

APPENDIX C:
Output of the Principal Component Analysis

APPENDIX C

FACTOR

```

/VARIABLES ng_LogSN ng_LogPB ng_LogAS ng_LogSB ng_LogAG ng_LogNI ng_LogBI
ng_LogFE /MISSING LISTWISE /ANALYSIS ng_LogSN ng_LogPB ng_LogAS ng_LogSB
ng_LogAG ng_LogNI ng_LogBI ng_LogFE
/PRINT INITIAL CORRELATION EXTRACTION ROTATION
/PLOT EIGEN ROTATION
/CRITERIA MINEIGEN(1) ITERATE(25)
/EXTRACTION PC
/CRITERIA ITERATE(25)
/ROTATION VARIMAX
/SAVE REG(ALL)
/METHOD=CORRELATION .

```

Factor Analysis

Total Database of 1943 Trace Element Analyses

Correlation Matrix

		ng_LogSN	ng_LogPB	ng_LogAS	ng_LogSB	ng_LogAG
Correlation	ng_LogSN	1.000	.286	.348	.418	.437
	ng_LogPB	.286	1.000	.407	.305	.336
	ng_LogAS	.348	.407	1.000	.601	.572
	ng_LogSB	.418	.305	.601	1.000	.840
	ng_LogAG	.437	.336	.572	.840	1.000
	ng_LogNI	.452	.380	.544	.628	.563
	ng_LogBI	.090	.481	.300	.362	.378
	ng_LogFE	.339	.516	.334	.195	.241

Correlation Matrix

		ng_LogNI	ng_LogBI	ng_LogFE
Correlation	ng_LogSN	.452	.090	.339
	ng_LogPB	.380	.481	.516
	ng_LogAS	.544	.300	.334
	ng_LogSB	.628	.362	.195
	ng_LogAG	.563	.378	.241
	ng_LogNI	1.000	.074	.262
	ng_LogBI	.074	1.000	.292
	ng_LogFE	.262	.292	1.000

Communalities

	Initial	Extraction
ng_LogSN	1.000	.399
ng_LogPB	1.000	.723
ng_LogAS	1.000	.598
ng_LogSB	1.000	.805
ng_LogAG	1.000	.762
ng_LogNI	1.000	.667
ng_LogBI	1.000	.553
ng_LogFE	1.000	.585

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	3.833	47.913	47.913
2	1.257	15.712	63.624
3	.958	11.975	75.600
4	.614	7.672	83.272
5	.484	6.052	89.324
6	.417	5.213	94.537
7	.288	3.603	98.140
8	.149	1.860	100.000

Extraction Method: Principal Component Analysis.

Total Variance Explained

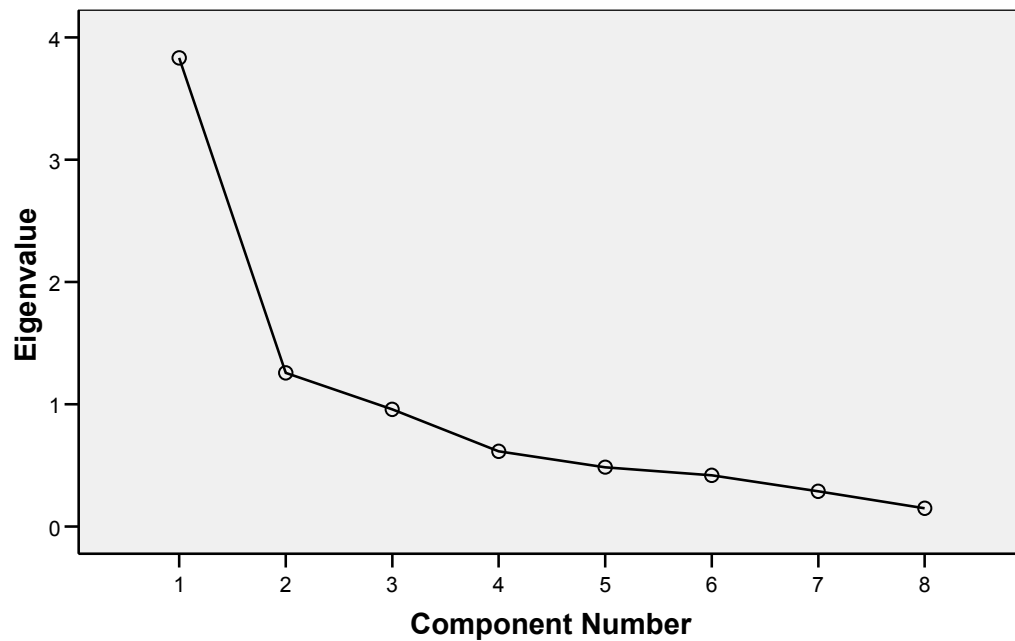
Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.833	47.913	47.913
2	1.257	15.712	63.624
3			
4			
5			
6			
7			
8			

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.119	38.983	38.983
2	1.971	24.641	63.624
3			
4			
5			
6			
7			
8			

Extraction Method: Principal Component Analysis.

Scree Plot**Component Matrix^a**

	Component	
	1	2
ng_LogSN	.608	-.172
ng_LogPB	.640	.559
ng_LogAS	.768	-.087
ng_LogSB	.832	-.334
ng_LogAG	.831	-.268
ng_LogNI	.742	-.341
ng_LogBI	.500	.550
ng_LogFE	.529	.552

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix^a

	Component	
	1	2
ng_LogSN	.607	.174
ng_LogPB	.250	.812
ng_LogAS	.699	.330
ng_LogSB	.884	.154
ng_LogAG	.847	.210
ng_LogNI	.810	.101
ng_LogBI	.136	.731
ng_LogFE	.158	.748

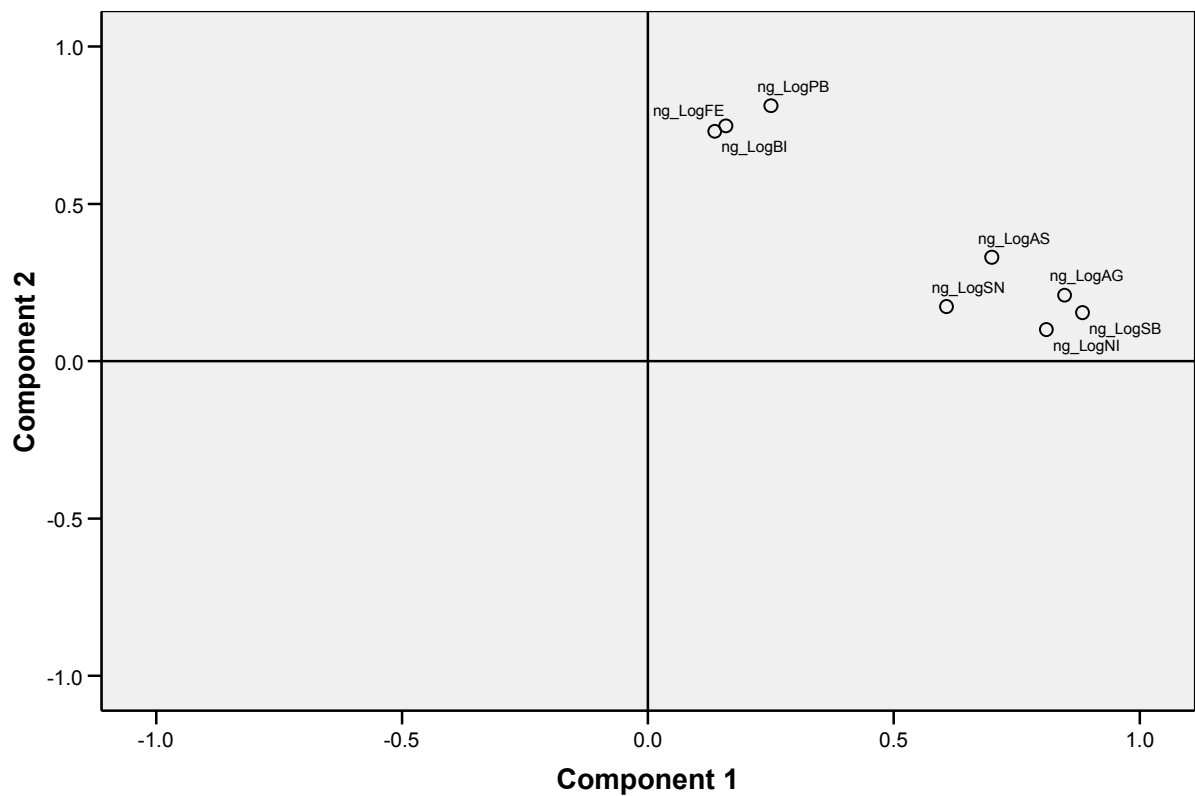
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	.850	.527
2	-.527	.850

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Component Plot in Rotated Space

GRAPH
/SCATTERPLOT(BIVAR)=FAC2_2 WITH FAC1_2

```
/MISSING=LISTWISE .
```

Graph

