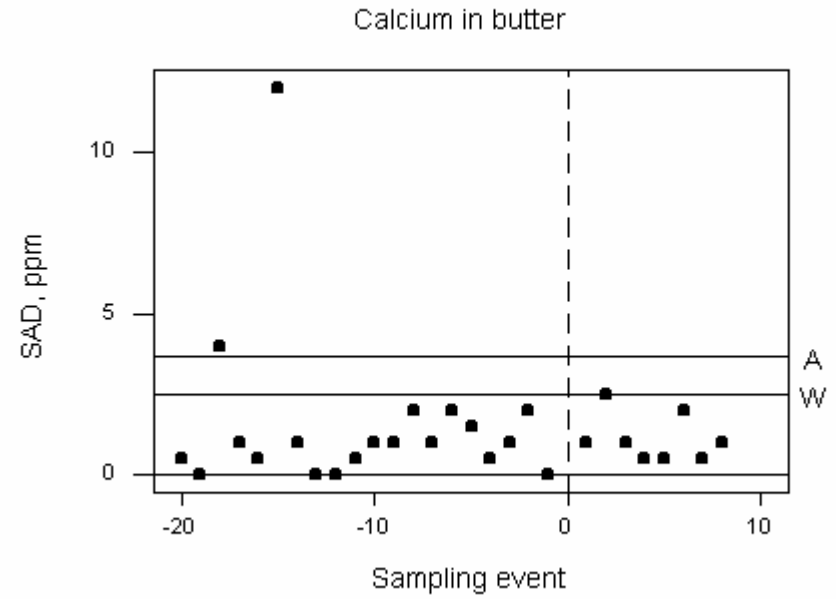
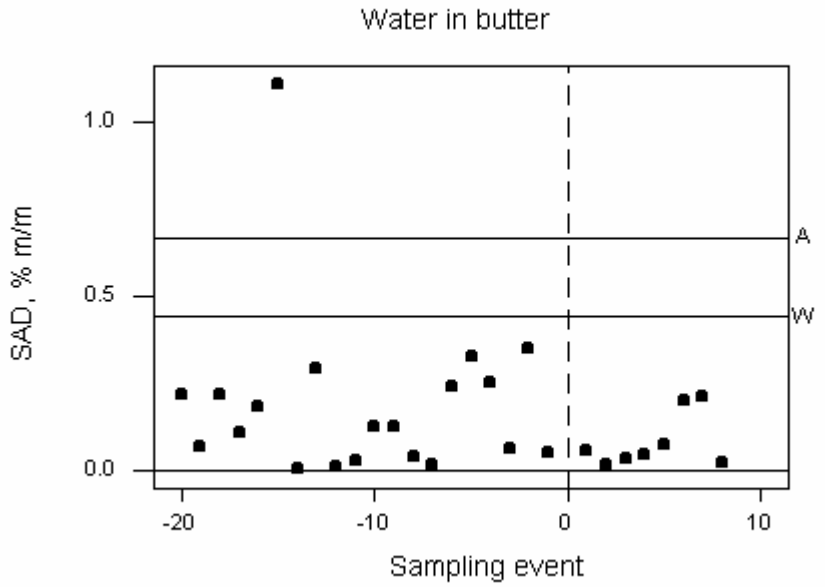
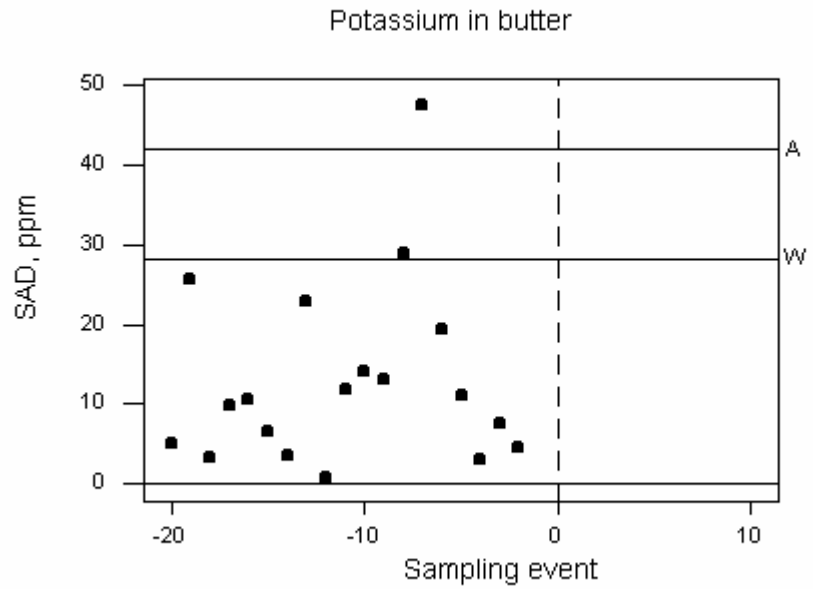
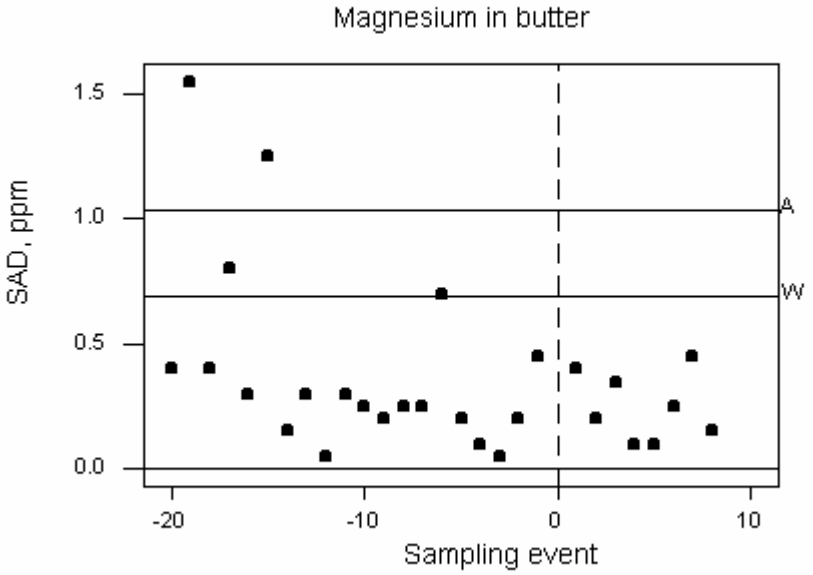
SAD charts for with sampling events in sequential order.

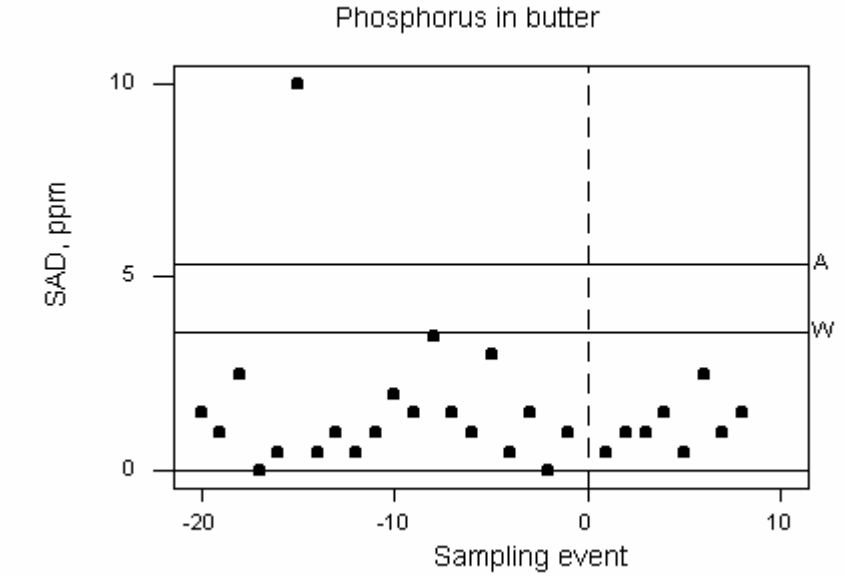
In all of these plots, sampling events with negative indices are the arbitrarily defined training set, while those with positive indices are the training set. “A” and “W” indicate the action limits and warning limits respectively.

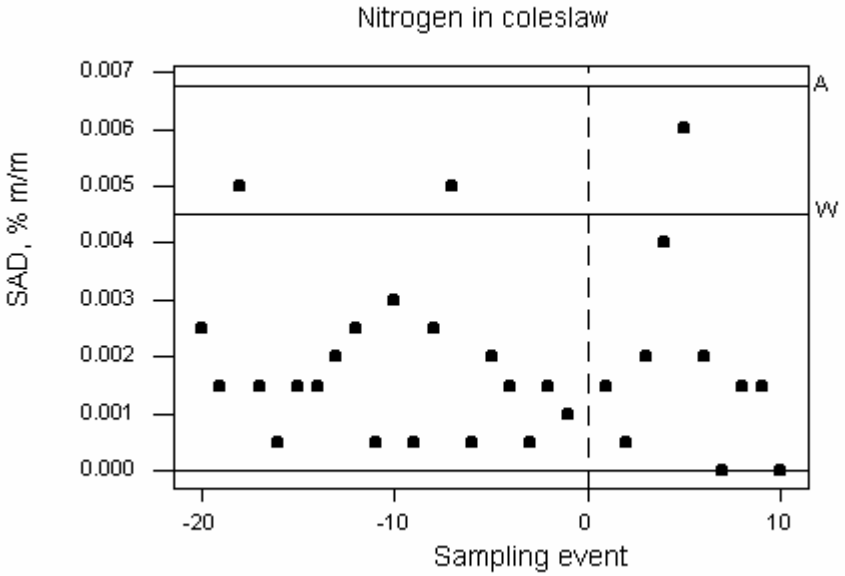


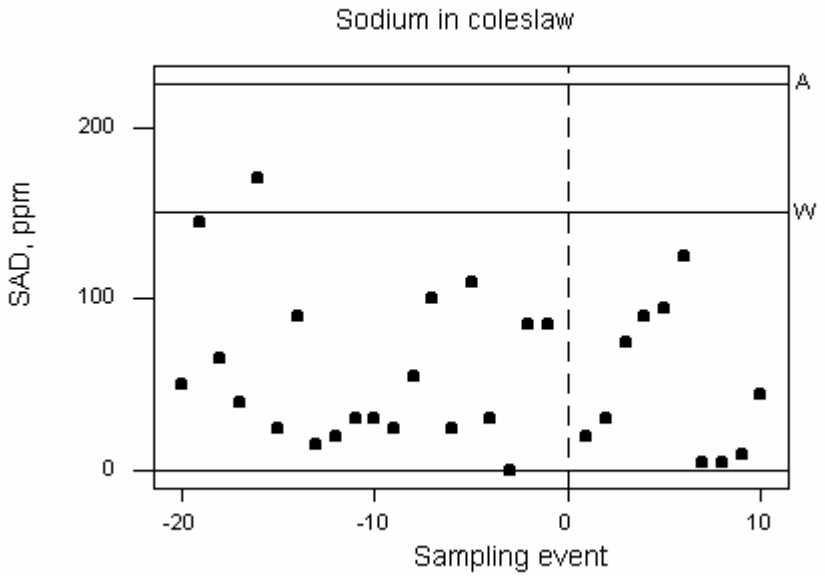


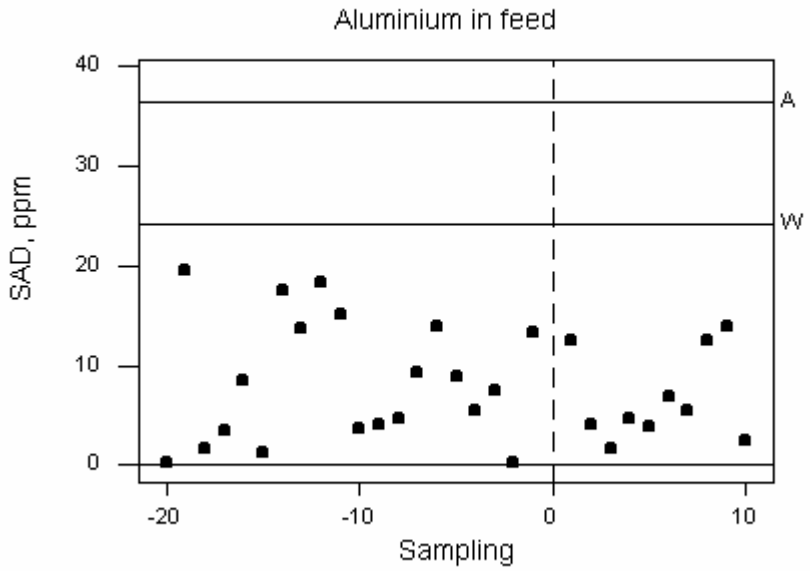

Potassium in butter
SAD, ppm
50
40
30
20
10
0
A
W
-20
-10
0
10
Sampling event

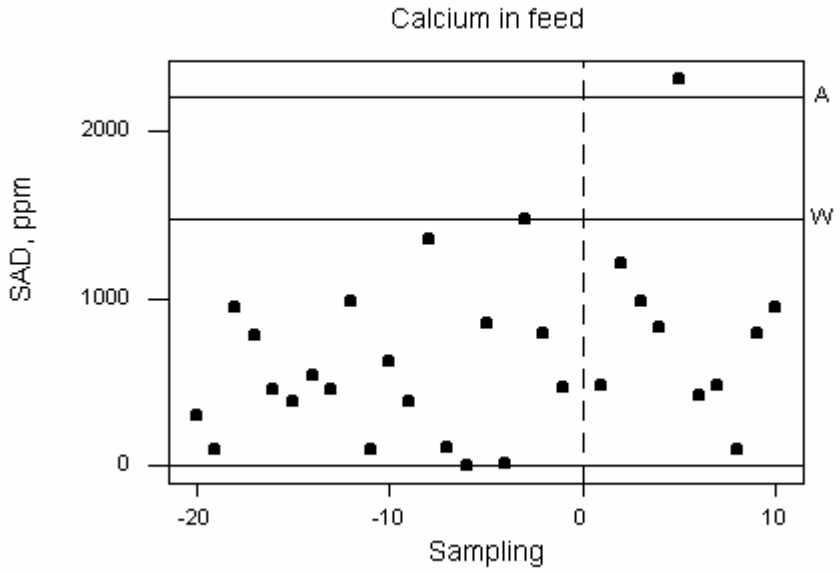

Magnesium in butter
SAD, ppm
1.5
1.0
0.5
0.0
A
W
-20
-10
0
10
Sampling event

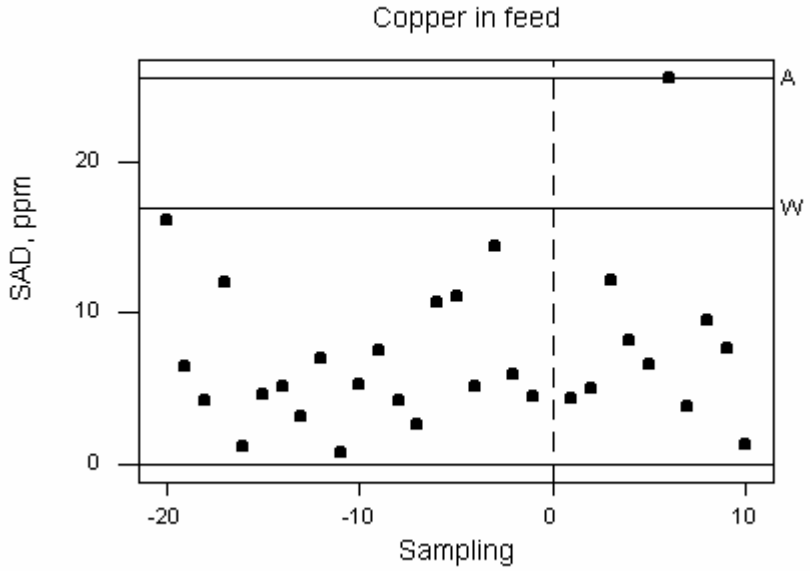

Phosphorus in butter
SAD, ppm
10
5
0
A
W
-20
-10
0
10
Sampling event

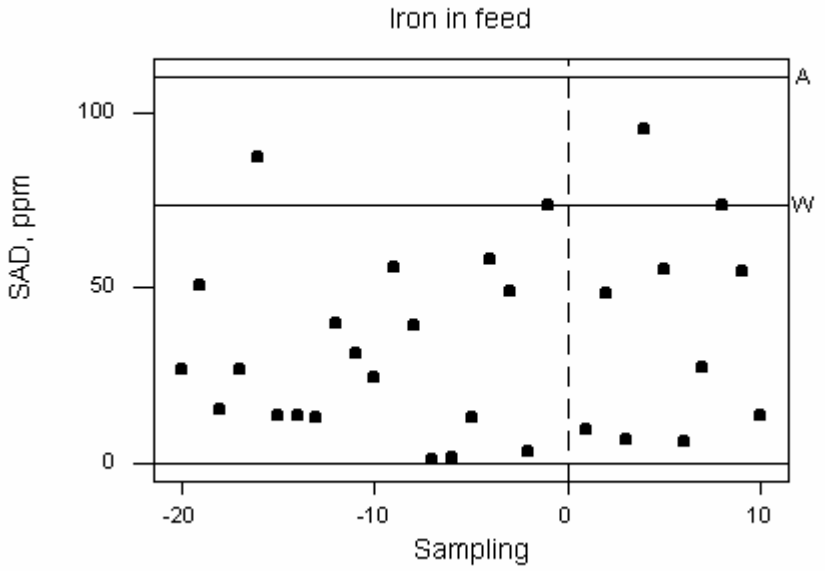

Nitrogen in coleslaw
SAD, % m/m
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
A
W
-20
-10
0
10
Sampling event

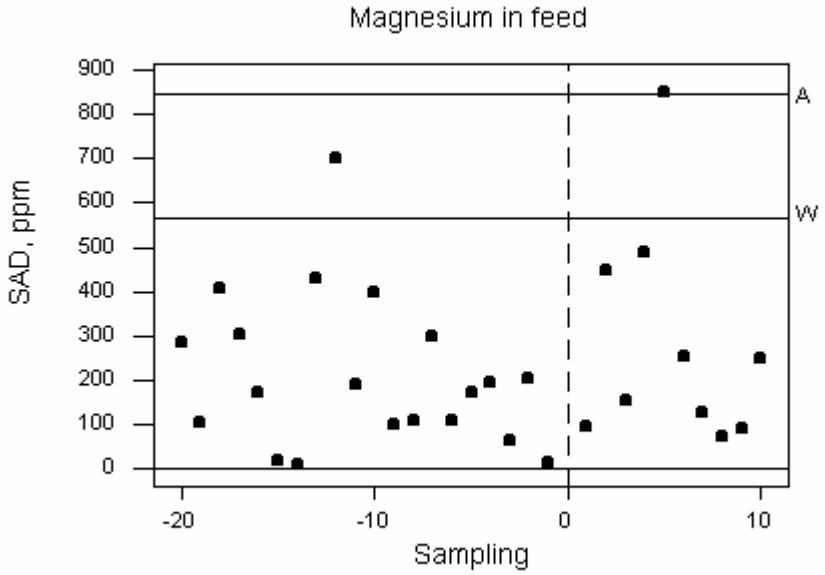

Sodium in coleslaw
SAD, ppm
200
100
0
A
W
-20
-10
0
10
Sampling event

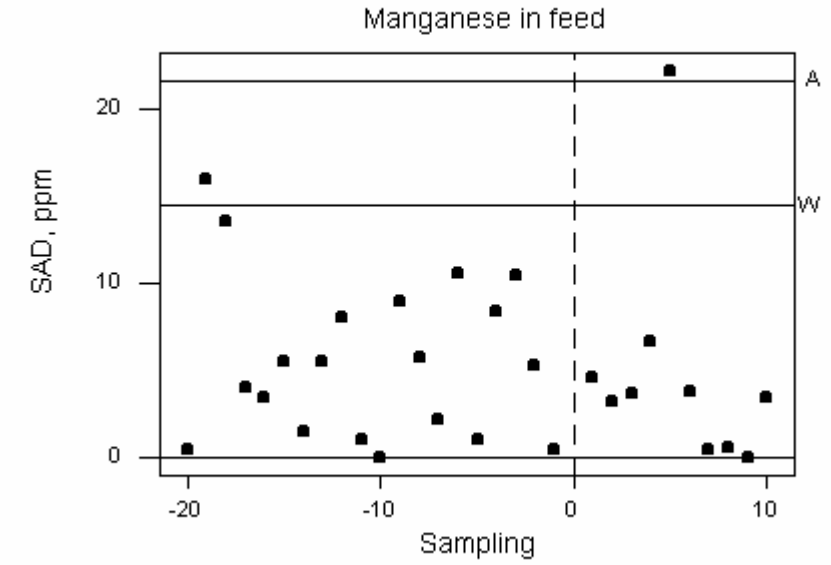

Aluminium in feed
SAD, ppm
40
30
20
10
0
A
W
-20
-10
0
10
Sampling

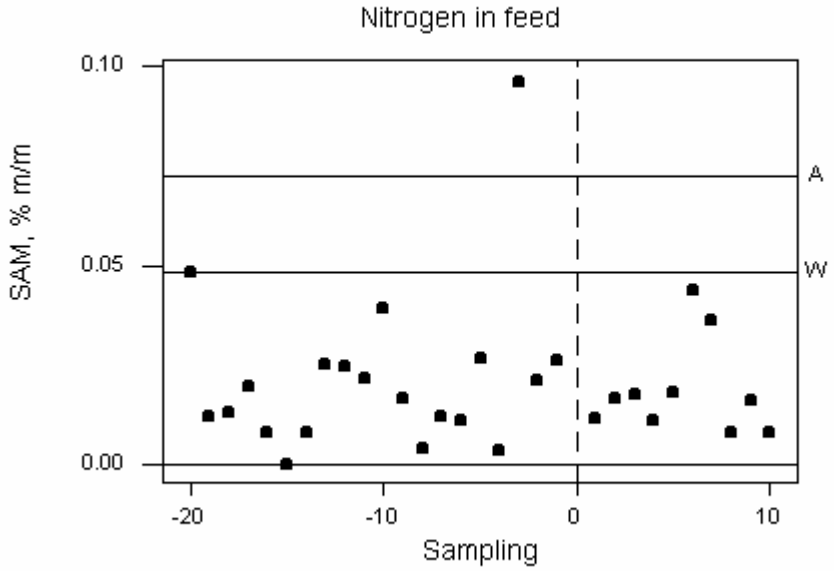

Calcium in feed
SAD, ppm
2000
1000
0
A
W
-20
-10
0
10
Sampling

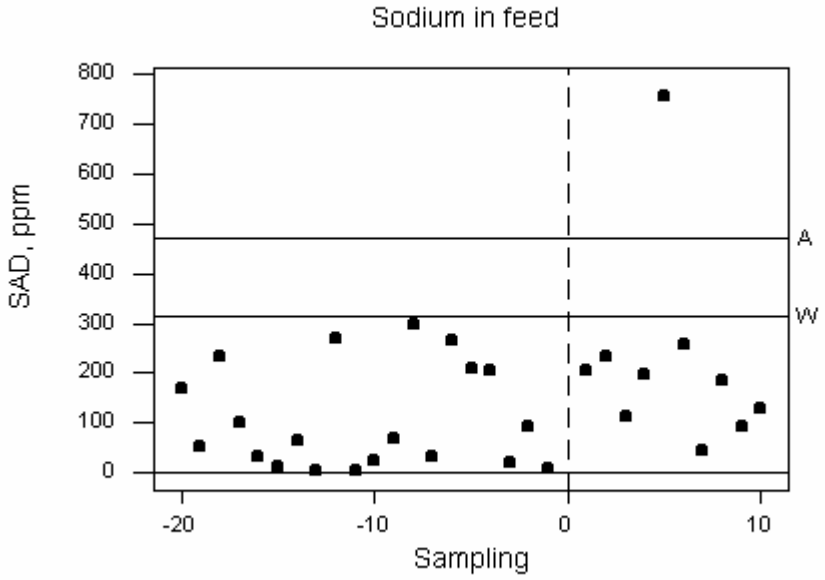

Copper in feed
SAD, ppm
20
10
0
A
W
-20
-10
0
10
Sampling

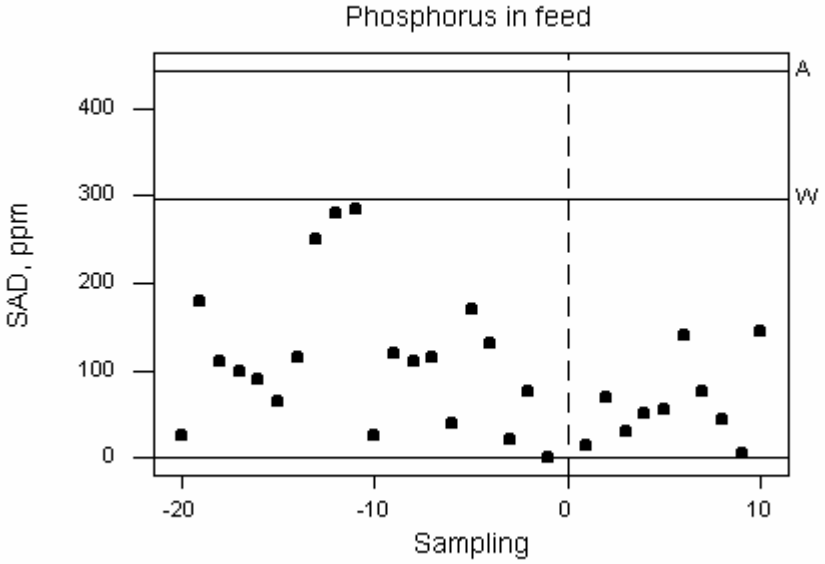

Iron in feed
SAD, ppm
100
50
0
A
W
-20
-10
0
10
Sampling

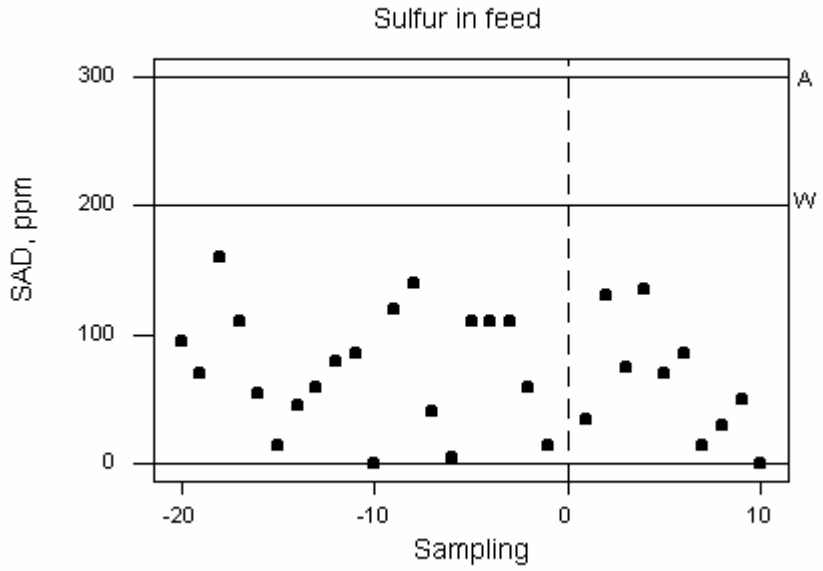

Magnesium in feed
SAD, ppm
900
800
700
600
500
400
300
200
100
0
A
W
-20
-10
0
10
Sampling

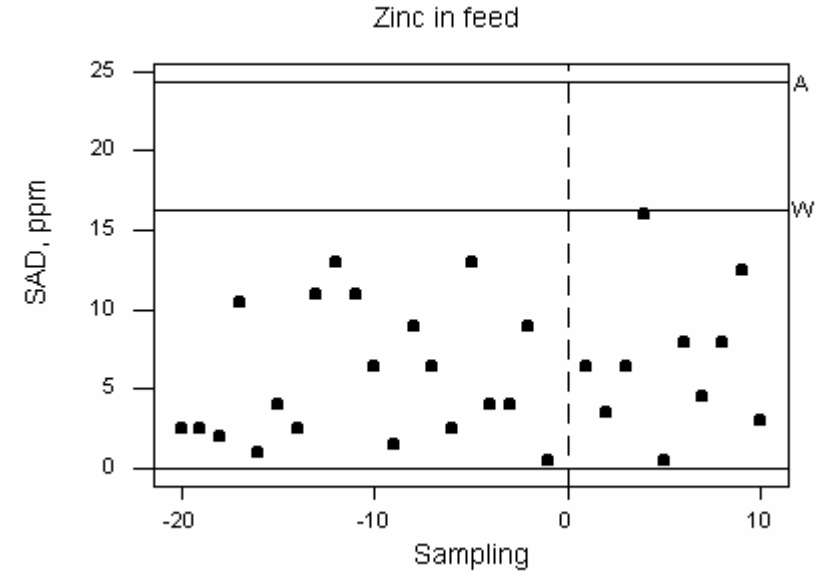

Manganese in feed
SAD, ppm
20
10
0
A
W
-20
-10
0
10
Sampling

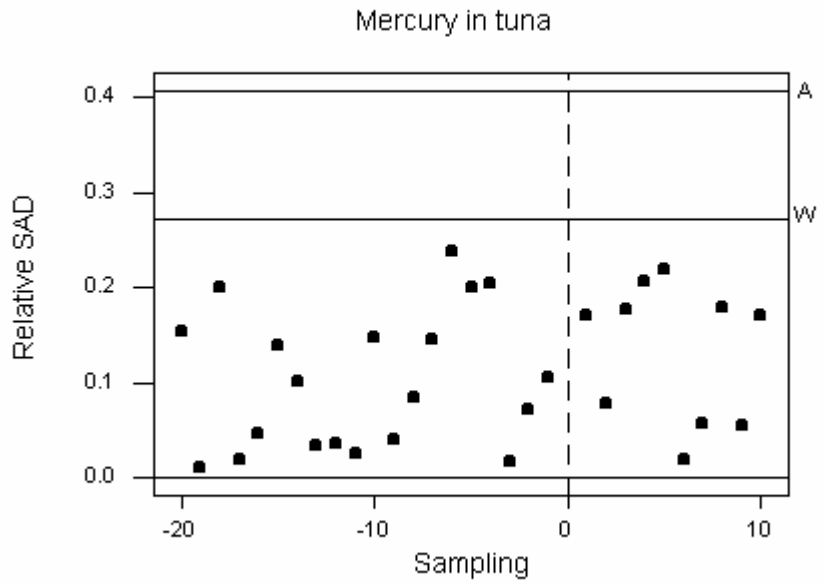

Nitrogen in feed
SAM, % m/m
0.10
0.05
0.00
A
W
-20
-10
0
10
Sampling

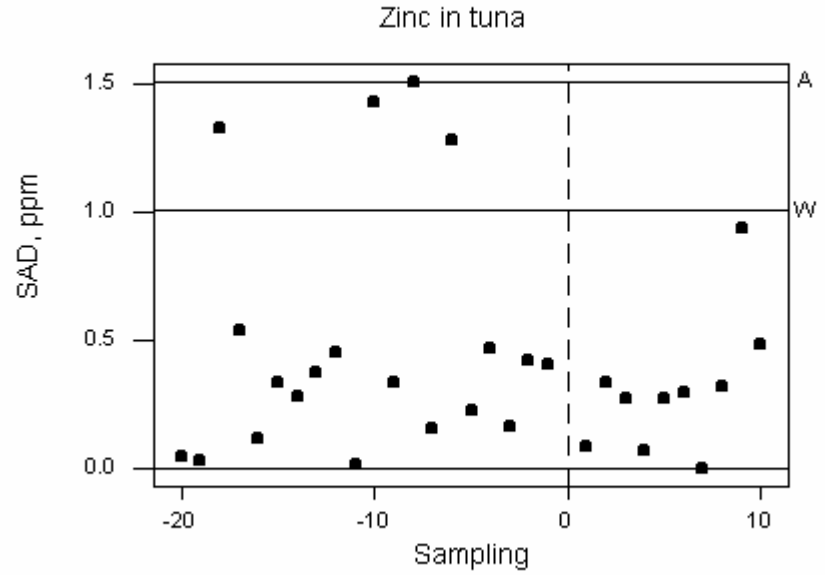

Sodium in feed
SAD, ppm
800
700
600
500
400
300
200
100
0
A
W
-20
-10
0
10
Sampling


Phosphorus in feed
SAD, ppm
400
300
200
100
0
A
W
-20
-10
0
10
Sampling

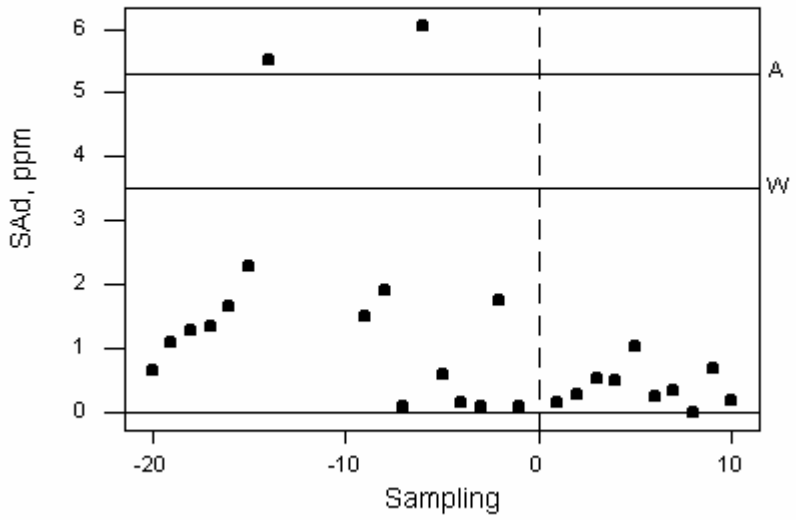

Sulfur in feed
300
200
100
0
SAD, ppm
A
W
-20
-10
0
10
Sampling


Zinc in feed
25
20
15
10
5
0
SAD, ppm
A
W
-20
-10
0
10
Sampling

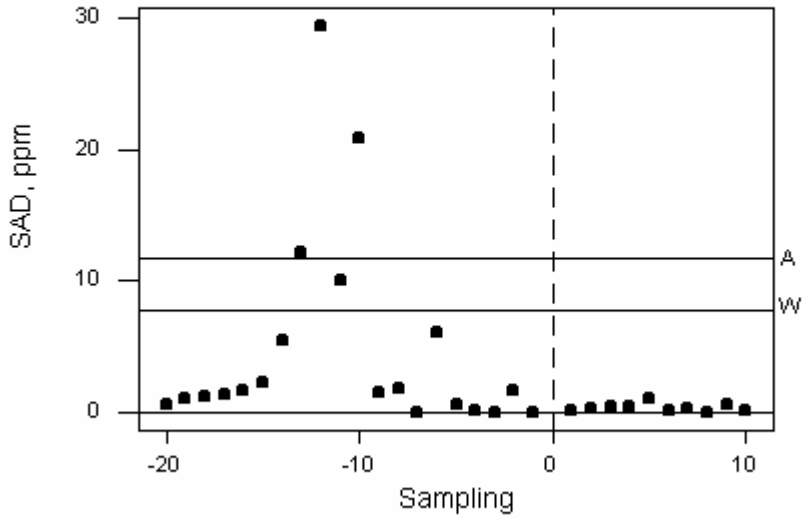

Mercury in tuna
Relative SAD
0.4
0.3
0.2
0.1
0.0
A
W
-20
-10
0
10
Sampling

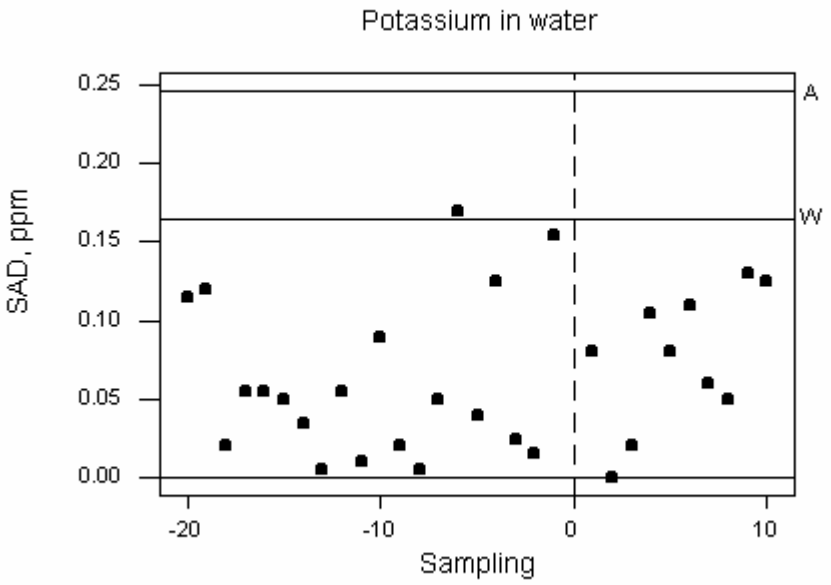

Zinc in tuna
SAD, ppm
1.5
1.0
0.5
0.0
A
W
-20
-10
0
10
Sampling

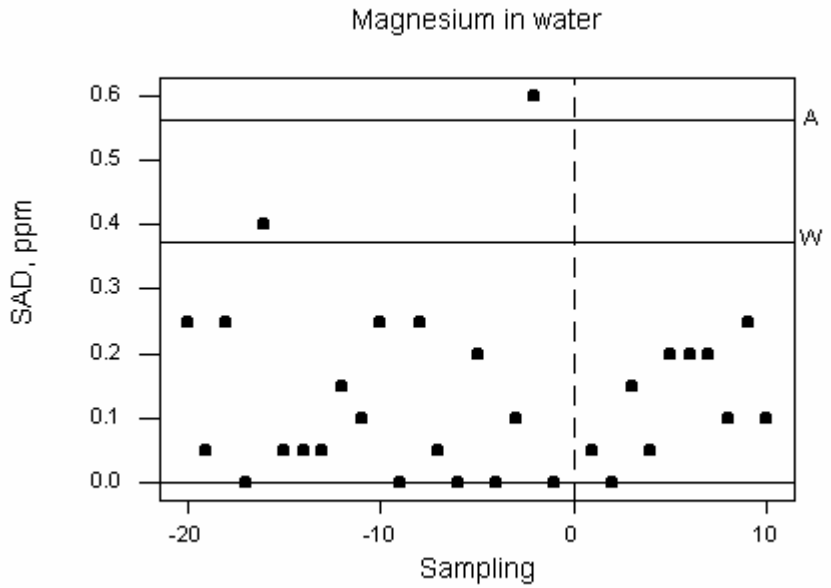
Calcium in water, anomalous sampling events deleted.

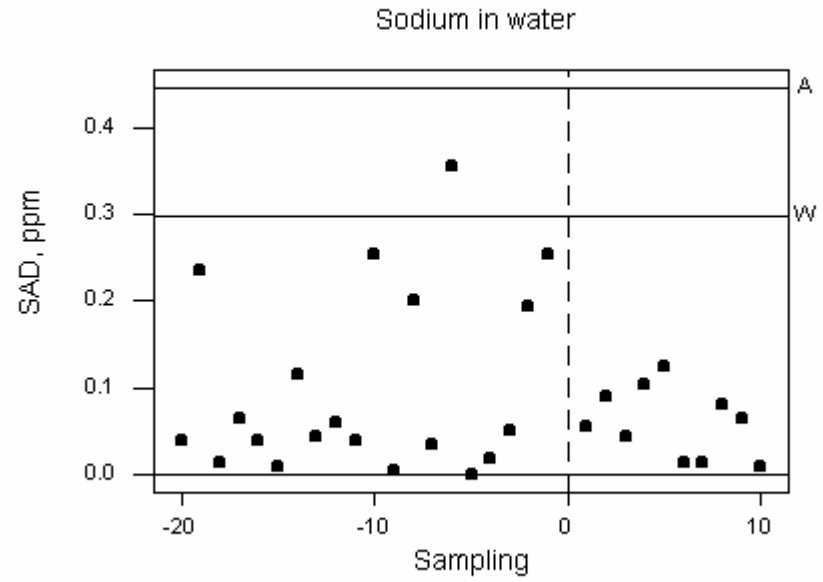


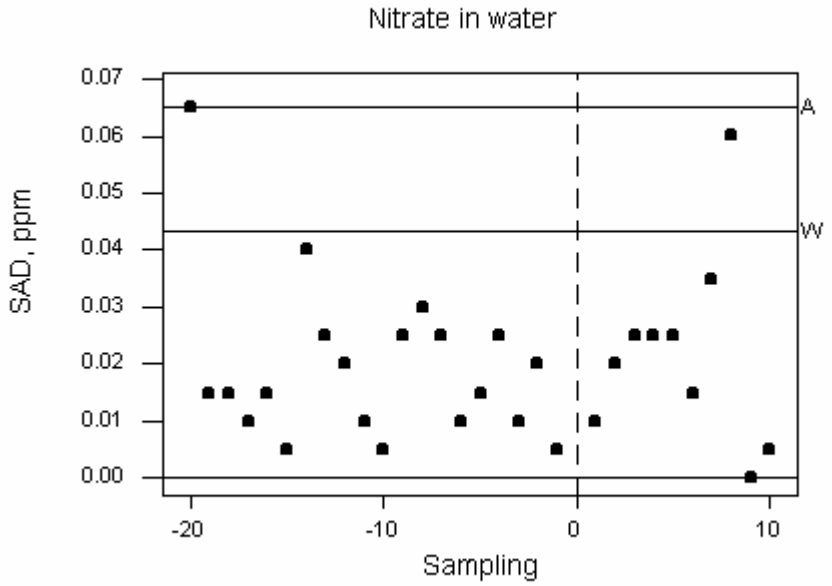
Calcium in water, all data included. Anomalous samplings in the training set have inflated the control limits unduly

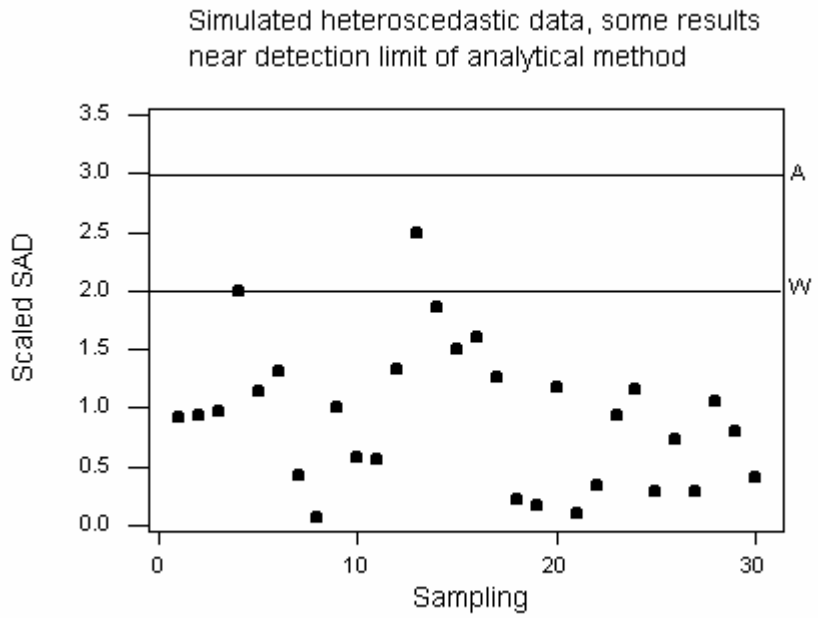



Potassium in water
SAD, ppm
0.25
0.20
0.15
0.10
0.05
0.00
A
W
-20
-10
0
10
Sampling


Magnesium in water
SAD, ppm
0.6
0.5
0.4
0.3
0.2
0.1
0.0
A
W
-20
-10
0
10
Sampling


Sodium in water
SAD, ppm
0.0
0.1
0.2
0.3
0.4
A
W
-20
-10
0
10
Sampling


Nitrate in water
SAD, ppm
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
A
W
-20
-10
0
10
Sampling


Simulated heteroscedastic data, some results
near detection limit of analytical method
Scaled SAD
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
A
W
0
10
20
30
Sampling