Annex 5: Statistical data analysis

Group 8: Total elements

Ca, Mg, Na, K, Al, Fe and Mn
Total Aluminium
Dot plot sample A

8 - Total Al - Sample A
Dot plot sample C

8 - Total Al - Sample C
Dot plot sample D

8 - Total Al - Sample D
Dot plot sample E

8 - Total Al - Sample E
Histogram of the means of samples A, B and C
Histogram of the means of samples D and E
Box plot of the means of samples A, B and C

- **A**
  - Mean: 82;84;40<3;48<7>30;36>32;13;14
  - Outliers: O: 0,0 / U:11

- **B**
  - Mean: 24892(84)
  - Outliers: O:1,0 / U: 10

- **C**
  - Mean: 37468(82); 39474(40) 45543(14); 46957(48)
  - Outliers: O:2,2 / U: 11

- **8 - Total Al - mean**

---
Box plot of the means of sample D and E

Sample D:
- Mean: 58311 (82); 62085 (48)
- Outlier: 2
- Upper fence: 84
- Lower fence: 30
- Median: 14
- Interquartile range: 13

Sample E:
- Mean: 40; 3; 84 (36); 14; 48; 7; 30; 32
- Outlier: 0
- Upper fence: 13
- Lower fence: 7
- Median: 30
- Interquartile range: 32

8 - Total Al - mean
Histogram of the standard deviations of samples D and E

8 - Total Al - Sample D - stdev

8 - Total Al - Sample E - stdev
Box plot of the standard deviations of samples A, B and C

8 - Total Al - stdev
Box plot of the standard deviations of samples D and E

Sample D:
- Values: 2234(82); 4244(84)
- Outliers: 14; 7; 13
- Upper limit: 36

Sample E:
- Values: 36; 84; 13; 14
- Outliers: 36; 84; 13
- Upper limit: 48; 7

8 - Total Al - stdev
Mandel's h and k plot of sample A

8 - Total Al - sample A

Step:2; Nlab:10; Mgen:47643; Fval:20.88; Pval:2.695e-006; sRep:743.8; sLab:1915; sRpr:2054; CV:4.311
Mandel’s h and k plot of sample B

8 - Total Al - sample B

Step: 4; Nlab: 8; Mgen: 27010; Fval: 41.91; Pval: 4.042e-007; sRep: 230.8; sLab: 852.2; sRpr: 882.9; CV: 3.269
Mandel’s h and k plot of sample C

8 - Total Al - sample C

Step:2; Nlab:10; Mgen:42923; Fval:27.06; Pval:2.695e-007; sRep:706; sLab:2081; sRpr:2198; CV:5.12
Mandel’s h and k plot of sample D

8 - Total Al - sample D

Step: 2; Nlab: 10; Mgen: 77065; V: 265.4; P: 0; sRep: 967.2; sLab: 9080; sRpr: 9132; CV: 11.85
Mandel’s h and k plot of sample E

8 - Total Al - sample E

Step:2; Nlab:9; Mgen:666.9; Fval:45.41; Pval:2.252e-008; sRep:34.85; sLab:134.1; sRpr:138.5; CV:20.77
Total Calcium
Dot plot sample A

8 - Total Ca - Sample A

Location

Laboratory Number

Location

18907;19392;23533
Dot plot sample C

8 - Total Ca - Sample C

Location

Laboratory Number

Location

33048;36394;39592
Dot plot sample D

8 - Total Ca - Sample D
Dot plot sample E

8 - Total Ca - Sample E

Laboratory Number

Location

1957;2096;2242

2221
Histogram of the means of samples A, B and C

Sample A:
- Mean: 8 - Total Ca
- N: 11
- NA: 0
- Z: 0
- E: 0
- U: 10
- a: 9831
- m: 8534
- s: 3697

Sample B:
- Mean: 8 - Total Ca
- N: 11
- NA: 0
- Z: 0
- E: 2
- U: 9
- a: 2989
- m: 1471
- s: 4822

Sample C:
- Mean: 8 - Total Ca
- N: 11
- NA: 0
- Z: 0
- E: 1
- U: 10
- a: 72935
- m: 76030
- s: 12542
Histogram of the means of samples D and E

8 - Total Ca - Sample D - mean

8 - Total Ca - Sample E - mean
Box plot of the means of samples A, B and C

Sample A:
- Median: 36 [30, 40, 36 < 48]
- Mean: 13 [3; 13; 3 > 7; 32; 84]
- Outliers: 0, 0
- Upper Bound: 10

Sample B:
- Median: 1347 (30)
- Mean: 1645 (40)
- Outliers: 36 [13 < 32], 7 [3 > 48]
- Upper Bound: 9

Sample C:
- Median: 7 [13; 3 < 40; 30 > 14; 84 > 32; 48; 36]
- Mean: 8 [0, 0]
- Outliers: 0, 0
- Upper Bound: 10

Y-axis: 8 - Total Ca - mean
X-axis: Sample A, B, C
Box plot of the means of samples D and E

D

O: 0,0 / U: 9

E

O: 0,0 / U: 8

8 - Total Ca - mean
Histogram of the standard deviations of samples A, B and C

Sample A:
- N: 11
- NA: 0
- Z: 0
- E: 0
- U: 10
- a: 441.2
- m: 172.5
- s: 743.3
- Total Ca: 2542 (82)

Sample B:
- N: 11
- NA: 0
- Z: 0
- E: 0
- U: 10
- a: 282.6
- m: 23.09
- s: 831.2
- Total Ca: 2788 (82)

Sample C:
- N: 11
- NA: 0
- Z: 0
- E: 11
- U: 10
- a: 1618
- m: 1512
- s: 758.4
- Total Ca: 9.1%
Histogram of the standard deviations of samples D and E

8 - Total Ca - Sample D - stdev

- N: 11
- NA: 0
- Z: 0
- E: 0,1
- U: 10
- a: 319
- m: 56.23
- s: 855.3

8 - Total Ca - Sample E - stdev

- N: 10
- NA: 0
- Z: 0
- E: 0,1
- U: 9
- a: 89.64
- m: 19.34
- s: 152.9

2895(82) 502(32)
Box plot of the standard deviations of samples A, B and C

Sample A
- Median: 916.6 (32)
- Min: 48;36;40
- Max: 7;30;84;14
- Outliers: O: 0,1 / U: 10

Sample B
- Median: 71.29 (84); 86.19 (40)
- Min: 30;7;14
- Max: 36;32;3;13;48
- Outliers: O: 0,2 / U: 10

Sample C
- Median: 396.1 (30); 2485 (14); 3272 (82)
- Min: 40;84;13;3
- Max: 32;7;36;48
- Outliers: O: 1,2 / U: 11

8 - Total Ca - stdev
Mandel’s h and k plot of sample A

8 - Total Ca - sample A

Step:3; Nlab:9; Mgen:8608; Fval:64.56; Pval:1.118e-009; sRep:200.8; sLab:924.2; sRpr:945.7; CV:10.99

E: hk82;k32
S: 14
Mandel’s h and k plot of sample C

8 - Total Ca - sample C

Step:2; Nlab:10; Mgen:76594; Fval:14.03; Pval:0.00007878; sRep:1544; sLab:3217; sRpr:3568; CV:4.659
Mandel’s h and k plot of sample D

8 - Total Ca - sample D

Step: 3; Nlab: 9; Mgen: 1322; Fval: 13.82; Pval: 0.000304; sRep: 72.08; sLab: 149; sRpr: 165.5; CV: 12.52
Mandel’s h and k plot of sample E

8 - Total Ca - sample E

Step: 5; Nlab: 6; Mgen: 1074; Fval: 42.81; Pval: 0.00003061; sRep: 13.65; sLab: 50.96; sRpr: 52.75; CV: 4.914
Total Fe
Dot plot sample A

8 - Total Fe - Sample A
Dot plot sample B

8 - Total Fe - Sample B
Dot plot sample C

8 - Total Fe - Sample C
Dot plot sample D

8 - Total Fe - Sample D
### Histogram of the means of samples A, B and C

<table>
<thead>
<tr>
<th>Sample</th>
<th>Mean</th>
<th>N</th>
<th>NA</th>
<th>Z</th>
<th>E</th>
<th>U</th>
</tr>
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<tr>
<td>A</td>
<td>28302</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>B</td>
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<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>C</td>
<td>23660</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
</tbody>
</table>

- **Sample A**
  - Mean: 28302
  - Standard Deviation: 2427
  - Relative Frequency: 9.1%

- **Sample B**
  - Mean: 13604
  - Standard Deviation: 694.2
  - Relative Frequency: 27.3%

- **Sample C**
  - Mean: 23660
  - Standard Deviation: 1014
  - Relative Frequency: 9.1%
Histogram of the means of samples D and E

8 - Total Fe - Sample D - mean

8 - Total Fe - Sample E - mean
Box plot of the means of samples A, B and C

**Sample A**
- Mean: 22624
- Minimum: 22624
- Maximum: 22624
- Median: 22624
- Outliers: None

**Sample B**
- Mean: 14958
- Minimum: 14958
- Maximum: 14958
- Median: 14958
- Outliers: None

**Sample C**
- Mean: 8
- Minimum: 8
- Maximum: 8
- Median: 8
- Outliers: None

**8 - Total Fe - mean**
Box plot of the means of samples D and E

8 - Total Fe - mean
Histogram of the standard deviations of samples A, B and C

8 - Total Fe - Sample A - stdev
N: 10 NA: 0 Z: 0 E: 0 U: 10
a: 420.9 m: 320.6 s: 343.5

8 - Total Fe - Sample B - stdev
N: 11 NA: 0 Z: 0 E: 0.1 U: 10
a: 241.4 m: 145.1 s: 339.9

8 - Total Fe - Sample C - stdev
N: 11 NA: 0 Z: 0 E: 0.1 U: 10
a: 618.7 m: 366.9 s: 678.5

N: 10 NA: 0 Z: 0 E: 0 U: 10
a: 420.9 m: 320.6 s: 343.5

N: 11 NA: 0 Z: 0 E: 0.1 U: 10
a: 241.4 m: 145.1 s: 339.9

N: 11 NA: 0 Z: 0 E: 0.1 U: 10
a: 618.7 m: 366.9 s: 678.5
Histogram of the standard deviations of samples D and E

8 - Total Fe - Sample D - stdev

8 - Total Fe - Sample E - stdev
Box plot of the standard deviations of samples A, B and C

Sample A:
- O: 0,1 / U: 10
- 1213(3)
- 13;30;40<7;36>14;32>84;48

Sample B:
- O: 0,2 / U: 10
- 247.6(48); 358.2(84)
- 30;36;3<14;40>13;32>7

Sample C:
- O: 0,1 / U: 10
- 1047(82)
- 30;40;36<48;32>3;13>84;7

8 - Total Fe - stdev
Box plot of the standard deviations of samples D and E

D: 1557(82)
O: 0,1 / U: 11

E: 174.7(32)
O: 0,1 / U: 10

8 - Total Fe - stdev
Mandel’s h and k plot of sample A

8 - Total Fe - sample A

Step:2; Nlab:10; Mgen:28130; Fval:136.3; Pval:5.551e-014; sRep:368.9; sLab:2477; sRpr:2505; CV:8.904
Mandel’s h and k plot of sample B

8 - Total Fe - sample B

Step: 2; Nlab: 10; Mgen: 13468; Fval: 32.13; Pval: 5.682e-008; sRep: 170.5; sLab: 549.2; sRpr: 575.1; CV: 4.27

Mandel’s h

Mandel’s k

E: k82
Mandel’s h and k plot of sample C

8 - Total Fe - sample C

Step: 2; Nlab: 10; Mgen: 23571; Fval: 12.42; Pval: 0.0002114; sRep: 502.7; sLab: 980.6; sRpr: 1102; CV: 4.675

Mandel’s h

Mandel’s k

Laboratory
Mandel’s h and k plot of sample D

8 - Total Fe - sample D

Step: 2; Nlab: 10; Mgen: 35845; Fval: 14.57; Pval: 0.00005758; sRep: 603.1; sLab: 1283; sRpr: 1417; CV: 3.954
Mandel’s h and k plot of sample E

8 - Total Fe - sample E

Step: 2; Nlab: 8; Mgen: 443.8; Fval: 14.17; Pval: 0.0008869; sRep: 37; sLab: 77.52; sRpr: 85.89; CV: 19.35
Total K
Dot plot sample A

8 - Total K - Sample A

Laboratory Number

Location

8666; 8666; 10261
Dot plot sample C

8 - Total K - Sample C

Location

Laboratory Number

15500 16000 16500

9482; 9608; 9608
Dot plot sample D

8 - Total K - Sample D
Dot plot sample E

8 - Total K - Sample E
Histogram of the means of samples A, B and C

8 - Total K - Sample A - mean

8 - Total K - Sample B - mean

8 - Total K - Sample C - mean
Histogram of the means of samples D and E
Box plot of the means of samples A, B and C

8 - Total K - mean
Box plot of the means of samples D and E

Sample D:
- Minimum: 7
- Maximum: 84
- Median: 32
- Q1: 36
- Q3: 40
- Outliers: 3, 13, 14

Sample E:
- Minimum: 3
- Maximum: 48
- Median: 30
- Q1: 36
- Q3: 48
- Outliers: 7, 13
Histogram of the standard deviations of samples A, B and C

Sample A:
- N: 11
- NA: 0
- Z: 0
- E: 0
- U: 11
- a: 331.4
- m: 243.2
- s: 300.2
- 45.5%
- 18.2%
- 18.2%
- 9.1%

Sample B:
- N: 11
- NA: 0
- Z: 0
- E: 0
- U: 11
- a: 167.4
- m: 116
- s: 156.4
- 36.4%
- 0%
- 9.1%
- 18.2%

Sample C:
- N: 11
- NA: 0
- Z: 0
- E: 0
- U: 11
- a: 156.7
- m: 141.7
- s: 63.23
- 18.2%
- 45.5%
- 9.1%
- 27.3%
Histogram of the standard deviations of samples D and E

8 - Total K - Sample D - stdev

8 - Total K - Sample E - stdev

N: 11 NA: 0 Z: 0 E: 0 U: 11
a: 332.8 m: 314.7 s: 251.6

N: 9 NA: 0 Z: 0 E: 0 U: 7
a: 31.5 m: 10:39 s: 43.29

45.5%
18.2%
18.2%
18.2%
14.3%
0%
42.9%
14.3%
14.3%
14.3%
Box plot of the standard deviations of samples A, B and C

Sample A:
- Minimum: 799.48
- Maximum: 921.2
- Median: 13.40
- Outliers: 799.48, 921.2

Sample B:
- Minimum: 416.84
- Maximum: 466.2
- Median: 7.14
- Outliers: 416.84, 466.2

Sample C:
- Minimum: 82.30
- Maximum: 143
- Median: 8.30
- Outliers: 82.30, 143

8 - Total K - stddev
Box plot of the standard deviations of samples D and E

Sample D:
- Outliers: 0, 0
- Range: 7,3;30<13;14<40>84;48>32;36;82

Sample E:
- Outliers: 1, 1
- Range: 7<40<30>3>13
- Values: 4.726(36), 15.45(84)

8 - Total K - std dev
Mandel’s h and k plot of sample A

Step:2; Nlab:10; Mgen:15145; Fval:6.703; Pval:0.02046; sRep:355; sLab:489.5; sRpr:604.7; CV:3.992
Mandel’s h and k plot of sample B

8 - Total K - sample B

Step:2; Nlab:10; Mgen:13761; Fval:16.38; Pval:0.00002169; sRep:183.1; sLab:414.7; sRpr:453.3; CV:3.294
Mandel’s h and k plot of sample C

Step:2; Nlab:10; Mgen:15975; Fval:20.34; Pval:3.381e-006; sRep:174.6; sLab:443.2; sRpr:476.4; CV:2.982

Mandel’s h

Mandel’s k

Laboratory

Laboratory
Mandel’s h and k plot of sample D

8 - Total K - sample D
Step:2; Nlab:10; Mgen:26263; Fval:16.05; Pval:0.00002565; sRep:352.3; sLab:789.3; sRpr:864.4; CV:3.291
Mandel’s h and k plot of sample E

8 - Total K - sample E

Step:3; Nlab:7; Mgen:236; Fval:54.12; Pval:6.889e-007; sRep:10.77; sLab:45.34; sRpr:46.6; CV:19.75
Total Mg
Dot plot sample A

8 - Total Mg - Sample A
Dot plot sample B

8 - Total Mg - Sample B

- Location
- Laboratory Number

3474;3515;4534

- 1600 1700 1800 1900

- Location
- Laboratory Number
Dot plot sample C

8 - Total Mg - Sample C

Location: 5875, 5916, 6222
Dot plot sample D

8 - Total Mg - Sample D
Histogram of the means of samples A, B and C
Histogram of the means of samples D and E

8 - Total Mg - Sample D - mean

8 - Total Mg - Sample E - mean
Box plot of the means of samples A, B and C

8 - Total Mg - mean
Box plot of the means of samples D and E

Sample D:
5227(48); 6146(84) 6637(36); 6708(7)

Sample E:
774.8(84)

Outliers: 14<30;32>13;40>3

Outliers: 48;7;3<40;30>14;13>36;32
Histogram of the standard deviations of samples A, B and C

8 - Total Mg - Sample A - stdev
N: 11 NA: 0 Z: 0 E: 0 U: 11
a: 218.5 m: 117.9 s: 258.1
63.6%
27.3%
9.1%

8 - Total Mg - Sample B - stdev
N: 11 NA: 0 Z: 0 E: 0 U: 9
a: 78.88 m: 20 s: 174.9
22.2%
44.4%
11.1%
22.2%
100.2(48); 600.7(82)

8 - Total Mg - Sample C - stdev
N: 11 NA: 0 Z: 0 E: 0 U: 11
a: 69.02 m: 55.57 s: 55.19
45.5%
36.4%
9.1%
9.1%
Histogram of the standard deviations of samples D and E

For Sample D:
- Total Mg: 553.7 (82)
- N: 11
- NA: 0
- Z: 0
- E: 0
- U: 10
- a: 111.1
- m: 46.89
- s: 154.2

For Sample E:
- Total Mg: 41.95 (84)
- N: 9
- NA: 0
- Z: 0
- E: 0
- U: 8
- a: 12.92
- m: 7
- s: 12.31
Box plot of the standard deviations of samples A, B and C

A

940.6(82)

30;36;13<7;40<32;48>84;14

O: 0,1 / U: 11

B

10.07(84); 11.27(13)

26.46(3); 27.15(32)

40<14<7>30;36

O: 2,2 / U: 9

C

147.5(48); 189.4(82)

30;7;3<36;32<40>84;13>14

O: 02 / U: 11

8 - Total Mg - stdev
Box plot of the standard deviations of samples D and E

Sample D:
- Values: 84; 40; 7<30; 13>3; 14>36; 32; 48
- Median: 10
- Outliers: 0, 0
- Interquartile range: 32
- Standard deviation: 40

Sample E:
- Values: 22.87(32)
- Median: 10
- Outliers: 0, 1
- Interquartile range: 32
- Standard deviation: 8

8 - Total Mg - stdev
Mandel’s h and k plot of sample A

8 - Total Mg - sample A

Step: 2; Nlab: 10; Mgen: 6819; Fval: 18.13; Pval: 9.124e-006; sRep: 175; sLab: 418.3; sRpr: 453.5; CV: 6.65
Mandel’s h and k plot of sample B

8 - Total Mg - sample B

Step: 3; Nlab: 8; Mgen: 1703; Fval: 11.23; Pval: 0.003965; sRep: 20.2; sLab: 37.29; sRpr: 42.41; CV: 2.49
Mandel’s h and k plot of sample C

8 - Total Mg - sample C

Step: 2; Nlab: 10; Mgen: 3785; Fval: 31.39; Pval: 7.023e-008; sRep: 68.54; sLab: 218.1; sRpr: 228.7; CV: 6.04
Mandel’s h and k plot of sample D

8 - Total Mg - sample D

Step: 3; Nlab: 9; Mgen: 6443; Fval: 16.4; Pval: 0.00008451; sRep: 71.26; sLab: 161.4; sRpr: 176.5; CV: 2.739
Mandel’s h and k plot of sample E

8 - Total Mg - sample E

Step: 2; Nlab: 9; Mgen: 516.9; Fval: 52.01; Pval: 7.118e-009; sRep: 10.3; sLab: 42.49; sRpr: 43.72; CV: 8.458
Total Mn
Dot plot sample A

8 - Total Mn - Sample A

Location
Laboratory Number

500 550 600 650 700 750

13231;13898;14079
Dot plot sample B

8 - Total Mn - Sample B
Dot plot sample D

8 - Total Mn - Sample D

Location

Laboratory Number

8262; 8282; 10436
Dot plot sample E

8 - Total Mn - Sample E
Histogram of the means of samples A, B and C
Histogram of the means of samples D and E

- Sample D:
  - N: 11
  - NA: 0
  - Z: 0
  - E: 0
  - U: 10
  - a: 1839
  - m: 1156
  - s: 2375

- Sample E:
  - N: 10
  - NA: 0
  - Z: 0
  - E: 0
  - U: 10
  - a: 19.67
  - m: 19.57
  - s: 2.19

8 - Total Mn - Sample D - mean
8 - Total Mn - Sample E - mean
Box plot of the means of samples A, B and C

A:
- Mean: 515(84)
- Range: 7;3<14;48>32;30>13;36

B:
- Mean: 121.7(84)
- Range: 30;13<7;32>3;40>14;36;48

C:
- Mean: 312.7(84)
- Range: 7;30<32;3>13;40>48;14;36

8 - Total Mn - mean
Box plot of the means of samples D and E

Sample D:
- Mean: 855.3 (84)

Sample E:
- Mean: 32.37 (84.40.36.14.48)

Outliers:
- Sample D: 7.30 < 32.13 > 40.3 > 48.36.14
- Sample E: 0.00 < 10
Histogram of the standard deviations of samples A, B and C

Sample A
- N: 10
- NA: 0
- Z: 0
- E: 0
- U: 9
- a: 60.08
- m: 16.77
- s: 136.3

Sample B
- N: 10
- NA: 0
- Z: 0
- E: 0
- U: 9
- a: 16.01
- m: 2.405
- s: 40.64

Sample C
- N: 11
- NA: 0
- Z: 0
- E: 0
- U: 10
- a: 34.09
- m: 5.774
- s: 83.02

Total Mn
- Sample A
- Sample B
- Sample C

Note: The values in parentheses are percentages of the total Mn.
Histogram of the standard deviations of samples D and E

8 - Total Mn - Sample D - stdev

N: 10 NA: 0 Z: 0 E: 0 U: 8
a: 154.6 m: 24.14 s: 386.8
143.6(14); 1250(82)
37.5%
12.5%
37.5%

8 - Total Mn - Sample E - stdev

N: 9 NA: 0 Z: 0 E: 0 U: 9
a: 1.089 m: 0.5774 s: 1.06
33.3% 33.3% 11.1% 11.1% 0% 0% 0% 11.1%
Box plot of the standard deviations of samples A, B and C

Sample A:
- Standard deviation: 43.3 (48)
- Outliers: 0, 1
- Upper Bound: 9

Sample B:
- Standard deviation: 5.292 (14); 10 (48)
- Outliers: 0, 2
- Upper Bound: 9

Sample C:
- Standard deviation: 13.85 (7); 24.44 (14)
- Outliers: 0, 2
- Upper Bound: 10

8 - Total Mn - stddev
Box plot of the standard deviations of samples D and E

Sample D:
- Median: 32
- Interquartile range: 13;40<7;36>32;48>3;84
- Outliers: 0,0 / U:8

Sample E:
- Median: 3.573(32)
- Interquartile range: 7;13;36<84<3>48;14>40
- Outliers: 0,1 / U:9

8 - Total Mn - stdev
Mandel’s h and k plot of sample A

8 - Total Mn - sample A

Step: 2; Nlab: 10; Mgen: 629.1; Fval: 38.75; Pval: 1.01e-008; sRep: 19.22; sLab: 68.19; sRpr: 70.85; CV: 11.26
Mandel's h and k plot of sample B

8 - Total Mn - sample B

Step:3; Nlab:9; Mgen:145.2; Fval:57.17; Pval:3.172e-009; sRep:2.493; sLab:10.79; sRpr:11.07; CV:7.625

Mandel's h

Mandel's k

Laboratory

Laboratory
Mandel’s h and k plot of sample C

8 - Total Mn - sample C

Step: 2; Nlab: 10; Mgen: 396.3; Fval: 33.65; Pval: 3.713e-008; sRep: 10.84; sLab: 35.77; sRpr: 37.38; CV: 9.43
Mandel’s h and k plot of sample D

8 - Total Mn - sample D

Step:3; Nlab:8; Mgen:1148; Fval:12.73; Pval:0.001777; sRep:17.59; sLab:34.79; sRpr:38.99; CV:3.396
Mandel’s h and k plot of sample E

8 - Total Mn - sample E

Step:2; Nlab:9; Mgen:19.97; Fval:17.07; Pval:0.00006227; sRep:0.8745; sLab:2.024; sRpr:2.205; CV:11.04
Total Na
Dot plot sample B

8 - Total Na - Sample B
Dot plot sample D

8 - Total Na - Sample D
Dot plot sample E

8 - Total Na - Sample E

Location

Laboratory Number

346.5;363.0;366.3

Location

50 100 150 200 250
Histogram of the means of samples A, B and C
Histogram of the means of samples D and E
Box plot of the means of samples D and E

Sample D:
- Mean: 5034 (standard deviation 3)
- 95% confidence interval: 6151 (84)
- Outliers: 36; 32; 30; <7; 14; <40; 48; 13; >82

Sample E:
- Mean: 37.8 (standard deviation 7)
- 95% confidence interval: 38.58 (32)
- Outliers: 263.3 (48)
- Outliers: 3; 13; >30; 36; >14

O: 0.2 / U: 11
O: 2.1 / U: 8
Histogram of the standard deviations of samples A, B and C

8 - Total Na - Sample A - stdev

8 - Total Na - Sample B - stdev

8 - Total Na - Sample C - stdev
Histogram of the standard deviations of samples D and E.

Sample D:
- N: 11
- NA: 0
- Z: 0
- U: 10
- a: 149.2
- m: 63
- s: 206.2

Sample E:
- N: 8
- NA: 0
- Z: 0
- U: 8
- a: 6.955
- m: 5.353
- s: 4.568

712.5 (82)
Box plot of the standard deviations of samples A, B and C

A

- Median: 30; 48; 7; 32; 40
- Outliers: 0, 1
- Upper bound: 10

B

- Median: 14; 30; 13; 7; 3
- Outliers: 84; 40
- Upper bound: 10

C

- Median: 298.5; 459.3; 820.4
- Outliers: 0, 3
- Upper bound: 11

8 - Total Na - std dev
Box plot of the standard deviations of samples D and E

Sample D:
- Average: 340.4(3)
- Range: 7;30;40<36;84>32;14>48;13

Sample E:
- Average: 15.28(48)
- Range: 7;32<36;13>14;3>84

8 - Total Na - stdev
Mandel’s h and k plot of sample A

8 - Total Na - sample A

Step:3; Nlab:9; Mgen:11705; Fval:30.03; Pval:7.038e-007; sRep:158.4; sLab:492.8; sRpr:517.7; CV:4.423
Mandel's h and k plot of sample B

8 - Total Na - sample B

Step: 2; Nlab: 10; Mgen: 5079; Fval: 17.63; Pval: 0.00001161; sRep: 65.55; sLab: 154.3; sRpr: 167.7; CV: 3.301
Mandel’s h and k plot of sample C

Step: 5; Nlab: 7; Mgen: 984.6; Fval: 21.57; Pval: 0.0002545; sRep: 17.1; sLab: 44.78; sRpr: 47.94; CV: 4.869

E: hk84; hk82; hk3; 14k
Mandel’s h and k plot of sample D

8 - Total Na - sample D

Step: 4; Nlab: 8; Mgen: 3303; Fval: 25.51; Pval: 0.00001537; sRep: 73.59; sLab: 210.3; sRpr: 222.8; CV: 6.747
Mandel's h and k plot of sample E

8 - Total Na - sample E

Step: 1; Nlab: 9; Mgen: 147.9; Fval: 537.5; Pval: 0; sRep: 7.696; sLab: 102.9; sRpr: 103.2; CV: 69.78