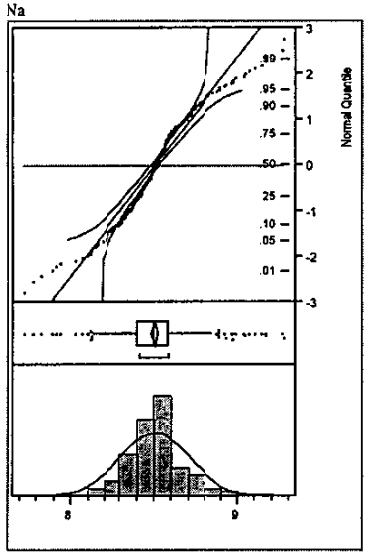
Quantiles		
maximum	100.0%	1.5810
	99.5%	1.5739
	97.5%	1.5352
	90.0%	1.4942
quartile	75.0%	1.4690
median	50.0%	1.4520
quartile	25.0%	1.4345
	10.0%	1.4168
	2.5%	1.3809
	0.5%	1.3296
minimum	0.0%	1.3280

Moments	
Mean	1.4529
Std Dev	0.0339
Std Error Mean	0.0018
Upper 95% Mean	1.4564
Lower 95% Mean	1.4494
N	357.0000
Sum Weights	357.0000

Appendix 1.1

SCREENED ARG-1, SME MA Data
Probability Plots and Sample Statistics

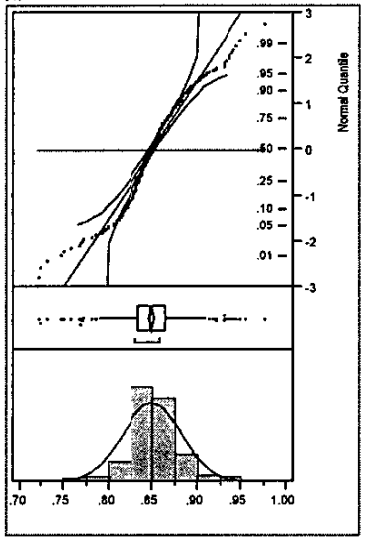
Na



Quantiles		
maximum	100.0%	9.2710
	99.5%	9.2670
	97.5%	9.0360
	90.0%	8.7360
quartile	75.0%	8.5880
median	50.0%	8.5070
quartile	25.0%	8.4070
	10.0%	8.2970
	2.5%	8.1030
	0.5%	7.7666
minimum	0.0%	7.7250

Moments	
Mean	8.5106
Std Dev	0.2084
Std Error Mean	0.0110
Upper 95% Mean	8.5322
Lower 95% Mean	8.4890
N	359.0000
Sum Weights	359.0000

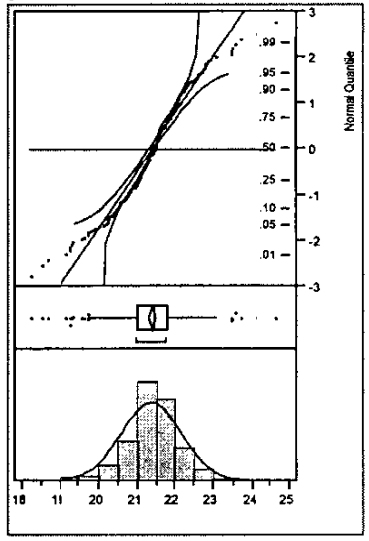
Ni



Quantiles		
maximum	100.0%	0.97600
	99.5%	0.95920
	97.5%	0.93160
	90.0%	0.88900
quartile	75.0%	0.86600
median	50.0%	0.84900
quartile	25.0%	0.83500
	10.0%	0.81680
	2.5%	0.77120
	0.5%	0.72484
minimum	0.0%	0.72400

Moments	
Mean	0.8507
Std Dev	0.0332
Std Error Mean	0.0017
Upper 95% Mean	0.8541
Lower 95% Mean	0.8473
N	367.0000
Sum Weights	367.0000

Si



Quantiles		
maximum	100.0%	24.679
	99.5%	24.232
	97.5%	22.933
	90.0%	22.242
quartile	75.0%	21.852
median	50.0%	21.449
quartile	25.0%	21.019
	10.0%	20.504
	2.5%	19.579
	0.5%	18.455
minimum	0.0%	18.224

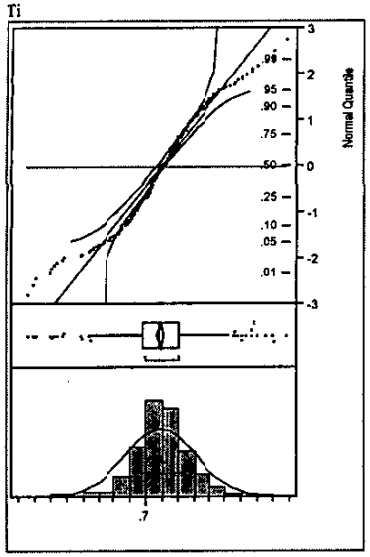
Moments	
Mean	21.4042
Std Dev	0.7932
Std Error Mean	0.0417
Upper 95% Mean	21.4862
Lower 95% Mean	21.3222
N	362.0000
Sum Weights	362.0000

Appendix 1.1

SCREENED ARG-1, SME MA Data

Probability Plots and Sample Statistics

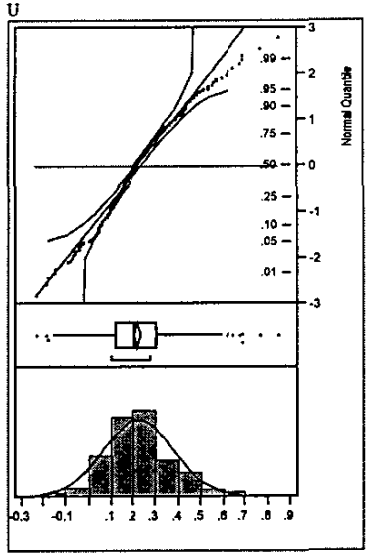
Ti



Quantiles		
maximum	100.0%	0.78800
	99.5%	0.78136
	97.5%	0.76000
	90.0%	0.73500
quartile	75.0%	0.72100
median	50.0%	0.70900
quartile	25.0%	0.69850
	10.0%	0.68500
	2.5%	0.64950
	0.5%	0.62849
minimum	0.0%	0.62600

Moments	
Mean	0.7095
Std Dev	0.0226
Std Error Mean	0.0012
Upper 95% Mean	0.7119
Lower 95% Mean	0.7072
N	365.0000
Sum Weights	365.0000

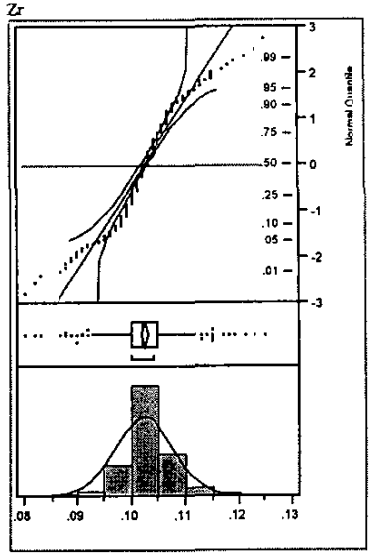
U



Quantiles		
maximum	100.0%	0.85000
	99.5%	0.77751
	97.5%	0.60650
	90.0%	0.43610
quartile	75.0%	0.31125
median	50.0%	0.21300
quartile	25.0%	0.12125
	10.0%	0.05000
	2.5%	-0.0691
	0.5%	-0.1845
minimum	0.0%	-0.223

Moments	
Mean	0.2263
StdDev	0.1588
StdError Mean	0.0082
Upper 95% Mean	0.2424
Lower 95% Mean	0.2103
N	378.0000
Sum Weights	378.0000

Zr



Quanties		
maximum	100.0%	0.12500
	99.5%	0.12351
	97.5%	0.11500
	90.0%	0.10800
quartile	75.0%	0.10500
mediar	50.0%	0.10200
quartile	25.0%	0.10000
	10.0%	0.09790
	2.5%	0.08972
	0.5%	0.08149
minimum	0.0%	0.08000

Moments	
Mean	0.1025
Std Dev	0.0055
Std Error Mean	0.0003
Upper 95% Mean	0.1031
Lower 95% Mean	0.1020
N	348.0000
Sum Weights	348.0000

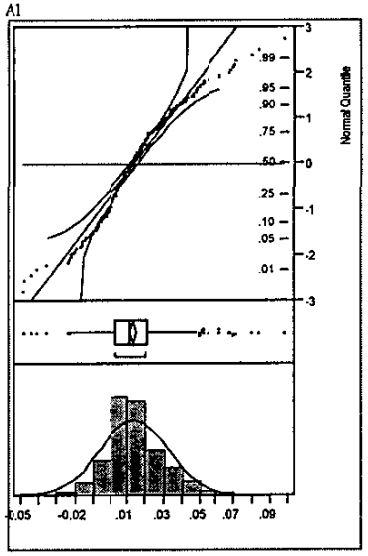
Appendix 1.2

SCREENED Blanks, SME MA Data

Probability Plots and Sample Statistics

Blanks(ID=D0 03)

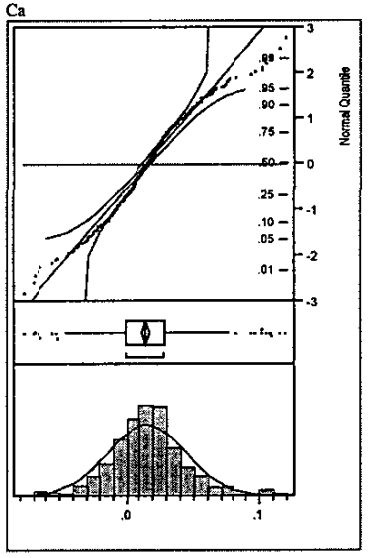
Al



Quantiles		
maximum	100.0%	0.09800
	99.5%	0.08645
	97.5%	0.06200
	90.0%	0.03700
quartile	75.0%	0.02175
median	50.0%	0.01150
quartile	25.0%	0.00400
	10.0%	-0.007
	2.5%	-0.0219
	0.5%	-0.0482
minimum	0.0%	-0.049

Moments	
Mean	0.0138
Std Dev	0.0193
Std Error Mean	0.0010
Upper 95% Mean	0.0158
Lower 95% Mean	0.0118
N	364.0000
Sum Weights	364.0000

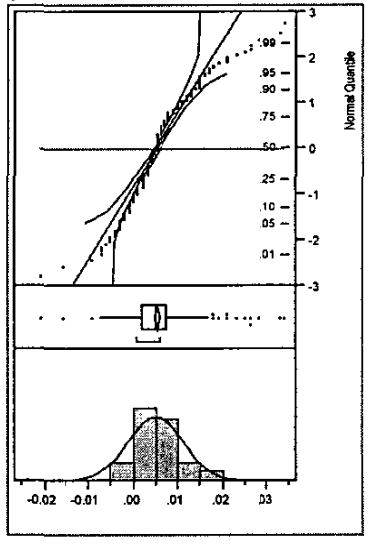
Ca



Quantiles		
maximum	100.0%	0.11900
	99.5%	0.11450
	97.5%	0.08750
	90.0%	0.05000
quartile	75.0%	0.03000
median	50.0%	0.01500
quartile	25.0%	-0.001
	10.0%	-0.017
	2.5%	-0.0435
	0.5%	-0.0707
minimum	0.0%	-0.077

Moments	
Mean	0.0155
Std Dev	0.0293
Std Error Mean	0.0015
Upper 95% Mean	0.0185
Lower 95% Mean	0.0126
N	379.0000
SumWeights	379.0000

Cr



Quantiles		
maximum	100.0%	0.03400
	99.5%	0.03316
	97.5%	0.02100
	90.0%	0.01300
quartile	75.0%	0.00800
median	50.0%	0.00500
quartile	25.0%	0.00200
	10.0%	-0.001
	2.5%	-0.005
	0.5%	-0.0168
minimum	0.0%	-0.021

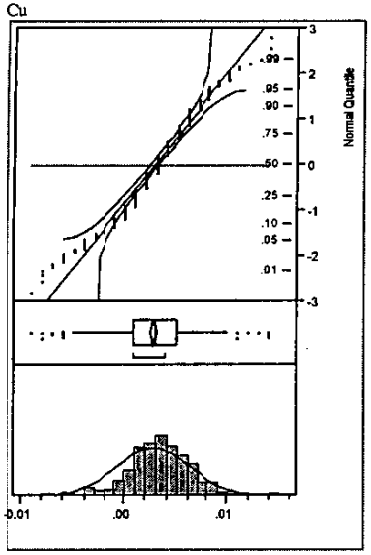
Moments	
Mean	0.0054
Std Dev	0.0062
Std Error Mean	0.0003
Upper 95% Mean	0.0060
Lower 95% Mean	0.0047
N	367.0000
Sum Weights	367.0000

Appendix 1.2

SCREENED Blanks, SME MA Data

Probability Plots and Sample Statistics

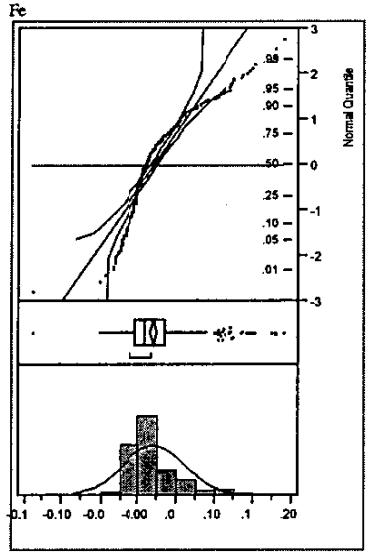
Cu



Quantiles		
maximum	100.0%	0.0140
	99.5%	0.0140
	97.5%	0.0100
	90.0%	0.0070
quartile	75.0%	0.0050
median	50.0%	0.0030
quartile	25.0%	0.0010
	10.0%	-0.001
	2.5%	-0.005
	0.5%	-0.0081
minimum	0.0%	-0.009

Moments	
Mean	0.0029
Std Dev	0.0035
Std Error Mean	0.0002
Upper 95% Mean	0.0032
Lower 95% Mean	0.0025
N	385.0000
Sum Weights	385.0000

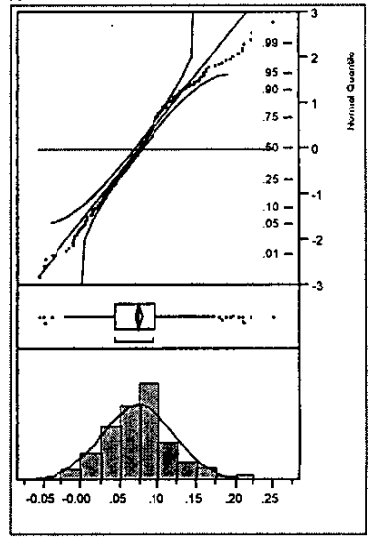
Fe



Quantiles		
maximum	100.0%	0.19000
	99.5%	0.18048
	97.5%	0.13703
	90.0%	0.07500
quartile	75.0%	0.03675
median	50.0%	0.01000
quartile	25.0%	-0.002
	10.0%	-0.013
	2.5%	-0.0297
	0.5%	-0.0625
minimum	0.0%	-0.136

Moments	
Mean	0.0215
Std Dev	0.0404
Std Error Mean	0.0021
Upper 95% Mean	0.0256
Lower 95% Mean	0.0174
N	372.0000
Sum Weights	372.0000

K



Quantiles		
maximum	100.0%	0.25100
	99.5%	0.22403
	97.5%	0.18975
	90.0%	0.13040
quartile	75.0%	0.09650
median	50.0%	0.07500
quartile	25.0%	0.04450
	10.0%	0.01880
	2.5%	-0.0094
	0.5%	-0.0513
minimum	0.0%	-0.056

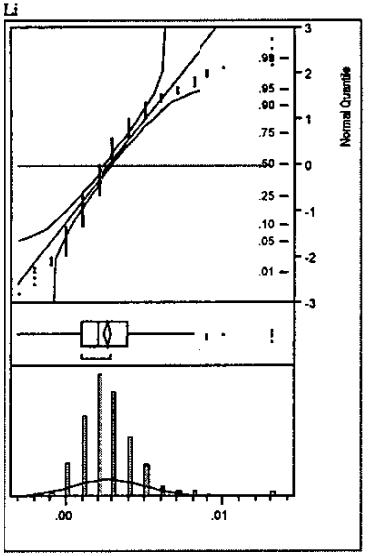
Moments	
Mean	0.0747
Std Dev	0.0464
Std Error Mean	0.0024
Upper 95% Mean	0.0793
Lower 95% Mean	0.0700
N	385.0000
Sum Weights	385.0000

Appendix 1.2

SCREENED Blanks, SME MA Data

Probability Plots and Sample Statistics

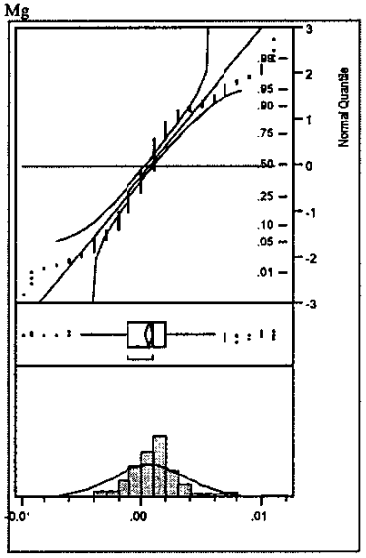
Li



Quantiles		
maximum	100.0%	0.01300
	99.5%	0.01300
	97.5%	0.00880
	90.0%	0.00500
quartile	75.0%	0.00400
median	50.0%	0.00200
quartile	25.0%	0.00100
	10.0%	0.00100
	2.5%	-0.0008
	0.5%	-0.0022
minimum	0.0%	-0.003

Moments	
Mean	0.0028
Std Dev	0.0023
Std Error Mean	0.0001
Upper 95% Mean	0.0030
Lower 95% Mean	0.0025
N	367.0000
Sum Weights	367.0000

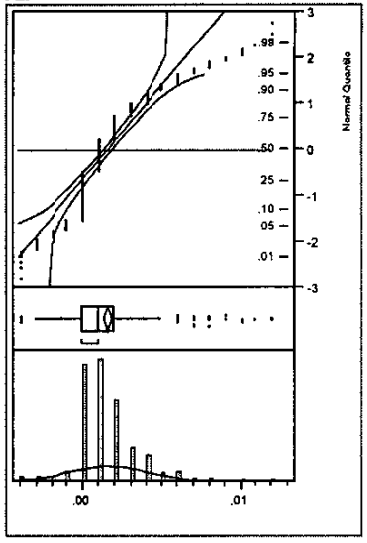
Mg



Quantiles		
maximum	100.0%	0.01100
	99.5%	0.01100
	97.5%	0.00900
	90.0%	0.00400
quartile	75.0%	0.00200
median	50.0%	0.00100
quartile	25.0%	-0.001
	10.0%	-0.002
	2.5%	-0.005
	0.5%	-0.0092
minimum	0.0%	-0.01

Moments	
Mean	0.0007
Std Dev	0.0031
Std Error Mean	0.0002
Upper 95% Mean	0.0010
Lover 95% Mean	0.0004
N	362.0000
Sun Weights	362.0000

Mn



Quantiles		
maximum	100.0%	0.01200
	99.5%	0.01200
	97.5%	0.00893
	90.0%	0.00400
quartile	75.0%	0.00200
median	50.0%	0.00100
quartile	25.0%	0.00000
	10.0%	0.00000
	2.5%	-0.003
	0.5%	-0.004
minimum	0.0%	-0.004

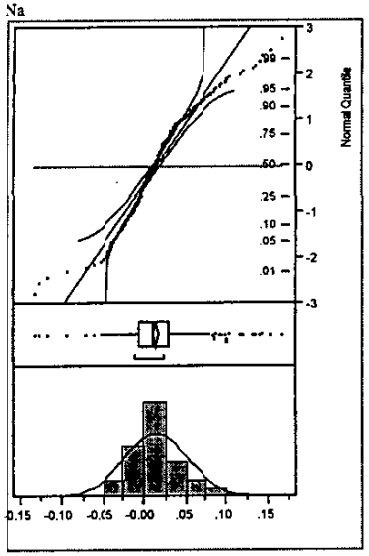
Moments	
Mean	0.0016
Std Dev	0.0024
Std Error Mean	0.0001
Upper 95% Mean	0.0019
Lower 95% Mean	0.0014
N	362.0000
Sum Weights	362.0000

Appendix 1.2

SCREENED Blanks, SME MA Data

Probability Plots and Sample Statistics

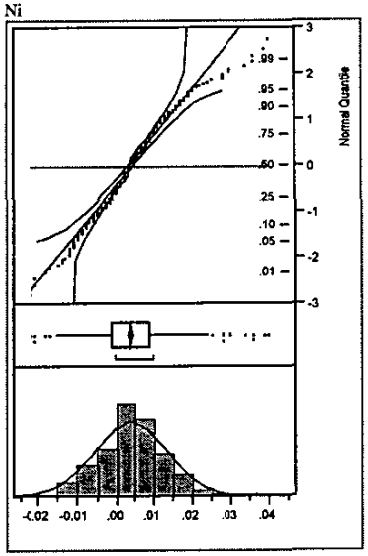
Na



Quantiles		
maximum	100.0%	0.16800
	99.5%	0.15723
	97.5%	0.10463
	90.0%	0.06000
quartile	75.0%	0.03000
median	50.0%	0.01200
quartile	25.0%	-0.005
	10.0%	-0.0245
	2.5%	-0.0449
	0.5%	-0.1287
minimum	0.0%	-0.132

Moments	
Mean	0.0150
Std Dev	0.0379
Std Error Mean	0.0020
Upper 95% Mean	0.0189
Lower 95% Mean	0.0111
N	364.0000
Sum Weights	364.0000

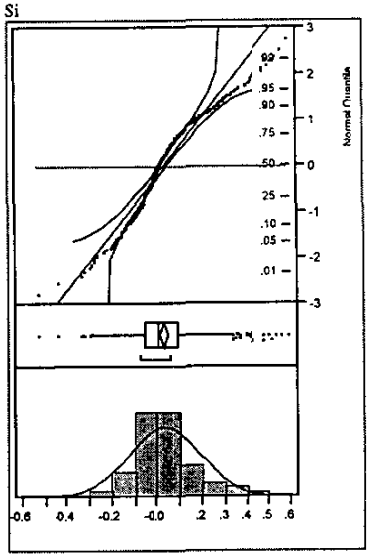
Ni



Quantiles		
maximum	100.0%	0.04000
	99.5%	0.03915
	97.5%	0.02800
	90.0%	0.01600
quartile	75.0%	0.00900
median	50.0%	0.00400
quartile	25.0%	-0.001
	10.0%	-0.008
	2.5%	-0.0128
	0.5%	-0.0211
minimum	0.0%	-0.022

Moments	
Mean	0.0041
Std Dev	0.0096
Std Error Mean	0.0005
Upper 95% Mean	0.0050
Lower 95% Mean	0.0031
N	369.0000
Sum Weights	369.0000

Si



Quantiles		
maximum	100.0%	0.59100
	99.5%	0.56809
	97.5%	0.42730
	90.0%	0.25960
quartile	75.0%	0.10300
median	50.0%	0.01600
quartile	25.0%	-0.052
	10.0%	-0.137
	2.5%	-0.2646
	0.5%	-0.4552
minimum	0.0%	-0.531

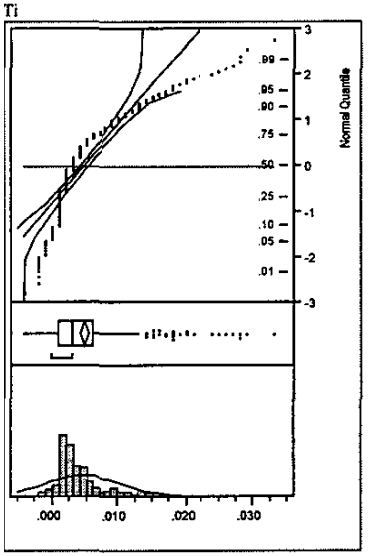
Moments	
Mean	0.0382
Std Dev	0.1596
Std Error Mean	0.0084
Upper 95% Mean	0.0548
Lower 95% Mean	0.0216
N	357.0000
Sum Weights	357.0000

Appendix 1.2

SCREENED Blanks, SME MA Data

Probability Plots and Sample Statistics

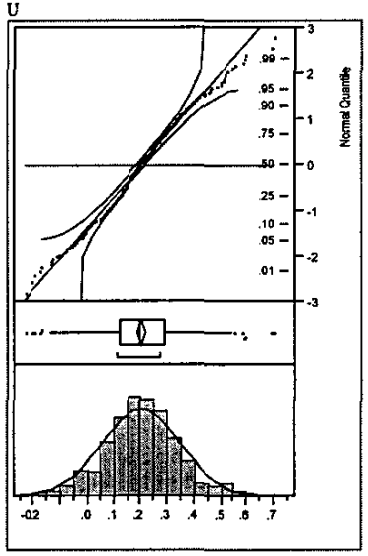
Ti



Quantiles		
maximum	100.0%	0.03300
	99.5%	0.02960
	97.5%	0.02175
	90.0%	0.01300
quartile	75.0%	0.00600
median	50.0%	0.00300
quartile	25.0%	0.00100
	10.0%	0.00100
	2.5%	-0.0013
	0.5%	-0.0023
minimum	0.0%	-0.004

Moments	
Mean	0.0043
Std Dev	0.0057
Std Error Mean	0.0003
Upper 95% Mean	0.0054
Lower 95% Mean	0.0042
N	369.0000
Sum Weights	369.0000

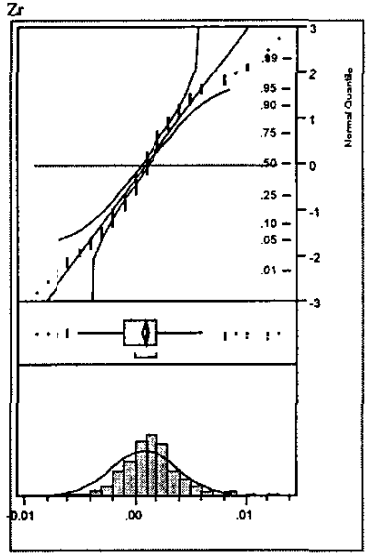
U



Quantiles		
maximum	100.0%	0.70300
	99.5%	0.69365
	97.5%	0.51897
	90.0%	0.38500
quartile	75.0%	0.29225
median	50.0%	0.20250
quartile	25.0%	0.11975
	10.0%	0.01510
	2.5%	-0.1036
	0.5%	-0.2048
minimum	0.0%	-0.23

Moments	
Mean	0.2057
Std Dev	0.1468
Std Error Mean	0.0075
Upper 95% Mean	0.2204
Lower 95% Mean	0.1911
N	386.0000
Sum Weights	386.0000

Zr



Quantiles		
maximum	100.0%	0.01300
	99.5%	0.01220
	97.5%	0.00800
	90.0%	0.00400
quartile	75.0%	0.00200
median	50.0%	0.00100
quartile	25.0%	-0.001
	10.0%	-0.002
	2.5%	-0.005
	0.5%	-0.0082
minimum	0.0%	-0.009

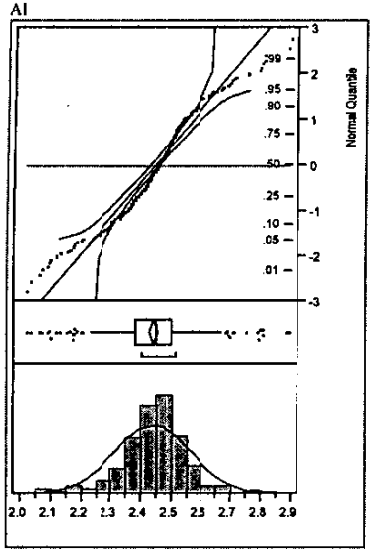
Moments	
Mean	0.0009
Std Dev	0.0030
Std Error Mean	0.0002
Upper 95% Mean	0.0013
Lower 95% Mean	0.0006
N	359.0000
Sum Weights	359.0000

Appendix 1.3

SCREENED ARG-1, SME FS Data
Probability Plots and Sample Statistics

ARG1(ID=D0104)

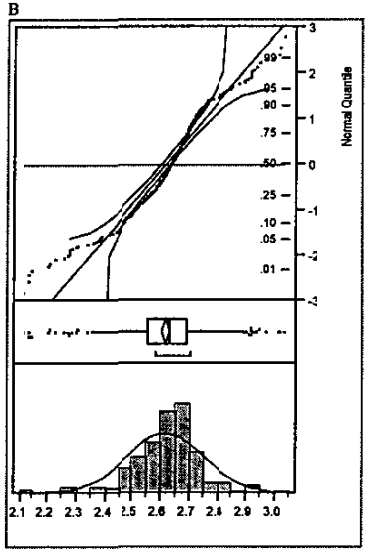
Al



Quantiles		
maximum	100.0%	2.8930
	99.5%	2.8835
	97.5%	2.7390
	90.0%	2.5778
quartile	75.0%	2.5020
median	50.0%	2.4500
quartile	25.0%	2.3847
	10.0%	2.3013
	2.5%	2.1206
	0.5%	2.0337
minimum	0.0%	2.0150

Moments	
Mean	2.4440
Std Dev	0.1259
Std Error Mean	0.0065
Upper 95% Mean	2.4568
Lower 95% Mean	2.4311
N	372.0000
Sum Weights	372.0000

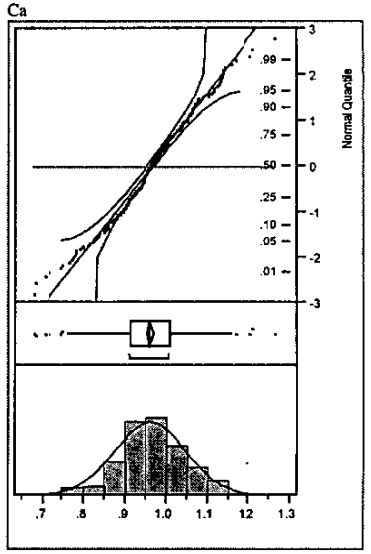
B



Quantiles		
maximum	100.0%	3.0350
	99.5%	3.0196
	97.5%	2.9179
	90.0%	2.7479
quartile	75.0%	2.6908
median	50.0%	2.6330
quartile	25.0%	2.5565
	10.0%	2.4650
	2.5%	2.2721
	0.5%	2.1344
minimum	0.0%	2.1190

Moments	
Mean	2.6193
Std Dev	0.1360
Std Error Mean	0.0070
Upper 95% Mean	2.6330
Lower 95% Mean	2.6056
N	380.0000
Sum Weights	380.0000

Ca



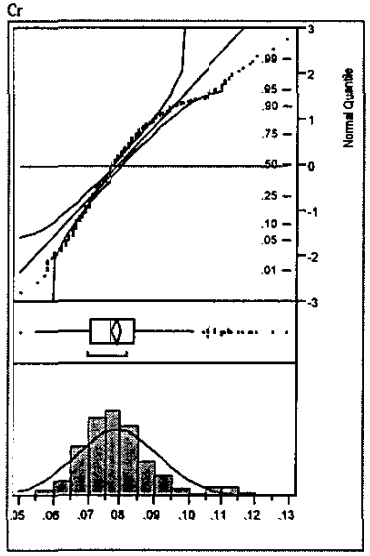
Quantiles		
maximum	100.0%	1.2670
	99.5%	1.2165
	97.5%	1.1336
	90.0%	1.0649
quartile	75.0%	1.0140
median	50.0%	0.9620
quartile	25.0%	0.9140
	10.0%	0.8590
	2.5%	0.7797
	0.5%	0.6808
minimum	0.0%	0.6780

Moments	
Mean	0.9639
Std Dev	0.0854
Std Error Mean	0.0043
Upper 95% Mean	0.9725
Lower 95% Mean	0.9554
N	386.0000
Sum Weights	386.0000

Appendix 1.3

SCREENED ARG-1, SME FS Data
Probability Plots and Sample Statistics

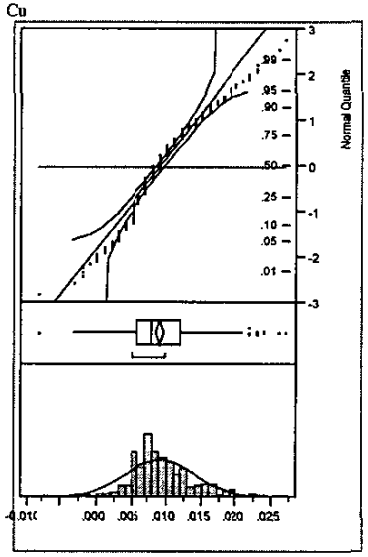
Cr



Quantiles		
maximum	100.0%	0.12900
	99.5%	0.12550
	97.5%	0.11263
	90.0%	0.09400
quartile	75.0%	0.08400
median	50.0%	0.07700
quartile	25.0%	0.07100
	10.0%	0.06600
	2.5%	0.06000
	0.5%	0.05438
minimum	0.0%	0.05000

Moments	
Mean	0.0791
Std Dev	0.0125
Std Error Mean	0.0006
Upper 95% Mean	0.0804
Lower 95% Mean	0.0778
N	374.0000
Sum Weights	374.0000

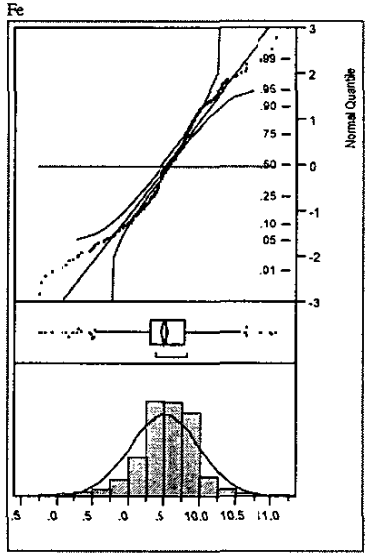
Cu



Quantiles		
maximum	100.0%	0.02700
	99.5%	0.02612
	97.5%	0.02200
	90.0%	0.01600
quarile	75.0%	0.01200
median	50.0%	0.00800
quarile	25.0%	0.00600
	10.0%	0.00400
	2.5%	0.00000
	0.5%	-0.0036
minimum	0.0%	-0.008

Moments	
Mean	0.0092
Std Dev	0.0050
Std Error Mean	0.0003
Upper 95% Mean	0.0097
Lower 95% Mean	0.0087
N	376.0000
SumWeights	376.0000

Fe



Quantiles		
maximum	100.0%	11.078
	99.5%	11.019
	97.5%	10.489
	90.0%	10.004
quartile	75.0%	9.809
median	50.0%	9.552
quartile	25.0%	9.308
	10.0%	8.953
	2.5%	8.302
	0.5%	7.750
minimum	0.0%	7.746

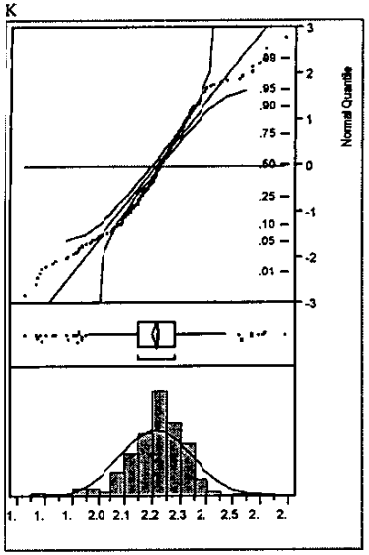
Moments	
Mean	9.5221
Std Dev	0.4834
Std Error Mean	0.0248
Upper 95% Mean	9.5707
Lower 95% Mean	9.4734
N	381.0000
Sum Weights	381.0000

Appendix 1.3

SCREENED ARG-1, SME FS Data

Probability Plots and Sample Statistics

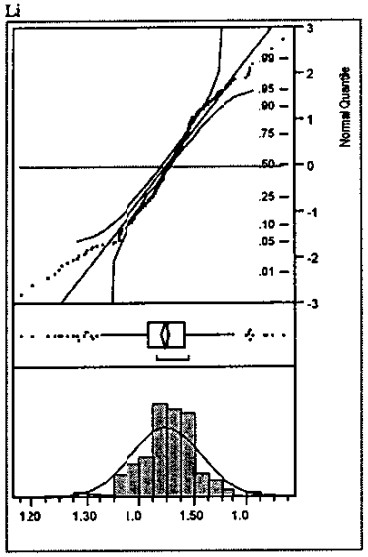
K



Quantiles		
maximum	100.0%	2.6860
	99.5%	2.6210
	97.5%	2.5303
	90.0%	2.3380
quartile	75.0%	2.2847
median	50.0%	2.2235
quartile	25.0%	2.1540
	10.0%	2.0725
	2.5%	1.8822
	0.5%	1.7648
minimum	0.0%	1.7300

Moments	
Mean	2.2152
Std Dev	0.1331
Std Error Mean	0.0068
Upper 95% Mean	2.2285
Lower 95% Mean	2.2018
N	382.0000
Sum Weights	382.0000

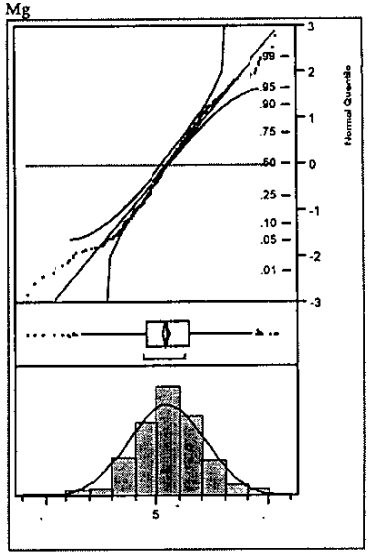
Li



Quantiles		
maximum	100.0%	1.6660
	99.5%	1.6484
	97.5%	1.6014
	90.0%	1.5174
quartile	75.0%	1.4840
median	50.0%	1.4540
quartile	25.0%	1.4190
	10.0%	1.3730
	2.5%	1.2842
	0.5%	1.1990
minimum	0.0%	1.1770

Moments	
Mean	1.4493
Std Dev	0.0656
Std Error Mean	0.0034
Upper 95% Mean	1.4560
Lower 95% Mean	1.4427
N	375.0000
Sum Weights	375.0000

Mg



Quantiles		
maximum	100.0%	0.60800
	99.5%	0.60616
	97.5%	0.58820
	90.0%	0.54760
quartile	75.0%	0.53000
median	50.0%	0.51000
quartile	25.0%	0.49100
	10.0%	0.47040
	2.5%	0.42700
	0.5%	0.38952
minimum	0.0%	0.38400

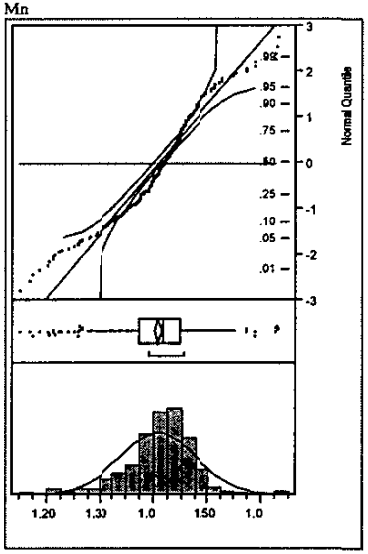
Moments	
Mean	0.5097
Std Dev	0.0338
Std Error Mean	0.0017
Upper 95% Mean	0.5131
Lower 95% Mean	0.5063
N	383.0000
Sum Weights	383.0000

Appendix 1.3

SCREENED ARG-1, SME FS Data

Probability Plots and Sample Statistics

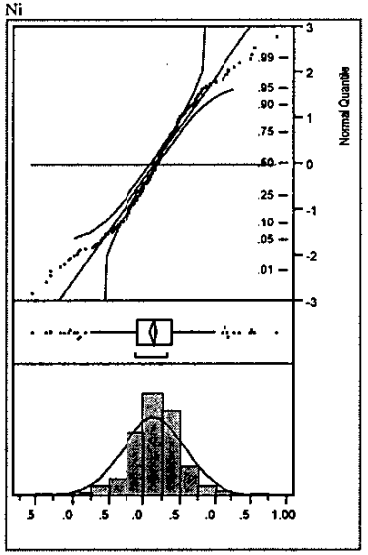
Mn



Quantiles		
maximum	100.0%	1.6320
	99.5%	1.6285
	97.5%	1.5514
	90.0%	1.4780
quartile	75.0%	1.4490
median	50.0%	1.4180
quartile	25.0%	1.3770
	10.0%	1.3195
	2.5%	1.2174
	0.5%	1.1673
minimum	0.0%	1.1520

Moments	
Mean	1.4101
Std Dev	0.0711
Std Error Mean	0.0037
Upper 95% Mean	1.4173
Lower 95% Mean	1.4029
N	375.0000
Sum Weights	375.0000

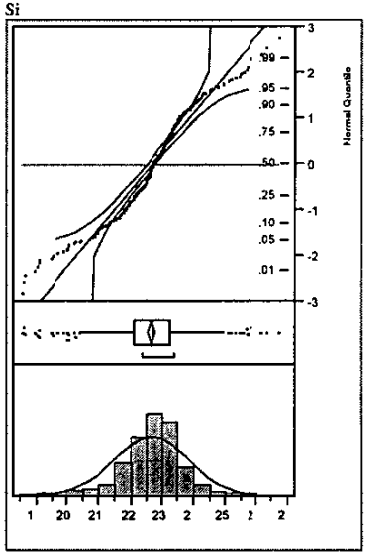
Ni



Quantiles		
maximum	100.0%	0.98500
	99.5%	0.95861
	97.5%	0.91535
	90.0%	0.86460
quartile	75.0%	0.83950
median	50.0%	0.81700
quartile	25.0%	0.79250
	10.0%	0.76500
	2.5%	0.70420
	0.5%	0.66138
minimum	0.0%	0.64500

Moments	
Mean	0.8149
Std Dev	0.0449
Std Error Mean	0.0023
Upper 95% Mean	0.8195
Lower 95% Mean	0.8104
N	381.0000
Sum Weights	381.0000

Si

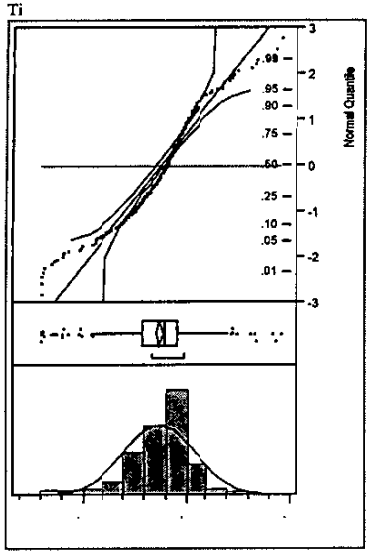


Quantiles		
maximum	100.0%	26.725
	99.5%	26.390
	97.5%	25.448
	90.0%	23.946
quartile	75.0%	23.282
median	50.0%	22.739
quartile	25.0%	22.142
	10.0%	21.330
	2.5%	19.607
	0.5%	18.592
minimum	0.0%	18.549

Moments	
Mean	22.6894
Std Dev	1.1935
Std Error Mean	0.0615
Upper 95% Mean	22.8103
Lower 95% Mean	22.5686
N	377.0000
Sum Weights	377.0000

Appendix 1.3
SCREENED ARG-1, SME FS Data
Probability Plots and Sample Statistics

Ti



Quantiles		
maximum	100.0%	0.79200
	99.5%	0.78663
	97.5%	0.74453
	90.0%	0.70610
quartile	75.0%	0.69225
median	50.0%	0.68000
quartile	25.0%	0.65900
	10.0%	0.63600
	2.5%	0.58000
	0.5%	0.56050
minimum	0.0%	0.56000

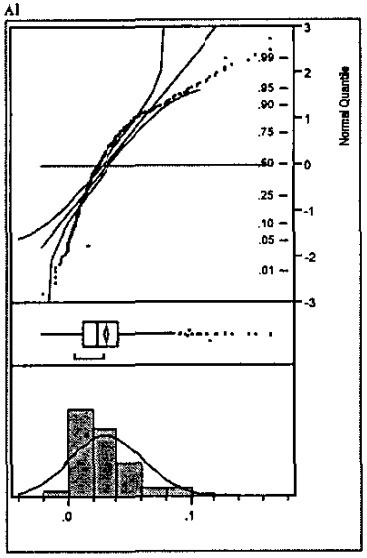
Moments	
Mean	0.6751
Std Dev	0.0344
Std Error Mean	0.0018
Upper 95% Mean	0.6785
Lower 95% Mean	0.6716
N	378.0000
Sum Weights	378.0000

Appendix 1.4

SCREENED Blanks, SME FS Data
Probability Plots and Sample Statistics

Blanks(ID=D0105)

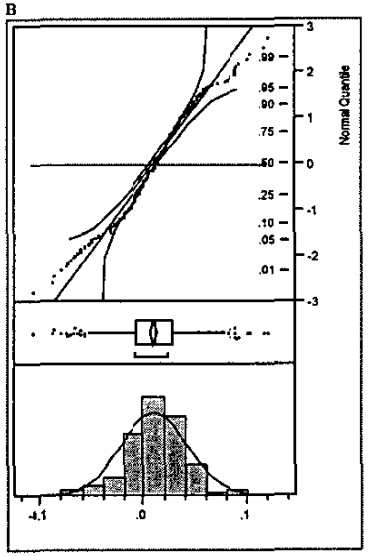
Al



Quantiles		
maximum	100.0%	0.16600
	99.5%	0.16600
	97.5%	0.12175
	90.0%	0.07360
quartile	75.0%	0.04300
median	50.0%	0.02400
quartile	25.0%	0.01300
	10.0%	0.00600
	2.5%	-0.0049
	0.5%	-0.0129
minimum	0.0%	-0.02

Moments	
Mean	0.0323
Std Dev	0.0302
Std Error Mean	0.0016
Upper 95% Mean	0.0354
Lower 95% Mean	0.0292
N	361.0000
Sum Weights	361.0000

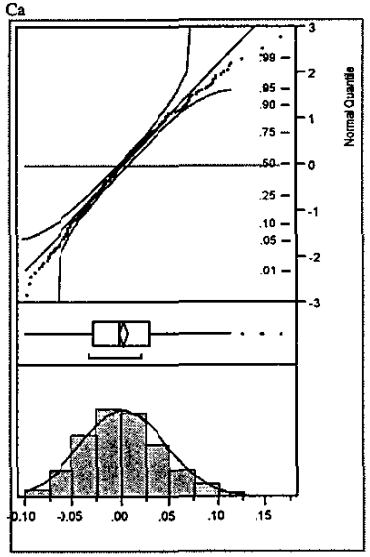
B



Quantiles		
maximum	100.0%	0.12100
	99.5%	0.11764
	97.5%	0.08800
	90.0%	0.04700
quartile	75.0%	0.02900
median	50.0%	0.01300
quartile	25.0%	-0.005
	10.0%	-0.0282
	2.5%	-0.0664
	0.5%	-0.0914
minimum	0.0%	-0.109

Moments	
Mean	0.0108
Std Dev	0.0325
Std Error Mean	0.0017
Upper 95% Mean	0.0142
Lower 95% Mean	0.0075
N	367.0000
Sum Weights	367.0000

Ca



Quantiles		
maximum	100.0%	0.16600
	99.5%	0.14944
	97.5%	0.10000
	90.0%	0.06560
quartile	75.0%	0.03000
median	50.0%	0.00000
quartile	25.0%	-0.027
	10.0%	-0.0506
	2.5%	-0.0754
	0.5%	-0.0952
minimum	0.0%	-0.098

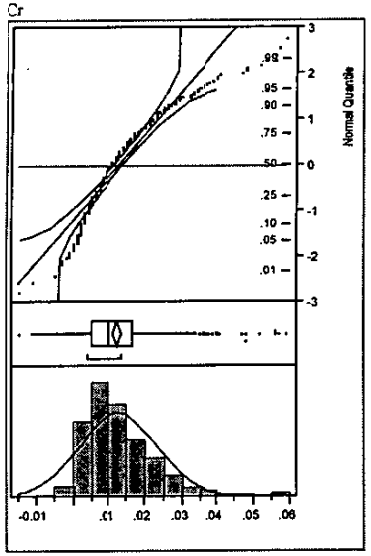
Moments	
Mean	0.0036
Std Dev	0.0442
Std Error Mean	0.0023
Upper 95% Mean	0.0080
Lower 95% Mean	-0.0009
N	383.0000
Sum Weights	383.0000

Appendix 1.4

SCREENED Blanks, SME FS Data

Probability Plots and Sample Statistics

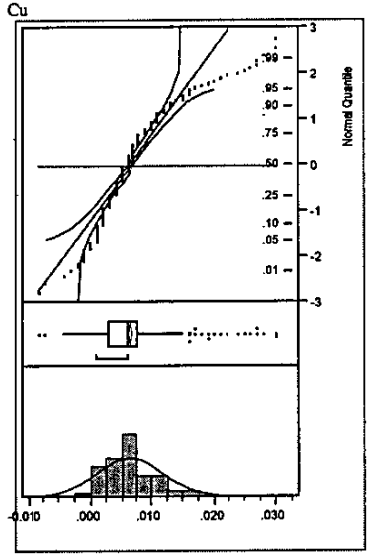
Cr



Quantiles		
maximum	100.0%	0.05900
	99.5%	0.05731
	97.5%	0.04077
	90.0%	0.02600
quartile	75.0%	0.01700
median	50.0%	0.01050
quartile	25.0%	0.00525
	10.0%	0.00200
	2.5%	-0.001
	0.5%	-0.0115
minimum	0.0%	-0.015

Moments	
Mean	0.0123
Std Dev	0.0103
Std Error Mean	0.0005
Upper 95% Mean	0.0133
Lower 95% Mean	0.0117
N	368.0000
Sum Weights	368.0000

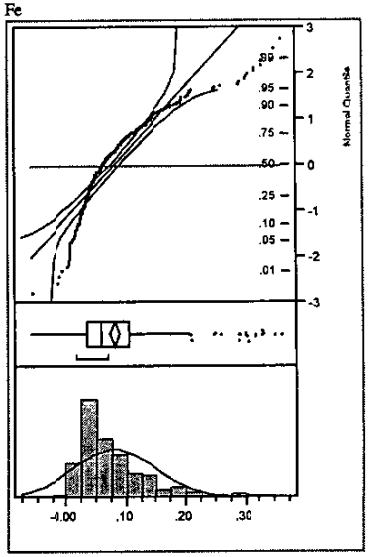
Cu



Quantiles		
maximum	100.0%	0.03000
	99.5%	0.03000
	97.5%	0.02177
	90.0%	0.01300
quartile	75.0%	0.00800
median	50.0%	0.00600
quartile	25.0%	0.00300
	10.0%	0.00190
	2.5%	-0.001
	0.5%	-0.0072
minimum	0.0%	-0.008

Moments	
Mean	0.0066
Std Dev	0.0053
Std Error Mean	0.0003
Upper 95% Mean	0.0071
Lower 95% Mean	0.0060
N	368.0000
Sum Weights	368.0000

Fe



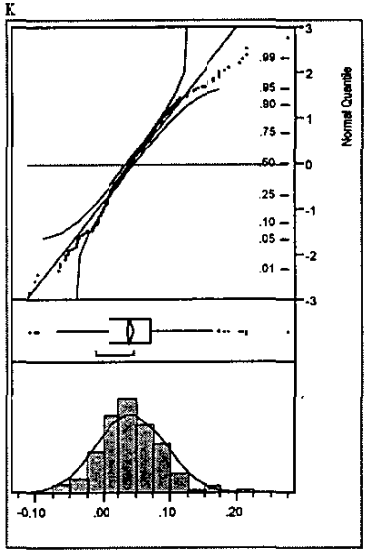
Quantiles		
maximum	100.0%	0.36200
	99.5%	0.35282
	97.5%	0.30065
	90.0%	0.17320
quartile	75.0%	0.10525
median	50.0%	0.06050
quartile	25.0%	0.03700
	10.0%	0.02170
	2.5%	0.00700
	0.5%	-0.0204
minimum	0.0%	-0.058

Moments	
Mean	0.0818
Std Dev	0.0692
Std Error Mean	0.0036
Upper 95% Mean	0.0889
Lower 95% Mean	0.0747
N	366.0000
Sum Weights	366.0000

Appendix 1.4

SCREENED Blanks, SME FS Data
Probability Plots and Sample Statistics

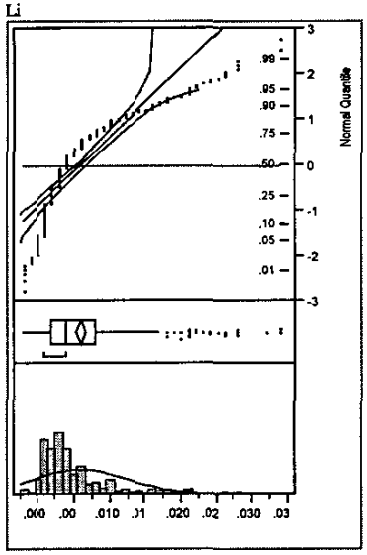
K



Quantiles		
maximum	100.0%	0.2740(
	99.5%	0.2197(
	97.5%	0.1720(
	90.0%	0.1019(
quartile	75.0%	0.0720(
median	50.0%	0.0390(
quartile	25.0%	0.0090(
	10.0%	-0.010(
	2.5%	-0.054(
	0.5%	-0.102(
minimum	0.0%	-0.11

Moments	
Mean	0.042(
Std Dev	0.052(
Std Error Mear	0.002(
Upper 95% Mean	0.047(
Lower 95% Mean	0.037(
N	380.000(
Sum Weights	380.000(

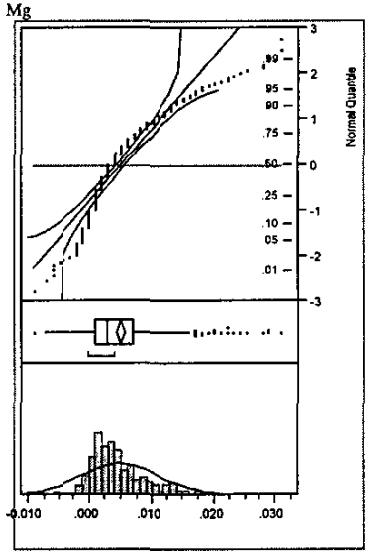
Li



Quantiles		
maximum	100.0%	0.03400
	99.5%	0.03400
	97.5%	0.02600
	90.0%	0.01600
quarile	75.0%	0.00800
median	50.0%	0.00400
quarile	25.0%	0.00200
	10.0%	0.00100
	2.5%	-0.0001
	0.5%	-0.002
minimum	0.0%	-0.002

Moments	
Mean	0.0060
Std Dev	0.0065
Std Error Mean	0.0003
Upper 95% Mean	0.0067
Lower 95% Mean	0.0053
N	354.0000
SumWeights	354.0000

Mg



Quantiles		
maximum	100.0%	0.03100
	99.5%	0.03100
	97.5%	0.02297
	90.0%	0.01300
quartile	75.0%	0.00700
median	50.0%	0.00300
quartile	25.0%	0.00100
	10.0%	0.00000
	2.5%	-0.002
	0.5%	-0.0074
minimum	0.0%	-0.009

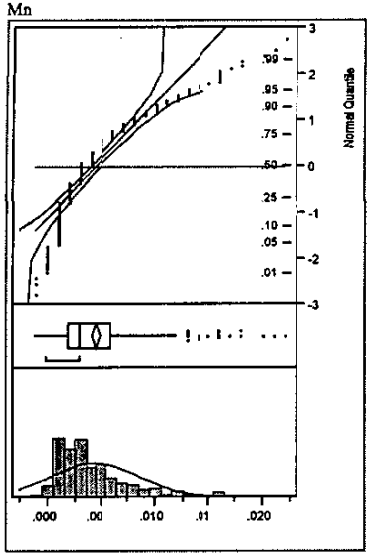
Moments	
Mean	0.0051
Std Dev	0.0062
Std Error Mean	0.0003
Upper 95% Mean	0.0057
Lower 95% Mean	0.0045
N	360.0000
Sum Weights	360.0000

Appendix 1.4

SCREENED Blanks, SME FS Data

Probability Plots and Sample Statstics

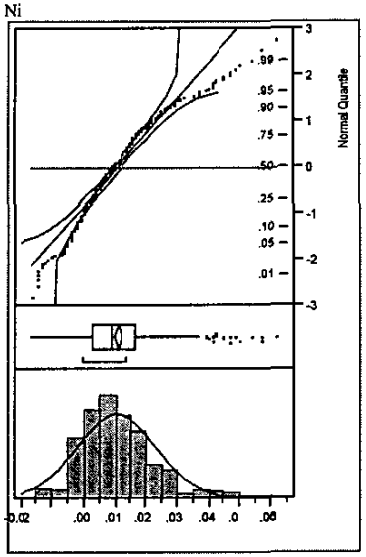
Mn



Quantiles		
maximum	100.0%	0.02200
	99.5%	0.02118
	97.5%	0.01600
	90.0%	0.01000
quartile	75.0%	0.00600
median	50.0%	0.00300
quartile	25.0%	0.00200
	10.0%	0.00100
	2.5%	0.00000
	0.5%	-0.001
minimum	0.0%	-0.001

Moments	
Mean	0.0045
Std Dev	0.0040
Std Error Mean	0.0002
Upper 95% Mean	0.0049
Lower 95% Mean	0.0041
N	363.0000
Sum Weights	363.0000

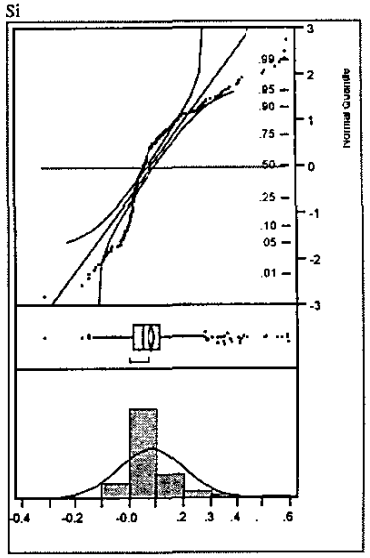
Ni



Quantiles		
maximum	100.0%	0.06200
	99.5%	0.05755
	97.5%	0.04500
	90.0%	0.02620
quartile	75.0%	0.01700
median	50.0%	0.00900
quartile	25.0%	0.00300
	10.0%	-0.002
	2.5%	-0.0106
	0.5%	-0.0142
minimum	0.0%	-0.016

Moments	
Mean	0.0110
Std Dev	0.0127
Std Error Mean	0.0007
Upper 95% Mean	0.0123
Lower 95% Mean	0.0097
N	377.0000
Sum Weights	377.0000

Si



Quantiles		
maximum	100.0%	0.59300
	99.5%	0.58990
	97.5%	0.42188
	90.0%	0.26200
quartile	75.0%	0.12000
median	50.0%	0.05000
quartile	25.0%	0.01500
	10.0%	-0.009
	2.5%	-0.0929
	0.5%	-0.2061
minimum	0.0%	-0.32

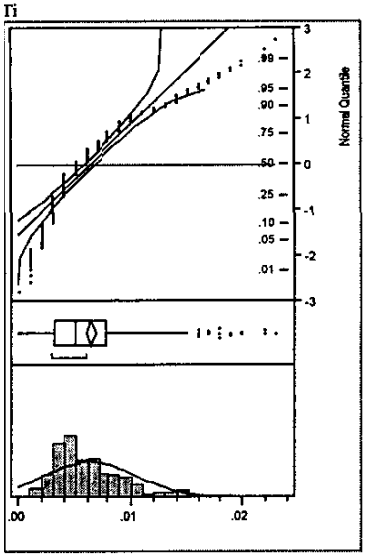
Moments	
Mean	0.0850
Std Dev	0.1239
Std Error Mean	0.0066
Upper 95% Mean	0.0980
Lower 95% Mean	0.0721
N	354.0000
Sum Weights	354.0000

Appendix 1.4

SCREENED Blanks, SME FS Data

Probability Plots and Sample Statistics

Ti



Quantiles		
maximum	100.0%	0.02300
	99.5%	0.02215
	97.5%	0.01800
	90.0%	0.01300
quartile	75.0%	0.00800
median	50.0%	0.00500
quartile	25.0%	0.00325
	10.0%	0.00200
	2.5%	0.00100
	0.5%	0.00084
minimum	0.0%	0.00000

Moments	
Mean	0.0064
Std Dev	0.0042
Std Error Mean	0.0002
Upper 95% Mean	0.0068
Lower 95% Mean	0.0059
N	368.0000
Sum Weights	368.0000

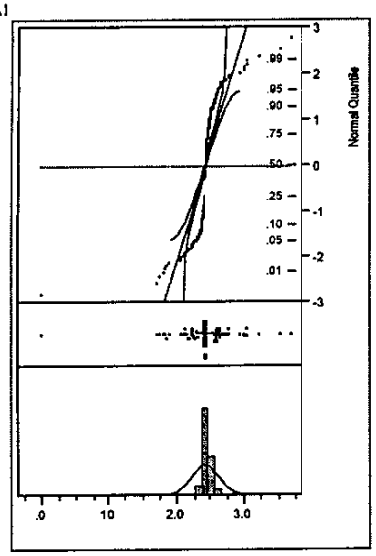
Appendix 1.5

UNSCREENED ARG-1, SME MA Data
Probability Plots and Sample Statstics

UNSCREENED ARG-1, SMEMA Data

Probability Plot and Sample Statistics

Al



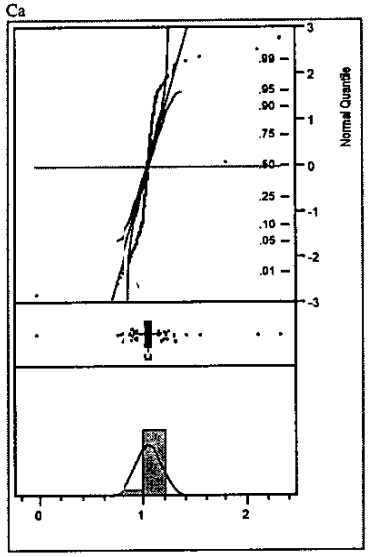
Quantiles		
maximum	100.0%	3.6890
	99.5%	3.5377
	97.5%	2.7669
	90.0%	2.5216
quartile	75.0%	2.4610
median	50.0%	2.4290
quartile	25.0%	2.3990
	10.0%	2.3428
	2.5%	2.0718
	0.5%	1.5962
minimum	0.0%	-0.0140

Moments	
Mean	2.4272
Std Dev	0.2051
Std Error Mean	0.0104
Upper 95% Mean	2.4477
Lower 95% Mean	2.4067
N	387.0000
Sum Weights	387.0000

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

Ca



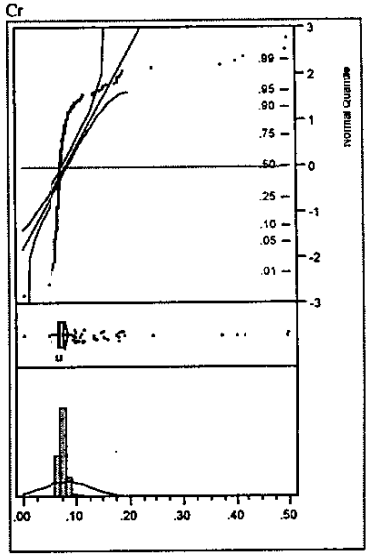
Quantiles		
maximum	100.0%	2.3300
	99.5%	2.1307
	97.5%	1.2361
	90.0%	1.1142
qurtile	75.0%	1.0770
median	50.0%	1.0510
qurtile	25.0%	1.0260
	10.0%	0.9904
	2.5%	0.8845
	0.5%	0.6860
minimum	0.0%	-0.0350

Moments	
Mean	1.0542
Std Dev	0.1252
Std Error Mean	0.0064
Upper 95% Mean	1.0667
Lower 95% Mean	1.0417
N	387.0000
Sum Weights	387.0000

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

Cr



Quantiles		
maximum	100.0%	0.49700
	99.5%	0.49418
	97.5%	0.17950
	90.0%	0.09420
quartile	75.0%	0.07900
median	50.0%	0.07300
quartile	25.0%	0.06900
	10.0%	0.06600
	2.5%	0.06100
	0.5%	0.04418
minimum	0.0%	0.00000

Moments	
Mean	0.0827
Std Dev	0.0461
Std Error Mean	0.0023
Upper 95% Mean	0.0873
Lower 95% Mean	0.0781
N	387.0000
Sum Weights	387.0000

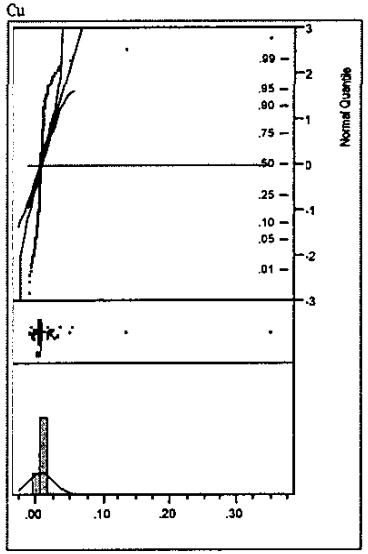
Appendix 1.5

UNSCREENED ARG-1, SME MA Data
Probablity Plots and Sample Statistics

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

Cu



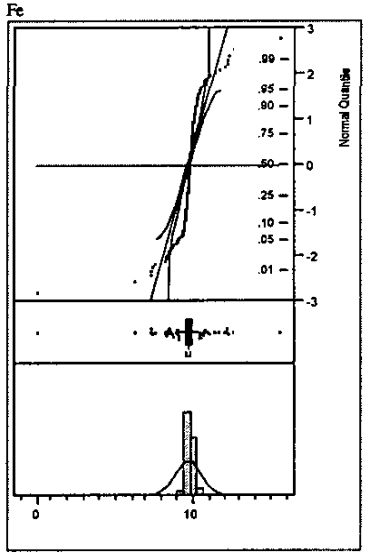
Quantiles		
maximum	100.0%	0.35000
	99.5%	0.14884
	97.5%	0.02360
	90.0%	0.01120
quartile	75.0%	0.00900
median	50.0%	0.00600
quartile	25.0%	0.00500
	10.0%	0.00200
	2.5%	-0.0043
	0.5%	-0.0091
minimum	0.0%	-0.01

Moments	
Mean	0.0082
Std Dev	0.0195
Std Error Mean	0.0010
Upper 95% Mean	0.0102
Lower 95% Mean	0.0063
N	387.0000
Sum Weights	387.0000

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statstics

Fe



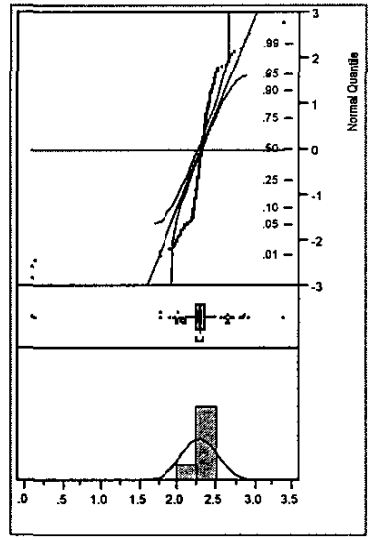
Quantiles		
maximum	100.0%	15.494
	99.5%	12.739
	97.5%	10.935
	90.0%	10.154
quarile	75.0%	9.909
median	50.0%	9.767
quarile	25.0%	9.635
	10.0%	9.452
	2.5%	8.370
	0.5%	5.813
minimum	0.0%	-0.023

Moments	
Mean	9.7555
Std Dev	0.7888
Std Error Mean	0.0401
Upper 95% Mean	9.8344
Lower 95% Mean	9.6767
N	387.0000
Sum Weights	387.0000

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

K



Quantiles		
maximum	100.0%	3.3940
	99.5%	2.9353
	97.5%	2.6496
	90.0%	2.4300
quartile	75.0%	2.3610
median	50.0%	2.3090
quartile	25.0%	2.2570
	10.0%	2.2090
	2.5%	1.9845
	0.5%	0.0988
minimum	0.0%	0.0950

Moments	
Mean	2.2988
Std Dev	0.2356
Std Error Mean	0.0120
Upper 95% Mean	2.3223
Lower 95% Mean	2.2752
N	387.0000
Sum Weights	387.0000

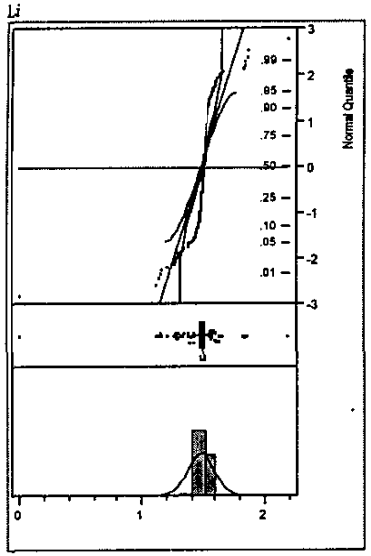
Appendix 1.5

UNSCREENED ARG-1, SME MA Data
Probability Plots and Sample Statistics

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

Li



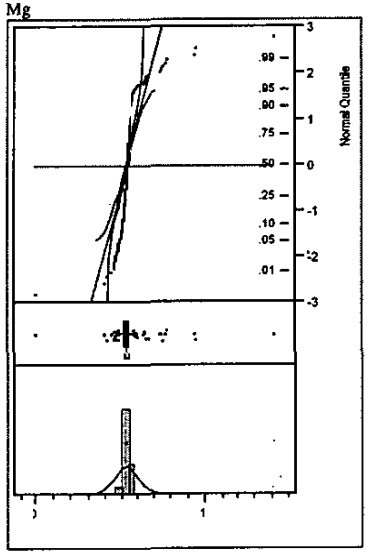
Quantiles		
maximum	100.0%	2.1870
	99.5%	1.8843
	97.5%	1.6261
	90.0%	1.5390
quartile	75.0%	1.5110
median	50.0%	1.4940
quartile	25.0%	1.4760
	10.0%	1.4453
	2.5%	1.2810
	0.5%	1.0463
minimum	0.0%	0.0020

Moments	
Mean	1.4892
Std Dev	0.1114
Std Error Mean	0.0057
Upper 95% Mean	1.5003
Lower 95% Mean	1.4780
N	387.0000
Sum Weights	387.0000

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

Mg



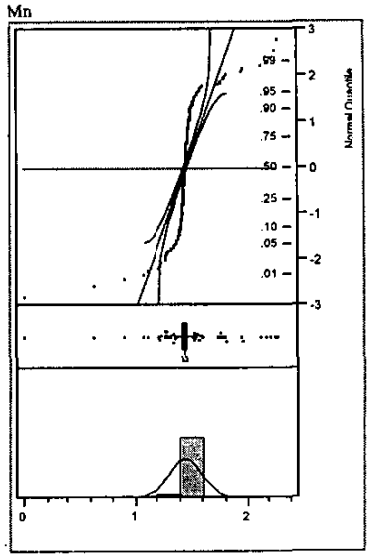
Quantiles		
maximum	100.0%	1.4130
	99.5%	0.9731
	97.5%	0.6595
	90.0%	0.5610
quartile	75.0%	0.5420
median	50.0%	0.5290
quartile	25.0%	0.5180
	10.0%	0.5048
	2.5%	0.4642
	0.5%	0.3702
minimum	0.0%	-0.0020

Moments	
Mean	0.5360
Std Dev	0.0713
Std Error Mean	0.0036
Upper 95% Mean	0.5431
Lower 95% Mean	0.5289
N	387.0000
Sum Weights	387.0000

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

Mn



Quantiles		
maximum	100.0%	2.2820
	99.5%	2.2613
	97.5%	1.7917
	90.0%	1.5020
quartile	75.0%	1.4700
median	50.0%	1.4520
quartile	25.0%	1.4340
	10.0%	1.4104
	2.5%	1.2760
	0.5%	0.5941
minimum	0.0%	0.0000

Moments	
Mean	1.4580
Std Dev	0.1458
Std Error Mean	0.0074
Upper 95% Mean	1.4726
Lower 95% Mean	1.4434
N	387.0000
Sum Weights	387.0000

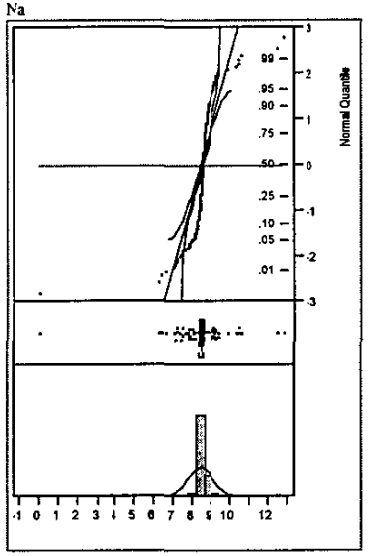
Appendix 1.5

UNSCREENED ARG-1, SME MA Data
Probability Plots and Sample Statistics

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

Na



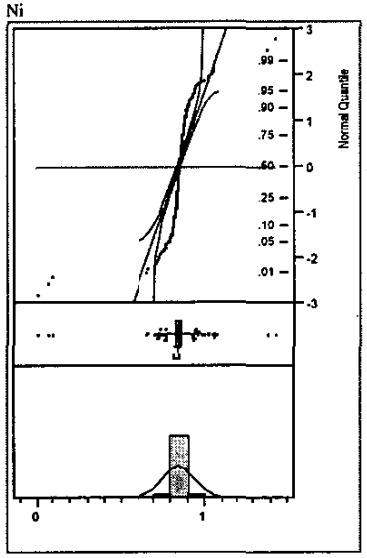
Quantiles		
maximum	100.0%	12.829
	99.5%	12.473
	97.5%	9.336
	90.0%	8.809
quartile	75.0%	8.598
median	50.0%	8.507
quartile	25.0%	8.396
	10.0%	8.226
	2.5%	7.338
	0.5%	5.900
minimum	0.0%	-0.006

Moments	
Mean	8.5012
Std Dev	0.6671
Std Error Mean	0.0339
Upper 95% Mean	8.5679
Lower 95% Mean	8.4345
N	387.0000
Sum Weights	387.0000

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

Ni



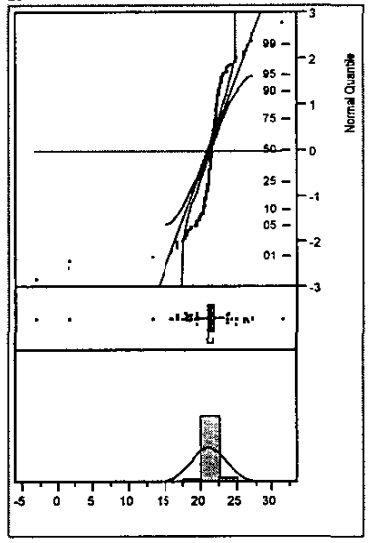
Quantiles		
maximum	100.0%	1.4340
	99.5%	1.3842
	97.5%	1.0170
	90.0%	0.8972
quartile	75.0%	0.8680
median	50.0%	0.8500
quartile	25.0%	0.8340
	10.0%	0.8140
	2.5%	0.7299
	0.5%	0.0709
minimum	0.0%	-0.0090

Moments	
Mean	0.8501
Std Dev	0.0938
Std Error Mean	0.0048
Upper 95% Mean	0.8595
Lower 95% Mean	0.8407
N	387.0000
Sum Weights	387.0000

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

Si



Quantiles		
maximum	100.0%	31.515
	99.5%	27.222
	97.5%	24.675
	90.0%	22.320
quartile	75.0%	21.892
median	50.0%	21.419
quartile	25.0%	20.989
	10.0%	20.254
	2.5%	17.200
	0.5%	1.262
minimum	0.0%	-3.235

Moments	
Mean	21.2085
Std Dev	2.3616
Std Error Mean	0.1200
Upper 95% Mean	21.4446
Lower 95% Mean	20.9725
N	387.0000
Sum Weights	387.0000

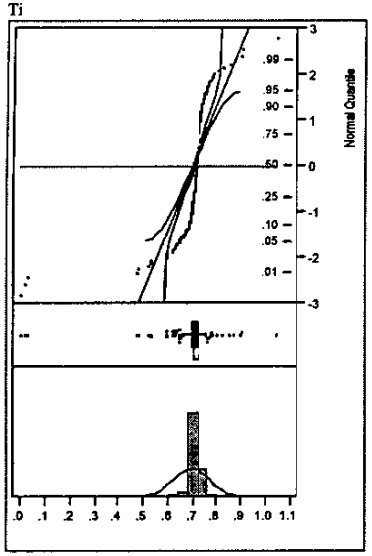
Appendix 1.5

UNSCREENED ARG-1, SME MA Data
Probability Plots and Sample Statistics

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

Ti



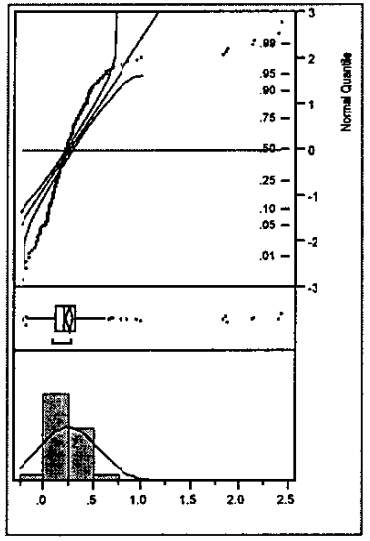
Quantiles		
maximum	100.0%	1.0440
	99.5%	0.9115
	97.5%	0.7793
	90.0%	0.7362
quartile	75.0%	0.7210
median	50.0%	0.7090
quartile	25.0%	0.6960
	10.0%	0.6796
	2.5%	0.5904
	0.5%	0.0179
minimum	0.0%	0.0010

Moments	
Mean	0.7029
Std Dev	0.0745
Std Error Mean	0.0038
Upper 95% Mean	0.7103
Lower 95% Mean	0.6954
N	387.0000
Sum Weights	387.0000

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

U



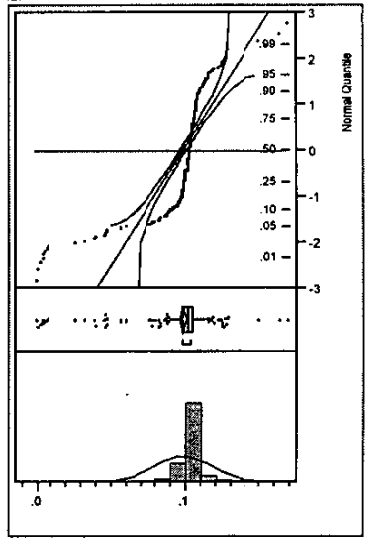
Quantiles		
maximum	100.0%	2.4180
	99.5%	2.4011
	97.5%	0.8824
	90.0%	0.4540
quartile	75.0%	0.3260
median	50.0%	0.2160
quartile	25.0%	0.1280
	10.0%	0.0508
	2.5%	-0.0682
	0.5%	-0.1826
minimum	0.0%	-0.2230

Moments	
Mean	0.2641
Std Dev	0.3012
Std Error Mean	0.0153
Upper 95% Mean	0.2942
Lower 95% Mean	0.2340
N	387.0000
Sum Weights	387.0000

UNSCREENED ARG-1, SME MA Data

Probability Plot and Sample Statistics

Zr



Quantiles		
maximum	100.0%	0.16900
	99.5%	0.16336
	97.5%	0.12430
	90.0%	0.10900
quartile	75.0%	0.10500
median	50.0%	0.10200
quartile	25.0%	0.09900
	10.0%	0.09000
	2.5%	0.03020
	0.5%	-6e-5
minimum	0.0%	-0.001

Moments	
Mean	0.0990
Std Dev	0.0194
Std Error Mean	0.0010
Upper 95% Mean	0.1010
Lower 95% Mean	0.0971
N	387.0000
Sum Weights	387.0000

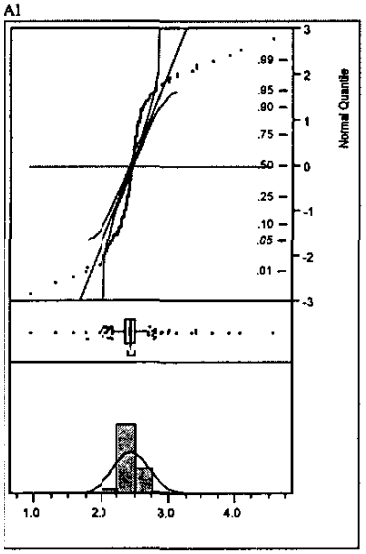
Appendix 1.6

UNSCREENED ARG-1, SME FS Data
Probability Plots and Sample Statistics

UNSCREENED ARG-1, SME FS Data

Probability Plot and Sample Statistics

Al



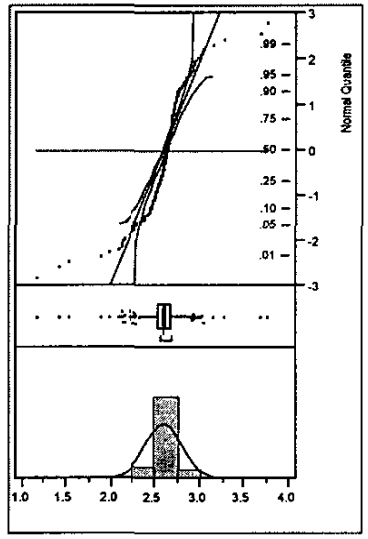
Quantiles		
maximum	100.0%	4.5550
	99.5%	4.0836
	97.5%	3.0206
	90.0%	2.5974
quartile	75.0%	2.5080
median	50.0%	2.4510
quartile	25.0%	2.3810
	10.0%	2.2912
	2.5%	2.0576
	0.5%	1.2884
minimum	0.0%	0.9380

Moments	
Mean	2.4600
Std Dev	0.2606
Std Error Mean	0.0132
Upper 95% Mean	2.4860
Lower 95% Mean	2.434
N	391.0000
Sum Weights	391.0000

UNSCREENED ARG-1, SME FS Data

Probability Plot and Sample Statistics

B



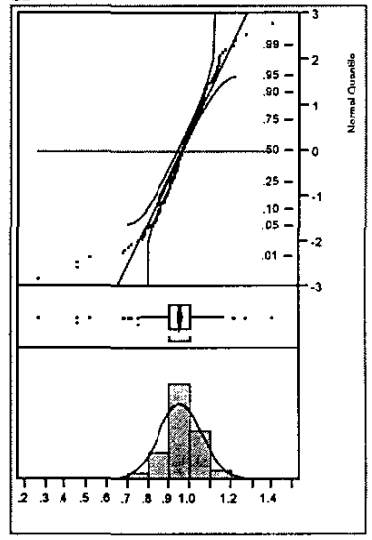
Quantiles		
maximum	100.0%	3.7660
	99.5%	3.6950
	97.5%	2.9404
	90.0%	2.7542
quartile	75.0%	2.6920
median	50.0%	2.6310
quartile	25.0%	2.5540
	10.0%	2.4530
	2.5%	2.1376
	0.5%	1.4214
minimum	0.0%	1.1910

Moments	
Mean	2.6123
Std Dev	0.2043
Std Error Mean	0.0103
Upper 95% Mean	2.6326
Lower 95% Mean	2.5920
N	391.0000
Sum Weights	391.0000

UNSCREENED ARG-1, SME FS Data

Probability Plot and Sample Statistics

Ca



Quantiles		
maximum	100.0%	1.4070
	99.5%	1.2726
	97.5%	1.1352
	90.0%	1.0664
quartile	75.0%	1.0140
median	50.0%	0.9620
quartile	25.0%	0.9120
	10.0%	0.8572
	2.5%	0.7502
	0.5%	0.4501
minimum	0.0%	0.2600

Moments	
Mean	0.9595
Std Dev	0.1038
Std Error Mean	0.0052
Upper 95% Mean	0.9699
Lower 95% Mean	0.9492
N	391.0000
Sum Weights	391.0000

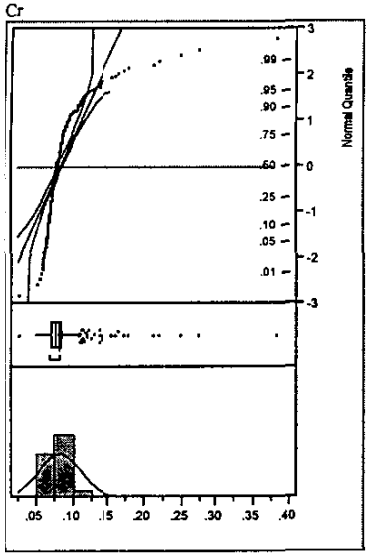
Appendix 1.6

UNSCREENED ARG-1, SME FS Data
Probability Plots and Sample Statistics

UNSCREENED ARG-1, SMEFS Data

Probability Plot and Sample Statistics

Cr



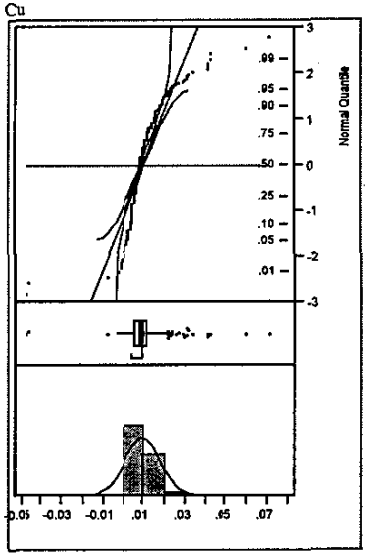
Quantiles		
maximum	100.0%	0.38200
	99.5%	0.27640
	97.5%	0.15540
	90.0%	0.10500
quartile	75.0%	0.08500
median	50.0%	0.07700
quartile	25.0%	0.07100
	10.0%	0.06600
	2.5%	0.05980
	0.5%	0.04900
minimum	0.0%	0.02500

Moments	
Mean	0.0834
Std Dev	0.0280
Std Error Mean	0.0014
Upper 95% Mean	0.0862
Lower 95% Mean	0.0806
N	391.0000
Sum Weights	391.0000

UNSCREENED ARG-1, SME FS Data

Probability Plot and Sample Statistics

Cu



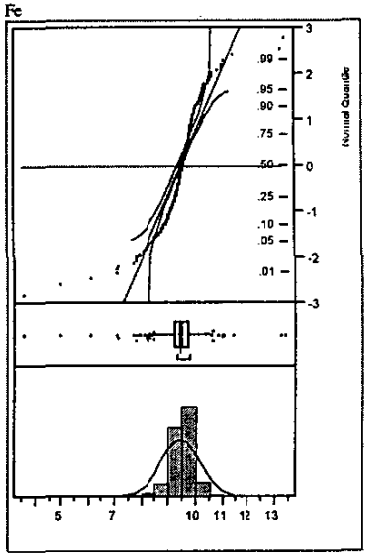
Quantiles		
maximum	100.0%	0.07100
	99.5%	0.06044
	97.5%	0.03120
	90.0%	0.01800
quartile	75.0%	0.01200
median	50.0%	0.00900
quartile	25.0%	0.00600
	10.0%	0.00400
	2.5%	0.00000
	0.5%	-0.046
minimum	0.0%	-0.047

Moments	
Mean	0.0100
Std Dev	0.0088
Std Error Mean	0.0004
Upper 95% Mean	0.0108
Lower 95% Mean	0.0091
N	391.0000
Sum Weights	391.0000

UNSCREENED ARG-1, SME FS Data

Probability Plot and Sample Statistics

Fe



Quantiles		
maximum	100.0%	13.352
	99.5%	13.215
	97.5%	10.620
	90.0%	10.028
quartile	75.0%	9.809
median	50.0%	9.549
quartile	25.0%	9.285
	10.0%	8.849
	2.5%	7.800
	0.5%	4.915
minimum	0.0%	3.575

Moments	
Mean	9.4870
Std Dev	0.7328
Std Error Mean	0.0371
Upper 95% Mean	9.5599
Lower 95% Mean	9.4142
N	391.0000
Sum Weights	391.0000

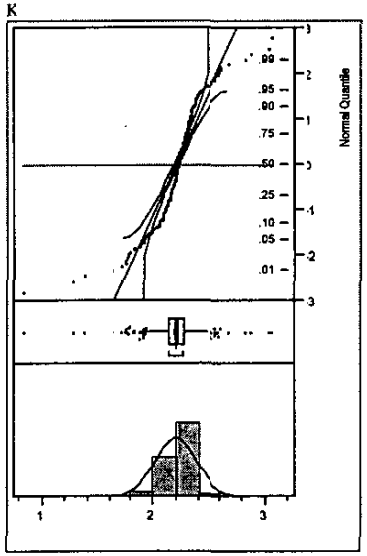
Appendix 1.6

UNSCREENED ARG-1, SME FS Data
Probability Plots and Sample Statistics

UNSCREENED ARG-1, SME FS Data

Probability Plot and Sample Statistics

K



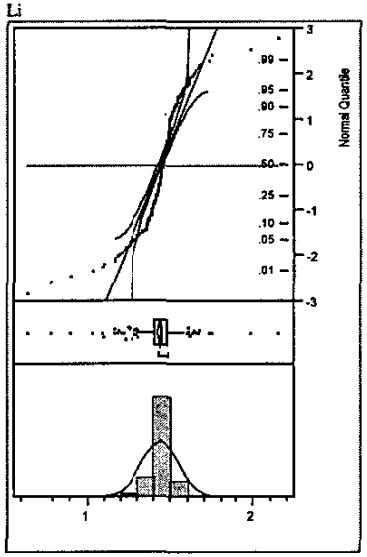
Quantiles		
maximum	100.0%	3.0630
	99.5%	3.0323
	97.5%	2.5724
	90.0%	2.3482
quartile	75.0%	2.2870
median	50.0%	2.2230
quartile	25.0%	2.1530
	10.0%	2.0584
	2.5%	1.7870
	0.5%	1.2627
minimum	0.0%	0.8480

Moments	
Mean	2.2121
Std Dev	0.1821
Std Error Mean	0.0092
Upper 95% Mean	2.2302
Lower 95% Mean	2.1939
N	391.0000
Sum Weights	391.0000

UNSCREENED ARG-1, SME FS Data

Probability Plot and Sample Statistics

Li



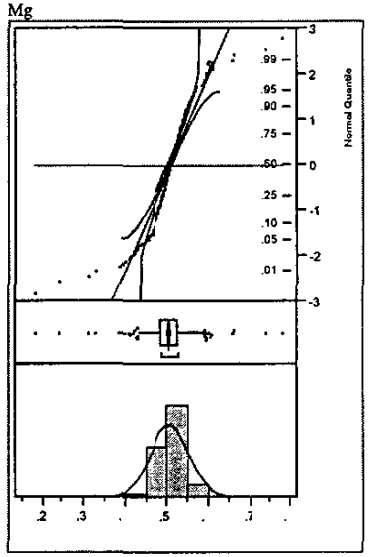
Quantiles		
maximum	100.0%	2.1450
	99.5%	1.9962
	97.5%	1.6150
	90.0%	1.5208
quartile	75.0%	1.4850
median	50.0%	1.4520
quartile	25.0%	1.4160
	10.0%	1.3600
	2.5%	1.1818
	0.5%	0.7869
minimum	0.0%	0.6400

Moments	
Mean	1.4432
Std Dev	0.1102
Std Error Mean	0.0056
Upper 95% Mean	1.4541
Lower 95% Mean	1.4322
N	391.0000
Sum Weights	391.0000

UNSCREENED ARG-1, SME FS Data

Probability Plot and Sample Statistics

Mg



Quantiles		
maximum	100.0%	0.78200
	99.5%	0.74360
	97.5%	0.59400
	90.0%	0.55100
quartile	75.0%	0.53000
median	50.0%	0.51000
quartile	25.0%	0.49100
	10.0%	0.47000
	2.5%	0.41560
	0.5%	0.24244
minimum	0.0%	0.18100

Moments	
Mean	0.5093
Std Dev	0.0469
Std Error Mean	0.0024
Upper 95% Mean	0.5139
Lower 95% Mean	0.5046
N	391.0000
Sum Weights	391.0000

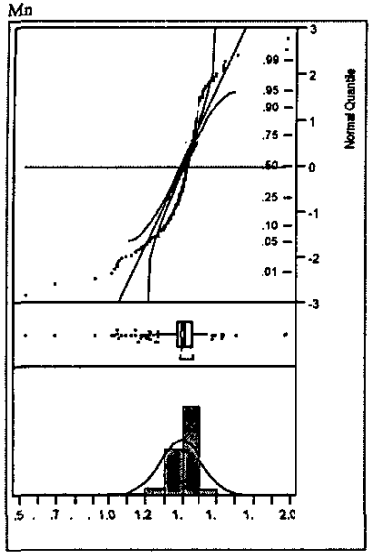
Appendix 1.6

UNSCREENED ARG-1, SME FS Data
Probability Plots and Sample Statistics

UNSCREENED ARG-1, SME FS Data

Probability Plot and Sample Statistics

Mn



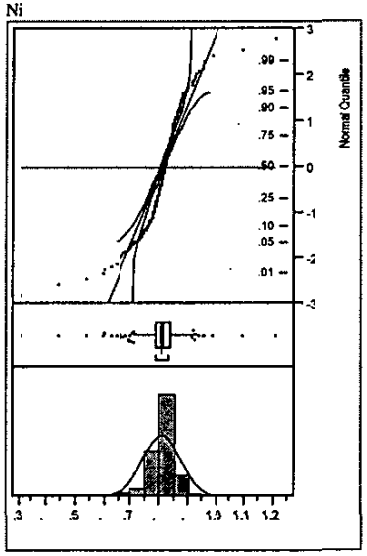
Quantiles		
maximum	100.0%	1.9700
	99.5%	1.9681
	97.5%	1.5762
	90.0%	1.4796
quartile	75.0%	1.4490
median	50.0%	1.4160
quartile	25.0%	1.3750
	10.0%	1.3010
	2.5%	1.0860
	0.5%	0.6797
minimum	0.0%	0.5280

Moments	
Mean	1.3997
Std Dev	0.1163
Std Error Mean	0.0059
Upper 95% Mean	1.4112
Lower 95% Mean	1.3881
N	391.0000
Sum Weights	391.0000

UNSCREENED ARG-1, SME FS Data

Probability Plot and Sample Statistics

Ni



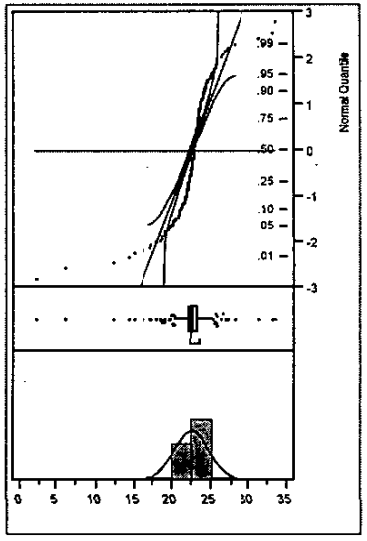
Quantiles		
maximum	100.0%	1.2090
	99.5%	1.0976
	97.5%	0.9200
	90.0%	0.8658
quartile	75.0%	0.8390
median	50.0%	0.8170
quartile	25.0%	0.7910
	10.0%	0.7562
	2.5%	0.6618
	0.5%	0.4348
minimum	0.0%	0.3090

Moments	
Mean	0.8113
Std Dev	0.0650
Std Error Mean	0.0033
Upper 95% Mean	0.8177
Lower 95% Mean	0.8048
N	391.0000
Sum Weights	391.0000

UNSCREENED ARG-1, SME FS Data

Probability Plot and Sample Statistics

Si



Quantiles		
maximum	100.0%	33.573
	99.5%	33.239
	97.5%	25.780
	90.0%	24.027
quartile	75.0%	23.302
median	50.0%	22.729
quartile	25.0%	22.097
	10.0%	21.019
	2.5%	18.422
	0.5%	5.957
minimum	0.0%	2.069

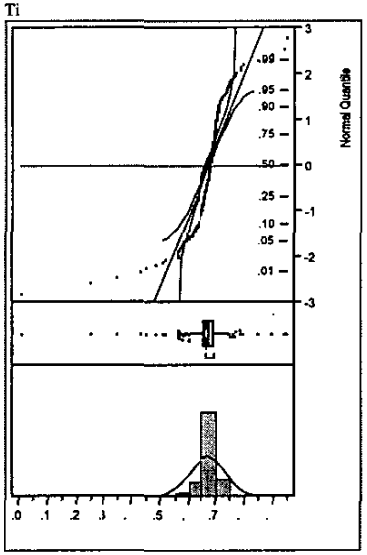
Moments	
Mean	22.5707
Std Dev	2.2362
Std Error Mean	0.1131
Upper 95% Mean	22.7931
Lower 95% Mean	22.3484
N	391.0000
Sum Weights	391.0000

Appendix 1.6
UNSCREENED ARG-1, SME FS Data
Probability Plots and Sample Statistics

UNSCREENED ARG-1, SMEFS Data

Probability Plot and Sample Statistics

Ti

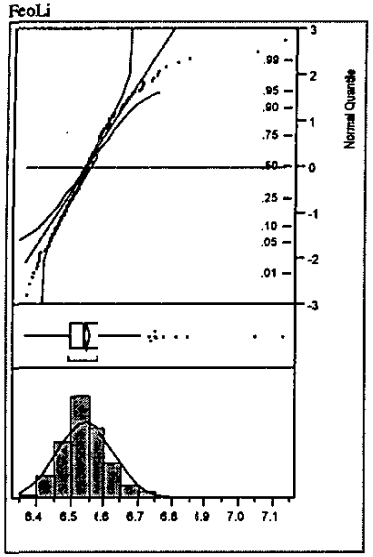


Quantiles		
maximum	100.0%	0.9480
	99.5%	0.9374
	97.5%	0.7636
	90.0%	0.7070
quartile	75.0%	0.6930
median	50.0%	0.6800
quartile	25.0%	0.6580
	10.0%	0.6282
	2.5%	0.5594
	0.5%	0.2354
minimum	0.0%	0.0050

Moments	
Mean	0.6709
Std Dev	0.0644
Std Error Mean	0.0033
Upper 95% Mean	0.6773
Lower 95% Mean	0.6645
N	391.0000
Sum Weights	391.0000

Appendix 2.1
Screened ARG-1, SME MA Data

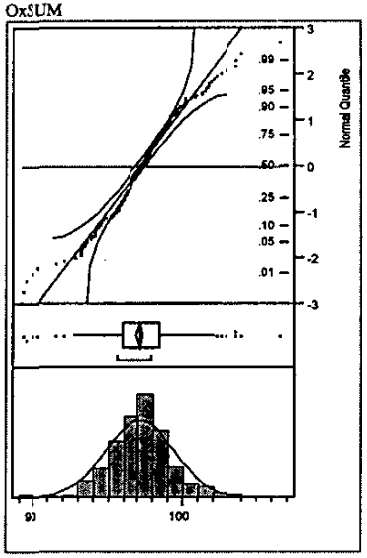
ARG1(ID=D0102)
FeoLi



Quantiles		
maximum	100.0%	7.1299
	99.5%	7.0651
	97.5%	6.7379
	90.0%	6.6449
quartile	75.0%	6.5838
median	50.0%	6.5371
quartile	25.0%	6.4950
	10.0%	6.4552
	2.5%	6.4026
	0.5%	6.3746
minimum	0.0%	6.3701

Moments	
Mean	6.5459
Std Dev	0.0841
Std Error Mean	0.0045
Upper 95% Mean	6.5547
Lower 95% Mean	6.5371
N	354.0000
Sum Weights	354.0000

OxSUM

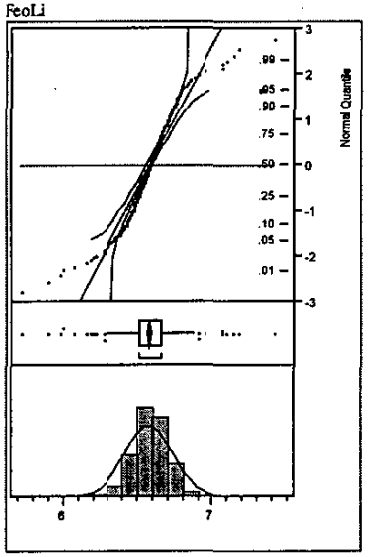


Quantiles		
maximum	100.0%	106.49
	99.5%	105.30
	97.5%	102.19
	90.0%	99.71
quartile	75.0%	98.47
median	50.0%	97.20
quartile	25.0%	95.96
	10.0%	94.34
	2.5%	92.87
	0.5%	89.34
minimum	0.0%	89.27

Moments	
Mean	97.1891
Std Dev	2.2947
Std Error Mean	0.1345
Upper 95% Mean	97.4538
Lower 95% Mean	96.9243
N	291.0000
Sum Weights	291.0000

Appendix 2.2
Screened ARG-1, SME FS Data

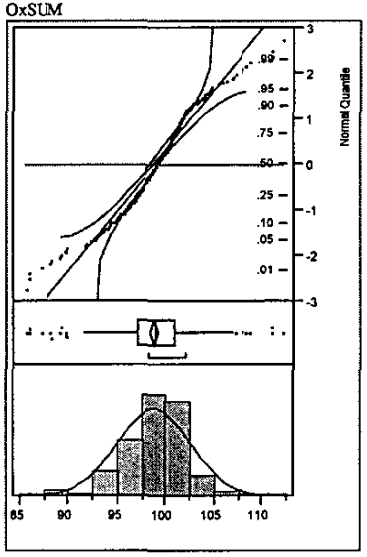
ARG1(ID=D0104)
FeoLi



Quantiles		
maximum	100.0%	7.415
	99.5%	7.205
	97.5%	6.883
	90.0%	6.735
quartile	75.0%	6.658
median	50.0%	6.582
quartile	25.0%	6.509
	10.0%	6.427
	2.5%	6.230
	0.5%	5.872
minimum	0.0%	5.720

Moments	
Mean	6.581
Std Dev	0.159
Std Error Mean	0.008
Upper 95% Mean	6.597
Lower 95% Mean	6.565
N	374.000
Sum Weights	374.000

OxSUM



Quantiles		
maximum	100.0%	112.13
	99.5%	111.43
	97.5%	107.04
	90.0%	102.61
quartile	75.0%	101.04
median	50.0%	99.14
quartile	25.0%	97.04
	10.0%	94.31
	2.5%	89.52
	0.5%	85.79
minimum	0.0%	85.65

Moments	
Mean	98.9118
Std Dev	3.7716
Std Error Mean	0.2070
Upper 95% Mean	99.3190
Lower 95% Mean	98.5046
N	332.0000
Sum Weights	332.0000

Appendix 3

Plot Sequence Numbers for Screened ARG-1 MA and FS Data

ID:
D0102: ARG-1, SME MA Data
D0104: ARG-1, SME FS Data

D0102

Seq	Type	Cal	LIMS	Batch	Cal #
1	SM01	336	200036353	20	336
2	SM01	336	200036353	20	336
3	MF01	349	200036434	20	349
4	MF01	349	200036434	20	349
5	SM01	375	200036723	21	375
6	SM01	375	200036723	21	375
7	MF01	406	200036879	21	406
8	MF01	406	200036879	21	406
9	MF01	411	200036879	21	411
10	MF01	411	200036879	21	411
11	SM01	415	200037076	21	415
12	SM01	415	200037076	21	415
13	SM01	503	200037823	24	503
14	SM01	503	200037823	24	503
15	SM01	503	200037823	24	503
16	SM01	503	200037823	24	503
17	SM01	503	200037823	24	503
18	SM01	529	200038119	25	529
19	SM01	529	200038119	25	529
20	SM01	529	200038119	25	529
21	MF01	534	200037916	24	534
22	MF01	534	200037916	24	534
23	MF01	534	200037916	24	534
24	MF01	541	200038219	25	541
25	MF01	541	200038219	25	541
26	SM01	547	200038332	26	547
27	SM01	547	200038332	26	547
28	SM01	547	200038332	26	547
29	MF01	561	200038433	26	561
30	MF01	561	200038433	26	561
31	SM01	579	200038574	27	579
32	SM01	579	200038574	27	579
33	MF01	584	200038681	27	584
34	MF01	584	200038681	27	584
35	SM01	597	200038821	28	597
36	SM01	597	200038821	28	597
37	SM01	610	200038938	28	610
38	SM01	610	200038938	28	610
39	MF01	622	200039014	28	622
40	MF01	622	200039014	28	622
41	SM01	632	200039160	29	632

D0104

Seq	Type	Cal	LIMS	Batch	Cal #
1	SM01	339	200036353	20	339
2	SM01	339	200036353	20	339
3	MF01	343	200036434	20	343
4	MF01	343	200036434	20	343
5	SM01	376	200036723	21	376
6	SM01	376	200036723	21	376
7	MF01	407	200036879	21	407
8	MF01	407	200036879	21	407
9	SM01	413	200037076	21	413
10	SM01	413	200037076	21	413
11	SM01	504	200037823	24	504
12	SM01	504	200037823	24	504
13	SM01	506	200037823	24	506
14	SM01	506	200037823	24	506
15	MF01	516	200037916	24	516
16	MF01	516	200037916	24	516
17	SM01	527	200038119	25	527
18	SM01	527	200038119	25	527
19	MF01	542	200038219	25	542
20	MF01	542	200038219	25	542
21	SM01	549	200038332	26	549
22	SM01	549	200038332	26	549
23	MF01	559	200038433	26	559
24	MF01	559	200038433	26	559
25	SM01	580	200038574	27	580
26	SM01	580	200038574	27	580
27	MF01	585	200038681	27	585
28	MF01	585	200038681	27	585
29	SM01	599	200038821	28	599
30	SM01	599	200038821	28	599
31	SM01	608	200038938	28	608
32	SM01	608	200038938	28	608
33	MF01	620	200039014	28	620
34	MF01	620	200039014	28	620
35	SM01	631	200039160	29	631
36	SM01	631	200039160	29	631
37	SM01	637	200039215	29	637
38	SM01	637	200039215	29	637
39	SM01	653	200039324	30	653
40	SM01	653	200039324	30	653
41	SM01	664	200039418	30	664

Appendix 3

Plot Sequence Numbers for Screened ARG-1 MA and FS Data

42	SM01	632	200039160	29	632
43	SM01	638	200039215	29	638
44	SM01	638	200039215	29	638
45	SM01	650	200039324	30	650
46	SM01	650	200039324	30	650
47	SM01	661	200039418	30	661
48	SM01	661	200039418	30	661
49	SM01	663	200039418	30	663
50	SM01	663	200039418	30	663
51	MF01	668	200039269	29	668
52	MF01	668	200039269	29	668
53	SM01	684	200039820	31	684
54	SM01	684	200039820	31	684
55	MF01	688	200039671	30	688
56	MF01	688	200039671	30	688
57	MF01	695	200039984	31	695
58	MF01	695	200039984	31	695
59	SM01	712	200040133	32	712
60	SM01	712	200040133	32	712
61	SM01	722	200040329	32	722
62	SM01	722	200040329	32	722
63	SM01	722	200040329	32	722
64	SM01	727	200040329	32	727
65	SM01	727	200040329	32	727
66	SM01	744	200040572	32	744
67	SM01	744	200040572	32	744
68	SM01	755	200040790	33	755
69	SM01	755	200040790	33	755
70	SM01	764	200040884	33	764
71	SM01	764	200040884	33	764
72	SM01	767	200041001	.	767
73	SM01	767	200041001	.	767
74	MF01	771	200040705	32	771
75	MF01	771	200040705	32	771
76	MF01	781	200041094	33	781
77	MF01	781	200041094	33	781
78	SM01	785	200041258	34	785
79	SM01	785	200041258	34	785
80	SM01	790	200041310	34	790
81	SM01	790	200041310	34	790
82	MF01	799	200041391	34	799
83	MF01	799	200041391	34	799
84	SM01	805	200041557	35	805
85	SM01	805	200041557	35	805
86	MF01	811	200041652	35	811
87	MF01	811	200041652	35	811
88	SM01	818	200041814	36	818

42	SM01	664	200039418	30	664
43	MF01	669	200039269	29	669
44	MF01	669	200039269	29	669
45	SM01	682	200039820	31	682
46	SM01	682	200039820	31	682
47	MF01	690	200039671	30	690
48	MF01	690	200039671	30	690
49	MF01	692	200039671	30	692
50	MF01	692	200039671	30	692
51	MF01	696	200039984	31	696
52	MF01	696	200039984	31	696
53	SM01	714	200040133	32	714
54	SM01	714	200040133	32	714
55	SM01	726	200040329	32	726
56	SM01	726	200040329	32	726
57	SM01	745	200040572	32	745
58	SM01	745	200040572	32	745
59	SM01	754	200040790	33	754
60	SM01	754	200040790	33	754
61	SM01	762	200040884	33	762
62	SM01	762	200040884	33	762
63	SM01	768	200041001	.	768
64	SM01	768	200041001	.	768
65	MF01	776	200040705	32	776
66	MF01	776	200040705	32	776
67	SM01	778	200041055	.	778
68	SM01	778	200041055	.	778
69	SM01	779	200041149	34	779
70	SM01	779	200041149	34	779
71	MF01	780	200041094	33	780
72	MF01	780	200041094	33	780
73	SM01	782	200041025	.	782
74	SM01	782	200041194	34	782
75	SM01	782	200041025	.	782
76	SM01	782	200041194	34	782
77	SM01	782	200041025	.	782
78	SM01	782	200041194	34	782
79	SM01	782	200041025	.	782
80	SM01	782	200041194	34	782
81	SM01	782	200041025	.	782
82	SM01	782	200041194	34	782
83	SM01	782	200041025	.	782
84	SM01	782	200041194	34	782
85	SM01	782	200041025	.	782
86	SM01	782	200041194	34	782
87	SM01	782	200041025	.	782
88	SM01	782	200041194	34	782

Appendix 3

Plot Sequence Numbers for Screened ARG-1 MA and FS Data

89	SM01	818	200041814	36	818
90	MF01	824	200041878	36	824
91	MF01	824	200041878	36	824
92	SM01	828	200042010	37	828
93	SM01	828	200042010	37	828
94	SM01	829	200042055	37	829
95	SM01	829	200042055	37	829
96	MF01	831	200042112	37	831
97	MF01	831	200042112	37	831
98	MF01	834	200042112	37	834
99	MF01	834	200042112	37	834
100	MF01	838	200042112	37	838
101	MF01	838	200042112	37	838
102	MF01	838	200042112	37	838
103	MF01	838	200042112	37	838
104	MF01	838	200042112	37	838
105	MF01	838	200042112	37	838
106	MF01	838	200042112	37	838
107	MF01	838	200042112	37	838
108	SM01	858	200042658	38	858
109	SM01	858	200042658	38	858
110	SM01	861	200042751	38	861
111	SM01	861	200042751	38	861
112	SM01	863	200042796	.	863
113	SM01	863	200042796	.	863
114	SM01	867	200042835	.	867
115	SM01	867	200042835	.	867
116	MF01	869	200042860	38	869
117	MF01	869	200042860	38	869
118	SM01	873	200042953	39	873
119	SM01	873	200042953	39	873
120	MF01	889	200043105	39	889
121	MF01	889	200043105	39	889
122	MF01	890	200043105	39	890
123	MF01	890	200043105	39	890
124	SM01	895	200043182	40	895
125	SM01	895	200043182	40	895
126	MF01	898	200043241	40	898
127	MF01	898	200043241	40	898
128	SM01	903	200043457	41	903
129	SM01	903	200043457	41	903
130	MF01	905	200043528	41	905
131	MF01	905	200043528	41	905
132	SM01	908	200043612	42	908
133	SM01	908	200043612	42	908
134	SM01	911	200043684	42	911
135	SM01	911	200043684	42	911

89	SM01	784	200041258	34	784
90	SM01	784	200041258	34	784
91	SM01	788	200041310	34	788
92	SM01	788	200041310	34	788
93	MF01	800	200041391	34	800
94	MF01	800	200041391	34	800
95	SM01	801	200041529	35	801
96	SM01	801	200041529	35	801
97	SM01	804	200041557	35	804
98	SM01	804	200041557	35	804
99	MF01	809	200041652	35	809
100	MF01	809	200041652	35	809
101	SM01	817	200041814	36	817
102	SM01	817	200041814	36	817
103	MF01	823	200041878	36	823
104	MF01	823	200041878	36	823
105	SM01	827	200042010	37	827
106	SM01	827	200042010	37	827
107	SM01	830	200042055	37	830
108	SM01	830	200042055	37	830
109	MF01	832	200042112	37	832
110	MF01	832	200042112	37	832
111	MF01	832	200042112	37	832
112	MF01	832	200042112	37	832
113	MF01	832	200042112	37	832
114	MF01	832	200042112	37	832
115	MF01	832	200042112	37	832
116	MF01	832	200042112	37	832
117	SM01	857	200042658	38	857
118	SM01	857	200042658	38	857
119	SM01	862	200042751	38	862
120	SM01	862	200042751	38	862
121	SM01	864	200042796	.	864
122	SM01	864	200042796	.	864
123	SM01	865	200042835	.	865
124	SM01	865	200042835	.	865
125	MF01	868	200042860	38	868
126	MF01	868	200042860	38	868
127	SM01	874	200042953	39	874
128	SM01	874	200042953	39	874
129	MF01	891	200043105	39	891
130	MF01	891	200043105	39	891
131	SM01	894	200043182	40	894
132	SM01	894	200043182	40	894
133	MF01	900	200043241	40	900
134	MF01	900	200043241	40	900
135	SM01	902	200043457	41	902

Appendix 3

Plot Sequence Numbers for Screened ARG-1 MA and FS Data

136	MF01	916	200043714	42	916
137	MF01	916	200043714	42	916
138	SM01	918	200043793	.	918
139	SM01	918	200043793	.	918
140	SM01	918	200043793	.	918
141	SM01	918	200043793	.	918
142	SM01	922	200043847	43	922
143	SM01	922	200043847	43	922
144	MF01	924	200043944	43	924
145	MF01	924	200043944	43	924
146	MF01	924	200043944	43	924
147	MF01	924	200043944	43	924
148	SM01	924	200043992	44	924
149	SM01	924	200043992	44	924
150	SM01	924	200043992	44	924
151	SM01	924	200043992	44	924
152	MF01	935	200044073	44	935
153	MF01	935	200044073	44	935
154	SM01	943	200044208	45	943
155	SM01	943	200044208	45	943
156	MF01	947	200044279	45	947
157	MF01	947	200044279	45	947
158	MF01	947	200044279	45	947
159	MF01	947	200044279	45	947
160	MF01	952	200044279	45	952
161	MF01	952	200044279	45	952
162	MF01	952	200044279	45	952
163	MF01	952	200044279	45	952
164	MF01	964	200044313	45	964
165	MF01	964	200044313	45	964
166	MF01	976	200044279	45	976
167	MF01	976	200044279	45	976
168	SM01	986	200044649	46	986
169	SM01	986	200044649	46	986
170	MF01	1003	200044769	46	1003
171	MF01	1003	200044769	46	1003
172	SM01	1020	200044940	47	1020
173	SM01	1020	200044940	47	1020
174	MF01	1026	200045011	47	1026
175	MF01	1026	200045011	47	1026
176	MF01	1026	200045011	47	1026
177	MF01	1026	200045011	47	1026
178	SM01	1027	200045091	48	1027
179	SM01	1027	200045091	48	1027
180	MF01	1034	200045011	47	1034
181	MF01	1034	200045011	47	1034
182	SM01	1037	200045217	49	1037

136	SM01	902	200043457	41	902
137	MF01	906	200043528	41	906
138	MF01	906	200043528	41	906
139	SM01	907	200043612	42	907
140	SM01	907	200043612	42	907
141	MF01	915	200043714	42	915
142	MF01	915	200043714	42	915
143	SM01	917	200043793	.	917
144	SM01	917	200043793	.	917
145	SM01	917	200043793	.	917
146	SM01	917	200043793	.	917
147	SM01	921	200043847	43	921
148	SM01	921	200043847	43	921
149	SM01	923	200043992	44	923
150	SM01	923	200043992	44	923
151	SM01	925	200043992	44	925
152	SM01	925	200043992	44	925
153	MF01	930	200043944	43	930
154	MF01	930	200043944	43	930
155	MF01	934	200044073	44	934
156	MF01	934	200044073	44	934
157	SM01	942	200044208	45	942
158	SM01	942	200044208	45	942
159	MF01	954	200044313	45	954
160	MF01	954	200044313	45	954
161	SM01	985	200044649	46	985
162	SM01	985	200044649	46	985
163	MF01	1004	200044769	46	1004
164	MF01	1004	200044769	46	1004
165	SM01	1019	200044940	47	1019
166	SM01	1019	200044940	47	1019
167	MF01	1024	200045011	47	1024
168	MF01	1024	200045011	47	1024
169	MF01	1025	200045011	47	1025
170	MF01	1025	200045011	47	1025
171	MF01	1025	200045011	47	1025
172	MF01	1025	200045011	47	1025
173	SM01	1029	200045091	48	1029
174	SM01	1029	200045091	48	1029
175	MF01	1033	200045011	47	1033
176	MF01	1033	200045011	47	1033
177	SM01	1035	200045217	49	1035
178	SM01	1035	200045217	49	1035
179	SM01	1035	200045217	49	1035
180	SM01	1035	200045217	49	1035
181	MF01	1040	200045147	48	1040
182	MF01	1040	200045147	48	1040

Appendix 3

Plot Sequence Numbers for Screened ARG-1 MA and FS Data

183	SM01	1037	200045217	49	1037
184	MF01	1041	200045147	48	1041
185	MF01	1041	200045147	48	1041
186	MF01	1045	200045269	49	1045
187	MF01	1045	200045269	49	1045
188	SM01	1047	200045365	50	1047
189	SM01	1047	200045365	50	1047
190	MF01	1050	200045441	50	1050
191	MF01	1050	200045441	50	1050
192	SM01	1053	200045489	51	1053
193	SM01	1053	200045489	51	1053
194	MF01	1056	200045539	51	1056
195	MF01	1056	200045539	51	1056
196	SM01	1059	200045595	52	1059
197	SM01	1059	200045595	52	1059
198	MF01	1069	200045683	52	1069
199	MF01	1069	200045683	52	1069
200	SM01	1071	200045752	53	1071
201	SM01	1071	200045752	53	1071
202	SM01	1077	200045881	54	1077
203	SM01	1077	200045881	54	1077
204	MF01	1081	200045914	53	1081
205	MF01	1081	200045914	53	1081
206	MF01	1083	200045914	53	1083
207	MF01	1083	200045914	53	1083
208	SM01	1086	200046023	55	1086
209	SM01	1086	200046023	55	1086
210	MF01	1097	200046126	55	1097
211	MF01	1097	200046126	55	1097
212	SM01	1107	200046255	56	1107
213	SM01	1107	200046255	56	1107
214	MF01	1115	200046326	56	1115
215	MF01	1115	200046326	56	1115
216	SM01	1128	200046495	57	1128
217	SM01	1128	200046495	57	1128
218	MF01	1138	200046664	57	1138
219	MF01	1138	200046664	57	1138
220	SM01	1144	200046772	58	1144
221	SM01	1144	200046772	58	1144
222	MF01	1154	200046924	58	1154
223	MF01	1154	200046924	58	1154
224	SM01	1166	200047080		1166
225	SM01	1166	200047080		1166
226	SM01	1168	200047131	59	1168
227	SM01	1168	200047131	59	1168
228	MF01	1174	200047189	59	1174
229	MF01	1174	200047189	59	1174

183	MF01	1044	200045269	49	1044
184	MF01	1044	200045269	49	1044
185	MF01	1046	200044279	45	1046
186	MF01	1046	200044279	45	1046
187	SM01	1048	200045365	50	1048
188	SM01	1048	200045365	50	1048
189	MF01	1051	200045441	50	1051
190	MF01	1051	200045441	50	1051
191	SM01	1052	200045489	51	1052
192	SM01	1052	200045489	51	1052
193	MF01	1055	200045539	51	1055
194	MF01	1055	200045539	51	1055
195	SM01	1060	200045595	52	1060
196	SM01	1060	200045595	52	1060
197	MF01	1067	200045683	52	1067
198	MF01	1067	200045683	52	1067
199	SM01	1070	200045752	53	1070
200	SM01	1070	200045752	53	1070
201	MF01	1073	200045683	52	1073
202	MF01	1073	200045683	52	1073
203	SM01	1076	200045881	54	1076
204	SM01	1076	200045881	54	1076
205	MF01	1080	200045914	53	1080
206	MF01	1080	200045914	53	1080
207	MF01	1082	200045914	53	1082
208	MF01	1082	200045914	53	1082
209	MF01	1084	200045989	54	1084
210	MF01	1084	200045989	54	1084
211	SM01	1087	200046023	55	1087
212	SM01	1087	200046023	55	1087
213	MF01	1096	200046126	55	1096
214	MF01	1096	200046126	55	1096
215	MF01	1099	200046126		1099
216	MF01	1099	200046126		1099
217	SM01	1105	200046255	56	1105
218	SM01	1105	200046255	56	1105
219	MF01	1114	200046326	56	1114
220	MF01	1114	200046326	56	1114
221	SM01	1129	200046495	57	1129
222	SM01	1129	200046495	57	1129
223	SM01	1133	200046495		1133
224	SM01	1133	200046495		1133
225	MF01	1139	200046664	57	1139
226	MF01	1139	200046664	57	1139
227	SM01	1145	200046772	58	1145
228	SM01	1145	200046772	58	1145
229	MF01	1153	200046924	58	1153

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Plot Sequence Numbers for Screened ARG-1 MA and FS Data

230	SM01	1180	200047365	60	1180
231	SM01	1180	200047365	60	1180
232	SM01	1185	200047453	60	1185
233	SM01	1185	200047453	60	1185
234	SM01	1186	200047453	60	1186
235	SM01	1186	200047453	60	1186
236	MF01	1189	200047525	60	1189
237	MF01	1189	200047525	60	1189
238	SM01	1200	200047646	61	1200
239	SM01	1200	200047646	61	1200
240	SM01	1203	200047646	61	1203
241	SM01	1203	200047646	61	1203
242	MF01	1209	200047745	61	1209
243	MF01	1209	200047745	61	1209
244	SM01	1212	200047845	62	1212
245	SM01	1212	200047845	62	1212
246	MF01	1217	200047930	62	1217
247	MF01	1217	200047930	62	1217
248	SM01	1219	200047955	63	1219
249	SM01	1219	200047955	63	1219
250	MF01	1226	200048017	63	1226
251	MF01	1226	200048017	63	1226
252	SM01	1228	200048094	64	1228
253	SM01	1228	200048094	64	1228
254	MF01	1233	200048159	64	1233
255	MF01	1233	200048159	64	1233
256	SM01	1239	200048222	65	1239
257	SM01	1239	200048222	65	1239
258	MF01	1241	200048262	65	1241
259	MF01	1241	200048262	65	1241
260	SM01	1244	200048328	66	1244
261	SM01	1244	200048328	66	1244
262	MF01	1250	200048414	66	1250
263	MF01	1250	200048414	66	1250
264	SM01	1253	200048484	67	1253
265	SM01	1253	200048484	67	1253
266	MF01	1258	200048543	67	1258
267	MF01	1258	200048543	67	1258
268	SM01	1267	200048677	68	1267
269	SM01	1267	200048677	68	1267
270	MF01	1269	200048714	68	1269
271	MF01	1269	200048714	68	1269
272	SM01	1274	200048794	69	1274
273	SM01	1274	200048794	69	1274
274	MF01	1282	200048970	69	1282
275	MF01	1282	200048970	69	1282
276	SM01	1285	200049030	70	1285

230	MF01	1153	200046924	58	1153
231	SM01	1162	200047080	.	1162
232	SM01	1162	200047080	.	1162
233	SM01	1162	200047080	.	1162
234	SM01	1162	200047080	.	1162
235	SM01	1162	200047080	.	1162
236	SM01	1169	200047131	59	1169
237	SM01	1169	200047131	59	1169
238	SM01	1170	200047131	59	1170
239	SM01	1170	200047131	59	1170
240	MF01	1175	200047189	59	1175
241	MF01	1175	200047189	59	1175
242	SM01	1181	200047365	60	1181
243	SM01	1181	200047365	60	1181
244	SM01	1184	200047453	60	1184
245	SM01	1184	200047453	60	1184
246	MF01	1197	200047525	60	1197
247	MF01	1197	200047525	60	1197
248	SM01	1198	200047646	61	1198
249	SM01	1198	200047646	61	1198
250	MF01	1208	200047745	61	1208
251	MF01	1208	200047745	61	1208
252	SM01	1213	200047845	62	1213
253	SM01	1213	200047845	62	1213
254	MF01	1216	200047930	62	1216
255	MF01	1216	200047930	62	1216
256	SM01	1218	200047955	63	1218
257	SM01	1218	200047955	63	1218
258	SM01	1220	200047955	63	1220
259	SM01	1220	200047955	63	1220
260	MF01	1222	200047930	62	1222
261	MF01	1222	200047930	62	1222
262	MF01	1225	200048017	63	1225
263	MF01	1225	200048017	63	1225
264	SM01	1229	200048094	64	1229
265	SM01	1229	200048094	64	1229
266	MF01	1231	200048159	64	1231
267	MF01	1231	200048159	64	1231
268	SM01	1238	200048222	65	1238
269	SM01	1238	200048222	65	1238
270	MF01	1240	200048262	65	1240
271	MF01	1240	200048262	65	1240
272	SM01	1245	200048328	66	1245
273	SM01	1245	200048328	66	1245
274	MF01	1249	200048414	66	1249
275	MF01	1249	200048414	66	1249
276	SM01	1252	200048484	67	1252

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Plot Sequence Numbers for Screened ARG-1 MA and FS Data

277	SM01	1285	200049030	70	1285
278	MF01	1286	200049098	70	1286
279	MF01	1286	200049098	70	1286
280	MF01	1286	200049098	70	1286
281	MF01	1286	200049098	70	1286
282	MF01	1289	200049098	70	1289
283	MF01	1289	200049098	70	1289
284	SM01	1294	200049185	71	1294
285	SM01	1294	200049185	71	1294
286	MF01	1299	200049276	71	1299
287	MF01	1299	200049276	71	1299
288	SM01	1301	200049343	72	1301
289	SM01	1301	200049343	72	1301
290	MF01	1307	200049425	72	1307
291	MF01	1307	200049425	72	1307
292	SM01	1320	200049609	73	1320
293	SM01	1320	200049609	73	1320
294	SM01	1322	200049754	74	1322
295	SM01	1322	200049754	74	1322
296	SM01	1322	200049754	74	1322
297	SM01	1322	200049754	74	1322
298	MF01	1326	200049721	73	1326
299	MF01	1326	200049721	73	1326
300	MF01	1329	200049721	73	1329
301	MF01	1329	200049721	73	1329
302	MF01	1339	200049858	74	1339
303	MF01	1339	200049858	74	1339
304	MF01	1339	200049858	74	1339
305	MF01	1339	200049858	74	1339
306	SM01	1341	200050073	75	1341
307	SM01	1341	200050073	75	1341
308	MF01	1344	200050140	75	1344
309	MF01	1344	200050140	75	1344
310	SM01	1348	200050191	76	1348
311	SM01	1348	200050191	76	1348
312	MF01	1352	200050265	76	1352
313	MF01	1352	200050265	76	1352
314	SM01	1361	200050358	77	1361
315	SM01	1361	200050358	77	1361
316	MF01	1364	200050572	77	1364
317	MF01	1364	200050572	77	1364
318	SM01	1366	200050660	78	1366
319	SM01	1366	200050660	78	1366
320	MF01	1374	200050741	78	1374
321	MF01	1374	200050741	78	1374
322	SM01	1378	200050830	79	1378
323	SM01	1378	200050830	79	1378

277	SM01	1252	200048484	67	1252
278	MF01	1257	200048543	67	1257
279	MF01	1257	200048543	67	1257
280	SM01	1266	200048677	68	1266
281	SM01	1266	200048677	68	1266
282	MF01	1268	200048714	68	1268
283	MF01	1268	200048714	68	1268
284	SM01	1273	200048794	69	1273
285	SM01	1273	200048794	69	1273
286	MF01	1281	200048970	69	1281
287	MF01	1281	200048970	69	1281
288	SM01	1284	200049030	70	1284
289	SM01	1284	200049030	70	1284
290	MF01	1287	200049098	70	1287
291	MF01	1287	200049098	70	1287
292	SM01	1293	200049185	71	1293
293	SM01	1293	200049185	71	1293
294	MF01	1300	200049276	71	1300
295	MF01	1300	200049276	71	1300
296	SM01	1302	200049343	72	1302
297	SM01	1302	200049343	72	1302
298	MF01	1308	200049425	72	1308
299	MF01	1308	200049425	72	1308
300	SM01	1319	200049609	73	1319
301	SM01	1319	200049609	73	1319
302	SM01	1321	200049754	74	1321
303	SM01	1321	200049754	74	1321
304	SM01	1321	200049754	74	1321
305	SM01	1321	200049754	74	1321
306	MF01	1323	200049721	73	1323
307	MF01	1323	200049721	73	1323
308	MF01	1330	200049858	74	1330
309	MF01	1330	200049858	74	1330
310	MF01	1330	200049858	74	1330
311	MF01	1330	200049858	74	1330
312	SM01	1342	200050073	75	1342
313	SM01	1342	200050073	75	1342
314	MF01	1345	200050140	75	1345
315	MF01	1345	200050140	75	1345
316	SM01	1347	200050191	76	1347
317	SM01	1347	200050191	76	1347
318	MF01	1351	200050265	76	1351
319	MF01	1351	200050265	76	1351
320	SM01	1357	200050358	77	1357
321	SM01	1357	200050358	77	1357
322	MF01	1363	200050572	77	1363
323	MF01	1363	200050572	77	1363

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Plot Sequence Numbers for Screened ARG-1 MA and FS Data

324	SM01	1382	200050830	79	1382
325	SM01	1382	200050830	79	1382
326	MF01	1387	200050936	79	1387
327	MF01	1387	200050936	79	1387
328	SM01	1391	200051002	80	1391
329	SM01	1391	200051002	80	1391
330	MF01	1411	200051208	80	1411
331	MF01	1411	200051208	80	1411
332	SM01	1412	200051249	81	1412
333	SM01	1412	200051249	81	1412
334	SM01	1419	200051319	.	1419
335	SM01	1419	200051319	.	1419
336	MF01	1421	200051366	81	1421
337	MF01	1421	200051366	81	1421
338	SM01	1428	200051510	82	1428
339	SM01	1428	200051510	82	1428
340	MF01	1435	200051615	82	1435
341	MF01	1435	200051615	82	1435
342	SM01	1443	200051654	83	1443
343	SM01	1443	200051654	83	1443
344	MF01	1446	200051744	83	1446
345	MF01	1446	200051744	83	1446
346	SM01	1455	200051826	84	1455
347	SM01	1455	200051826	84	1455
348	MF01	1468	200051923	84	1468
349	MF01	1468	200051923	84	1468
350	SM01	1471	200051979	85	1471
351	SM01	1471	200051979	85	1471
352	MF01	1477	200052072	85	1477
353	MF01	1477	200052072	85	1477
354	SM01	1480	200052147	86	1480
355	SM01	1480	200052147	86	1480
356	MF01	1488	200052225	86	1488
357	MF01	1488	200052225	86	1488
358	SM01	1492	200052269	87	1492
359	SM01	1492	200052269	87	1492
360	MF01	1506	200052406	87	1506
361	MF01	1506	200052406	87	1506
362	SM01	1512	200052502	88	1512
363	SM01	1512	200052502	88	1512
364	MF01	1515	200052561	88	1515
365	MF01	1515	200052561	88	1515
366	MF01	1517	200052561	88	1517
367	MF01	1517	200052561	88	1517
368	SM01	1519	200052637	89	1519
369	SM01	1519	200052637	89	1519
370	SM01	1522	200052637	89	1522

324	SM01	1365	200050660	78	1365
325	SM01	1365	200050660	78	1365
326	MF01	1373	200050741	78	1373
327	MF01	1373	200050741	78	1373
328	SM01	1379	200050830	79	1379
329	SM01	1379	200050830	79	1379
330	MF01	1386	200050936	79	1386
331	MF01	1386	200050936	79	1386
332	SM01	1390	200051002	80	1390
333	SM01	1390	200051002	80	1390
334	MF01	1409	200051208	80	1409
335	MF01	1409	200051208	80	1409
336	SM01	1413	200051249	81	1413
337	SM01	1413	200051249	81	1413
338	SM01	1418	200051319	.	1418
339	SM01	1418	200051319	.	1418
340	MF01	1422	200051366	81	1422
341	MF01	1422	200051366	81	1422
342	MF01	1424	200051366	81	1424
343	MF01	1424	200051366	81	1424
344	MF01	1425	200051366	81	1425
345	MF01	1425	200051366	81	1425
346	SM01	1429	200051510	82	1429
347	SM01	1429	200051510	82	1429
348	SM01	1429	200051510	82	1429
349	SM01	1429	200051510	82	1429
350	MF01	1434	200051615	82	1434
351	MF01	1434	200051615	82	1434
352	SM01	1442	200051654	83	1442
353	SM01	1442	200051654	83	1442
354	MF01	1447	200051744	83	1447
355	MF01	1447	200051744	83	1447
356	SM01	1454	200051826	84	1454
357	SM01	1454	200051826	84	1454
358	SM01	1456	200051826	84	1456
359	SM01	1456	200051826	84	1456
360	MF01	1470	200051923	84	1470
361	MF01	1470	200051923	84	1470
362	SM01	1472	200051979	85	1472
363	SM01	1472	200051979	85	1472
364	SM01	1473	200051979	85	1473
365	SM01	1473	200051979	85	1473
366	MF01	1478	200052072	85	1478
367	MF01	1478	200052072	85	1478
368	SM01	1481	200052147	86	1481
369	SM01	1481	200052147	86	1481
370	MF01	1487	200052225	86	1487

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Plot Sequence Numbers for Screened ARG-1 MA and FS Data

371	SM01	1522	200052637	89	1522
372	MF01	1525	200052752	89	1525
373	MF01	1525	200052752	89	1525
374	SM01	1527	200052826	90	1527
375	SM01	1527	200052826	90	1527
376	MF01	1534	200052922	90	1534
377	MF01	1534	200052922	90	1534
378	SM01	1538	200053014	91	1538
379	SM01	1538	200053014	91	1538
380	MF01	1539	200053066	91	1539
381	MF01	1539	200053066	91	1539
382	MF01	1544	200053066	91	1544
383	MF01	1544	200053066	91	1544
384	SM01	1547	200053161	92	1547
385	SM01	1547	200053161	92	1547
386	MF01	1554	200053235	92	1554
387	MF01	1554	200053235	92	1554
388	SM01	1584	200053791	93	1584
389	SM01	1584	200053791	93	1584
390	MF01	1590	200053889	93	1590
391	MF01	1590	200053889	93	1590

371	MF01	1487	200052225	86	1487
372	SM01	1490	200052269	87	1490
373	SM01	1490	200052269	87	1490
374	MF01	1503	200052411	.	1503
375	MF01	1503	200052411	.	1503
376	MF01	1505	200052406	87	1505
377	MF01	1505	200052406	87	1505
378	SM01	1509	200052502	88	1509
379	SM01	1509	200052502	88	1509
380	MF01	1516	200052561	88	1516
381	MF01	1516	200052561	88	1516
382	SM01	1518	200052637	89	1518
383	SM01	1518	200052637	89	1518
384	MF01	1524	200052752	89	1524
385	MF01	1524	200052752	89	1524
386	SM01	1528	200052826	90	1528
387	SM01	1528	200052826	90	1528
388	MF01	1535	200052922	90	1535
389	MF01	1535	200052922	90	1535
390	SM01	1537	200053014	91	1537
391	SM01	1537	200053014	91	1537
392	MF01	1540	200053066	91	1540
393	MF01	1540	200053066	91	1540
394	SM01	1546	200053161	92	1546
395	SM01	1546	200053161	92	1546
396	SM01	1546	200053161	92	1546
397	SM01	1546	200053161	92	1546
398	MF01	1553	200053235	92	1553
399	MF01	1553	200053235	92	1553
400	SM01	1585	200053791	93	1585
401	SM01	1585	200053791	93	1585
402	MF01	1588	200053889	93	1588
403	MF01	1588	200053889	93	1588