

Rijkswaterstaat

Rijksinstituut voor Integraal Zoetwaterbeheer en
Afvalwaterbehandeling RIZA



Laboratoriumevaluerend onderzoek;

Project 172 - Sediment, Totaal Pakket
1 november 1999

Bijlage 3, monsters 99092 en 99096

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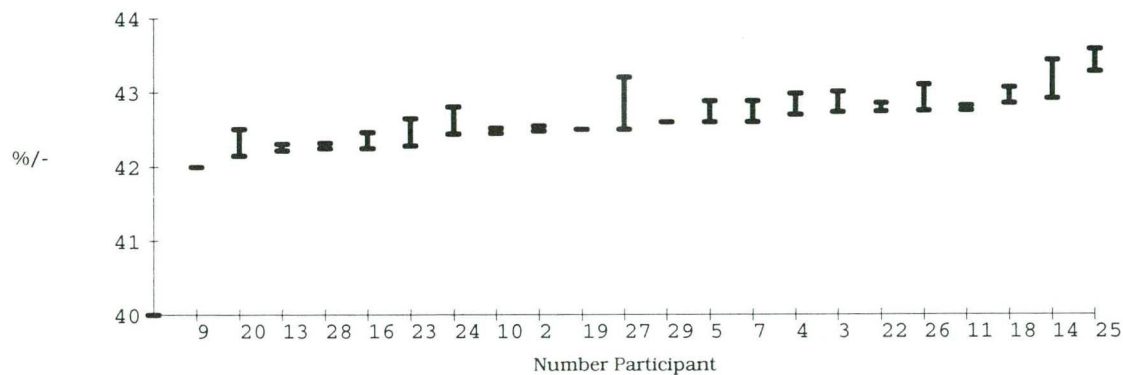
Rijkswaterstaat/RIZA
 Rijksinstituut voor
 Integraal Zoetwaterbeheer en
 Afvalwaterbehandeling
 Documentatie
 Postbus 17
 8200 AA Lelystad

Job 3 : 99092, 99096

percentage drooggewicht (bij 105 graden celcius)., %DW in %/- Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	41.25000	40.78000	41.01500	.8 %	*
2 *	42.52800	42.43660	42.48230	.2 %	*
3 *	42.54000	42.93000	42.73500	.6 %	*
4 *	42.90000	42.50000	42.70000	.7 %	*
5 *	42.40000	42.80000	42.60000	.7 %	*
6 *	43.20000	46.10000	44.65000	4.6 %	*
7 *	42.40000	42.80000	42.60000	.7 %	*
8 *			.00000	0 %	* - N.V.
9 *	42.00000	42.00000	42.00000	.0 %	*
10 *	42.50000	42.40000	42.45000	.2 %	*
11 *	42.80000	42.71000	42.75500	.1 %	*
12 *			.00000	0 %	* - N.V.
13 *	42.28000	42.16000	42.22000	.2 %	*
14 *	42.55000	43.28000	42.91500	1.2 %	*
15 *			.00000	0 %	* - N.V.
16 *	42.10000	42.40000	42.25000	.5 %	*
17 *			.00000	0 %	* - N.V.
18 *	43.00000	42.70000	42.85000	.5 %	*
19 *	42.50000	42.50000	42.50000	.0 %	*
20 *	41.90000	42.40000	42.15000	.8 %	*
21 *	43.60000	45.30000	44.45000	2.7 %	*
22 *	42.66000	42.82000	42.74000	.3 %	*
23 *	42.03000	42.54000	42.28500	.9 %	*
24 *	42.18000	42.70000	42.44000	.9 %	*
25 *	43.07000	43.49000	43.28000	.7 %	*
26 *	43.00000	42.50000	42.75000	.8 %	*
27 *	43.00000	42.00000	42.50000	1.7 %	*
28 *	42.30000	42.20000	42.25000	.2 %	*
29 *	42.60000	42.60000	42.60000	.0 %	*

Job 3: percentage drooggewicht (bij 105 graden celcius).



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

25 laboratory observations

Maximum absolute difference from Normal distribution: 0.24038. Critical value: 0.31700. KS-test passed

COCHRAN; 1 % ; replicas: 2

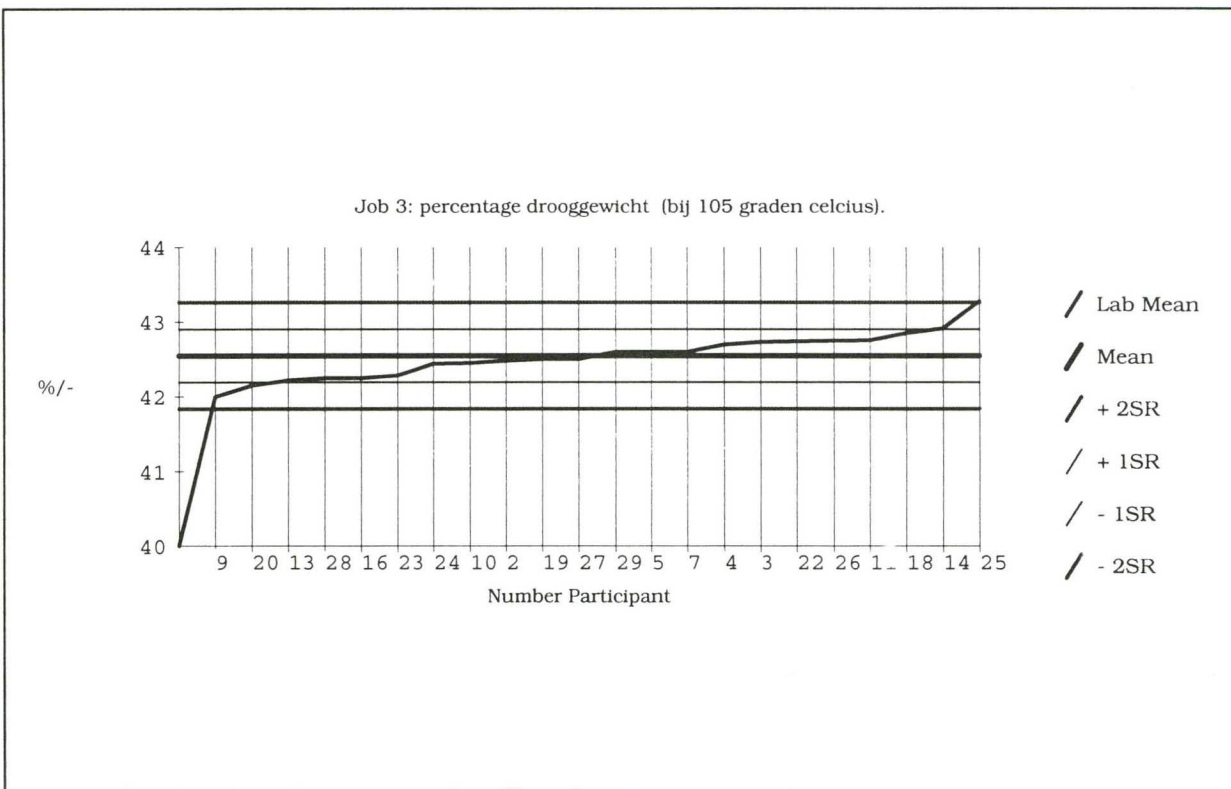
Cyc	Lab	Average	Variance	Result	Value
1	6	44.65000	2.05061	.55514	.41309
2	21	44.45000	1.20208	.42883	.42484

GRUBBS; 1 % ; replicas: 2

Cyc	Lab	D/S	Average	Variance	Result	Value
1	1	S	41.01500	.33234	3.42183	3.08700

Summary

1. Eliminations due to
 - 1.1 Repeatability = 2
 - 1.2 Reproducibility = 1
 - 1.3 Manual rejected = 0
2. General Mean = 42.54783
3. Repeatability
 - 3.1 Standard deviation $S_r = .28716$
 - 3.2 Coefficient of variation = 1 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = .35574$
 - 4.2 Coefficient of variation = 1 %



Job Classification

Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *
8 *	.00000	G	?	?	?	?
15 *	.00000	G	?	?	?	?
17 *	.00000	G	-	-	-	HUIS
12 *	.00000	G	-	-	-	-
1 *	41.01500	R	-	-	-	G-NEN 5747
9 *	42.00000	B	-	-	-	-
20 *	42.15000	B	-	-	-	NEN 6620
13 *	42.22000	B	-	-	-	G-NEN 6620
16 *	42.25000	B	-	-	-	C-NEN 6620
28 *	42.25000	B	-	-	-	NEN 5747
23 *	42.28500	A	-	-	-	-
24 *	42.44000	A	-	-	Z	NEN 6620
10 *	42.45000	A	-	-	-	C-NEN 6620
2 *	42.48230	A	-	-	-	-
19 *	42.50000	A	-	-	Z	G-NEN 6620
27 *	42.50000	A	-	-	-	NEN 6620
29 *	42.60000	A	-	-	Z	HUIS
7 *	42.60000	A	?	?	?	NEN 6620
5 *	42.60000	A	-	-	-	-
4 *	42.70000	A	-	-	-	-
3 *	42.73500	A	-	-	-	NEN 5748
22 *	42.74000	A	-	-	-	-
26 *	42.75000	A	-	-	-	G-NEN 6620
11 *	42.75500	A	-	-	-	C-NEN 6620
18 *	42.85000	B	-	-	-	C-NEN 6620
14 *	42.91500	B	-	-	-	-
25 *	43.28000	C	Z	-	Z	NEN 6620
21 *	44.45000	W	-	-	-	NEN 6620
6 *	44.65000	W	?	?	?	HUIS

General Mean = 42.54783

Between lab standard deviation SL = .20997

Coefficient of variation = 0 %

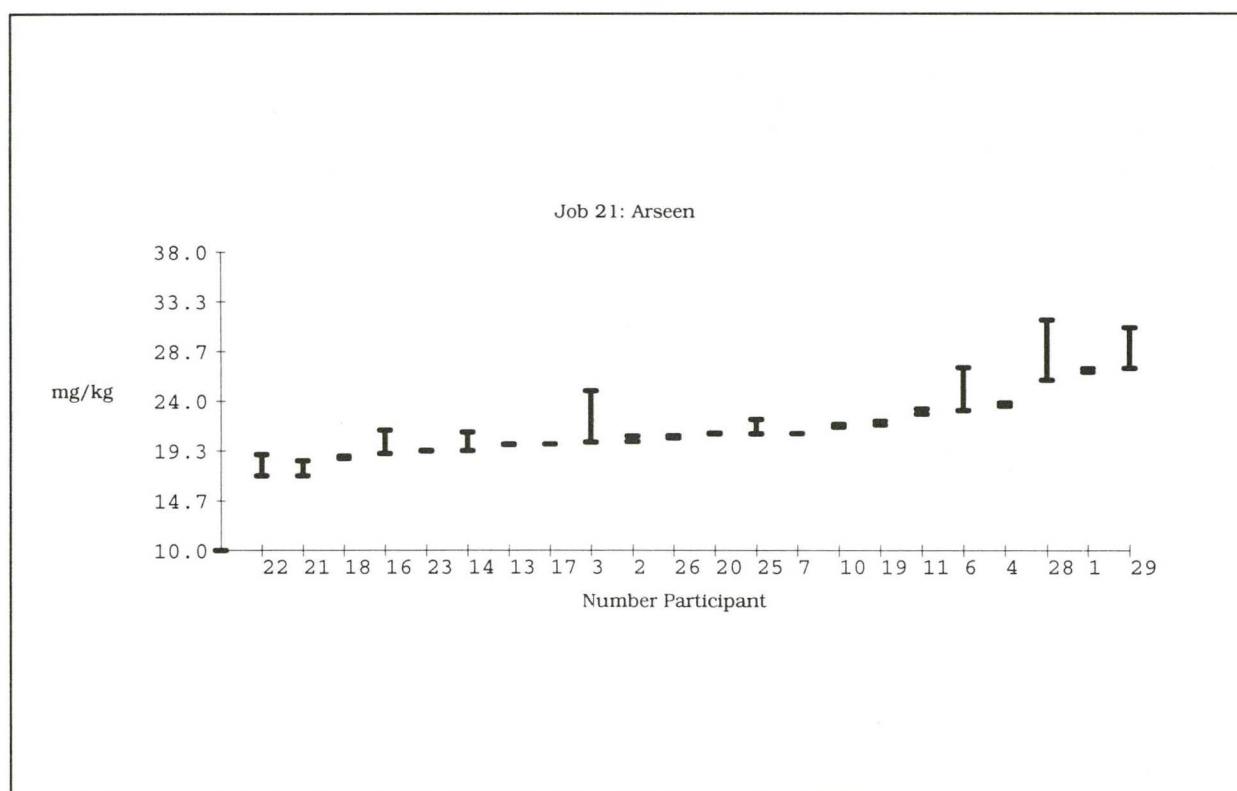
Number of laboratories = 22

A: Number of laboratories with	Z	-scores between 0 and 1	; 14
B: Number of laboratories with	Z	-scores between 1 and 2	; 7
C: Number of laboratories with	Z	-scores between 2 and 3	; 1
D: Number of laboratories with	Z	-scores larger than 3	· 0

Job 21 : 99092, 99096

Arseen, As in mg/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	26.53000 *	26.98000 *	26.75500 *	1.2 % *	
2 *	19.90000 *	20.60000 *	20.25000 *	2.4 % *	
3 *	23.60000 *	16.80000 *	20.20000 *	23.8 % *	
4 *	23.36000 *	23.78000 *	23.57000 *	1.3 % *	
5 *	7.40000 *	8.80000 *	8.10000 *	12.2 % *	
6 *	26.00000 *	20.30000 *	23.15000 *	17.4 % *	
7 *	21.00000 *	21.00000 *	21.00000 *	.0 % *	
8 *			.00000 *	0 % *	- N.V.
9 *			.00000 *	0 % *	- N.V.
10 *	21.40000 *	21.80000 *	21.60000 *	1.3 % *	
11 *	23.16000 *	22.48000 *	22.82000 *	2.1 % *	
12 *			.00000 *	0 % *	- N.V.
13 *	19.98000 *	19.92000 *	19.95000 *	.2 % *	
14 *	18.10000 *	20.60000 *	19.35000 *	9.1 % *	
15 *			.00000 *	0 % *	- N.V.
16 *	20.65000 *	17.54000 *	19.09500 *	11.5 % *	
17 *	20.00000 *	20.00000 *	20.00000 *	.0 % *	
18 *	18.80000 *	18.50000 *	18.65000 *	1.1 % *	
19 *	22.06000 *	21.50000 *	21.78000 *	1.8 % *	
20 *	21.00000 *	20.90000 *	20.95000 *	.3 % *	
21 *	18.00000 *	16.00000 *	17.00000 *	8.3 % *	
22 *	18.43000 *	15.56000 *	16.99500 *	11.9 % *	
23 *	19.36000 *	19.29000 *	19.32500 *	.3 % *	
24 *			.00000 *	0 % *	- N.V.
25 *	21.90000 *	20.00000 *	20.95000 *	6.4 % *	
26 *	20.40000 *	20.70000 *	20.55000 *	1.0 % *	
27 *			.00000 *	0 % *	- N.V.
28 *	22.00000 *	30.00000 *	26.00000 *	21.8 % *	
29 *	29.80000 *	24.40000 *	27.10000 *	14.1 % *	



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

23 laboratory observations

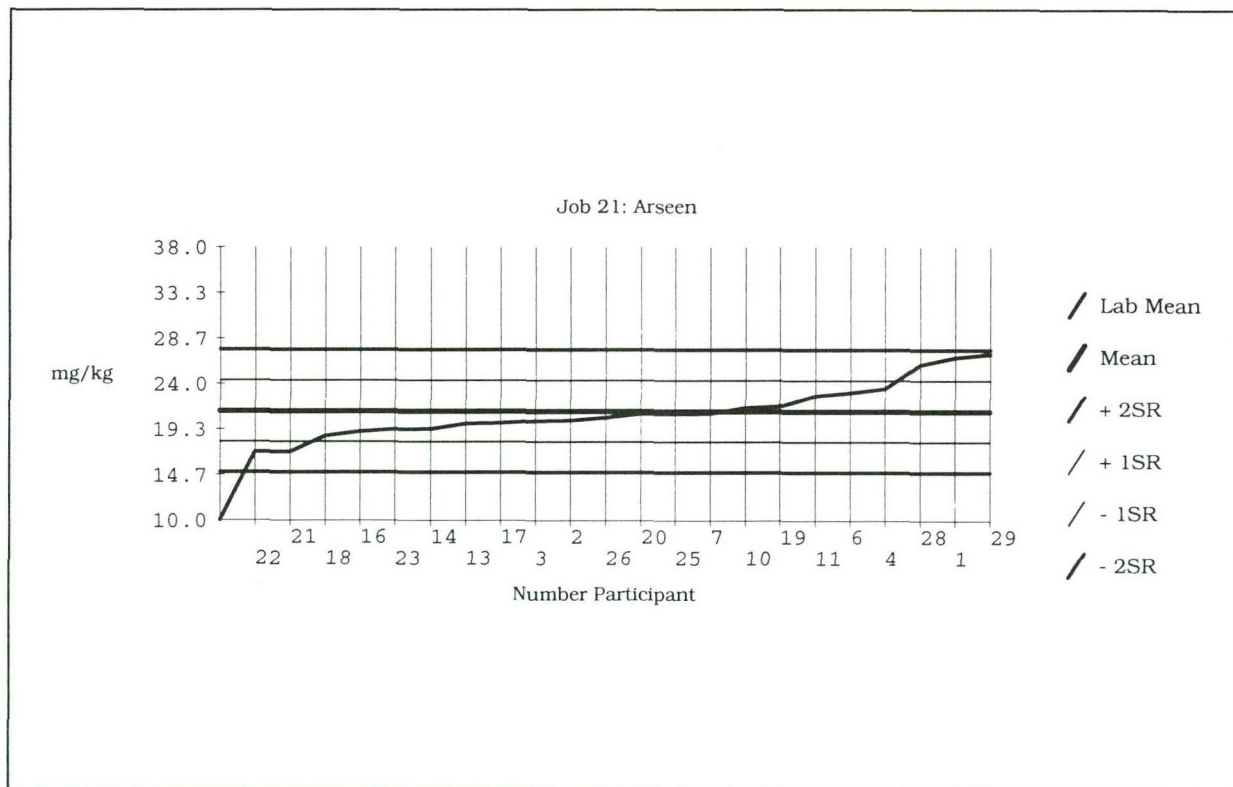
Maximum absolute difference from Normal distribution: 0.12762. Critical value: 0.33000. KS-test passed

GRUBBS; 1 % ; replicas: 2

Cyc *	Lab *	D/S *	Average *	Variance *	Result *	Value
1 *	5 *	S *	8.10000 *	.98995 *	3.26841 *	3.08700

Summary

1. Eliminations due to
 - 1.1 Repeatability = 0
 - 1.2 Reproducibility = 1
 - 1.3 Manual rejected = 0
2. General Mean = 21.22909
3. Repeatability
 - 3.1 Standard deviation $S_r = 2.16198$
 - 3.2 Coefficient of variation = 10 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = 3.15470$
 - 4.2 Coefficient of variation = 15 %



Job Classification

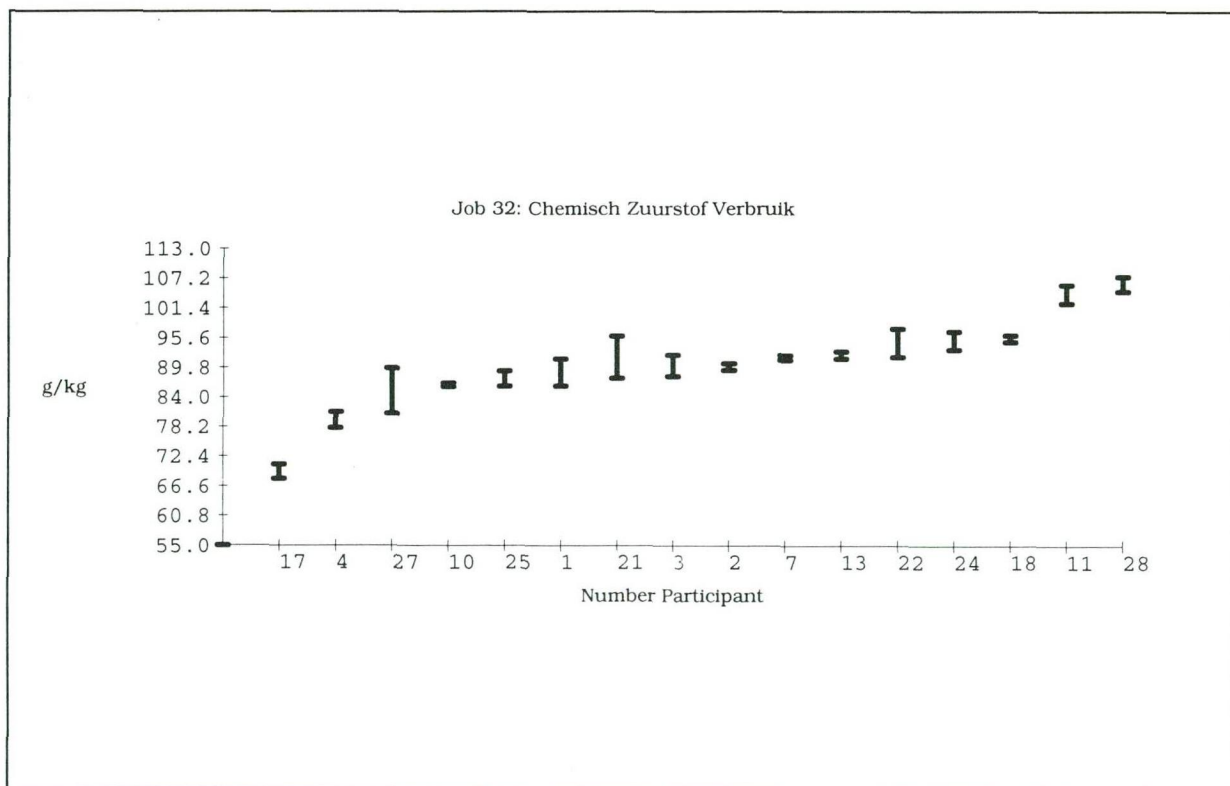
Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
24 *	.00000 *	G	-	-	-	-	*
8 *	.00000 *	G	?	?	?	?	*
9 *	.00000 *	G	-	-	-	-	*
15 *	.00000 *	G	?	?	?	?	*
27 *	.00000 *	G	-	-	-	-	*
12 *	.00000 *	G	-	-	-	-	*
5 *	8.10000 *	R	-	-	-	-	*
22 *	16.99500 *	B	-	-	-	-	*
21 *	17.00000 *	B	-	-	CB	NEN 6426	*
18 *	18.65000 *	A	TAM	-	AAA	C-NEN 5760	*
16 *	19.09500 *	A	TAM	-	AAC	C-NEN 5760	*
23 *	19.32500 *	A	TCM	-	D	-	*
14 *	19.35000 *	A	TAM	-	F	HUIS	*
13 *	19.95000 *	A	TAM	-	BAF	G-NEN 6457	*
17 *	20.00000 *	A	TA	F	FUU	C-NEN 5760	*
3 *	20.20000 *	A	-	-	-	NEN 5770	*
2 *	20.25000 *	A	-	-	-	NEN 6432	*
26 *	20.55000 *	A	TA	-	HGA	G-NEN 5760	*
25 *	20.95000 *	A	TAM	-	CB	G-NEN 6426/NVN7	*
20 *	20.95000 *	A	-	-	CB	NEN 6432/6426	*
7 *	21.00000 *	A	?	?	?	NEN 6432	*
10 *	21.60000 *	A	TAM	-	HGA	G-NEN 5760	*
19 *	21.78000 *	A	TAM	-	HGA	NVN5770/NEN6432	*
11 *	22.82000 *	A	TA	-	CB	C-NEN 6426	*
6 *	23.15000 *	A	TAM	-	BAF	HUIS	*
4 *	23.57000 *	A	-	-	-	-	*
28 *	26.00000 *	B	-	-	-	-	*
1 *	26.75500 *	C	TAM	-	CB	G-NEN 6426	*
29 *	27.10000 *	C	TAM	-	CB	HUIS	*

General Mean = 21.22909
Between lab standard deviation SL = 2.29738
Coefficient of variation = 11 %
Number of laboratories = 22

A: Number of laboratories with	Z	-scores between 0 and 1	; 17
B: Number of laboratories with	Z	-scores between 1 and 2	; 3
C: Number of laboratories with	Z	-scores between 2 and 3	; 2
D: Number of laboratories with	Z	-scores larger than 3	; 0

Job 32 : 99092, 99096
 Chemisch Zuurstof Verbruik, O2 in g/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	82.43000 *	90.00000 *	86.21500 *	6.2 % *	
2 *	88.39480 *	90.26190 *	89.32835 *	1.5 % *	
3 *	91.11000 *	85.21000 *	88.16000 *	4.7 % *	
4 *	75.70000 *	80.22000 *	77.96000 *	4.1 % *	
5 *			.00000 *	0 % *	- N.V.
6 *			.00000 *	0 % *	- N.V.
7 *	91.98000 *	90.65000 *	91.31500 *	1.0 % *	
8 *			.00000 *	0 % *	- N.V.
9 *			.00000 *	0 % *	- N.V.
10 *	85.60000 *	86.60000 *	86.10000 *	.8 % *	
11 *	99.90000 *	105.00000 *	102.45000 *	3.5 % *	
12 *			.00000 *	0 % *	- N.V.
13 *	90.60000 *	92.60000 *	91.60000 *	1.5 % *	
14 *			.00000 *	0 % *	- N.V.
15 *			.00000 *	0 % *	- N.V.
16 *			.00000 *	0 % *	- N.V.
17 *	70.00000 *	66.00000 *	68.00000 *	4.2 % *	
18 *	95.80000 *	93.90000 *	94.85000 *	1.4 % *	
19 *			.00000 *	0 % *	- N.V.
20 *			.00000 *	0 % *	- N.V.
21 *	93.60000 *	82.00000 *	87.80000 *	9.3 % *	
22 *	88.00000 *	95.80000 *	91.90000 *	6.0 % *	
23 *			.00000 *	0 % *	- N.V.
24 *	95.91000 *	90.82000 *	93.36500 *	3.9 % *	
25 *	84.00000 *	88.30000 *	86.15000 *	3.5 % *	
26 *			.00000 *	0 % *	- N.V.
27 *	74.50000 *	87.10000 *	80.80000 *	11.0 % *	
28 *	106.80000 *	102.60000 *	104.70000 *	2.8 % *	
29 *			.00000 *	0 % *	



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

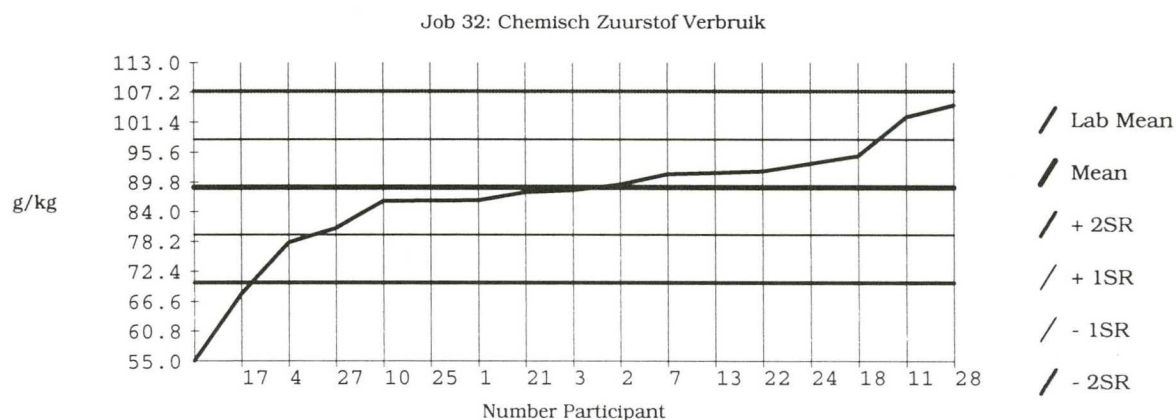
16 laboratory observations

Maximum absolute difference from Normal distribution: 0.12828. Critical value: 0.39200. KS-test passed

No outliers found

Summary

1. Eliminations due to
 - 1.1 Repeatability = 0
 - 1.2 Reproducibility = 0
 - 1.3 Manual rejected = 0
2. General Mean = 88.79333
3. Repeatability
 - 3.1 Standard deviation $S_r = 4.27476$
 - 3.2 Coefficient of variation = 5 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = 9.28869$
 - 4.2 Coefficient of variation = 10 %



Job Classification

Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
19 *	.00000	G	-	-	-	-	*
8 *	.00000	G	?	?	?	?	*
14 *	.00000	G	-	-	-	-	*
9 *	.00000	G	-	-	-	-	*
15 *	.00000	G	?	?	?	?	*
20 *	.00000	G	-	-	-	-	*
26 *	.00000	G	-	-	-	-	*
16 *	.00000	G	-	-	-	-	*
5 *	.00000	G	-	-	-	-	*
12 *	.00000	G	-	-	-	-	*
23 *	.00000	G	-	-	-	-	*
29 *	.00000	G	-	-	-	-	*
6 *	.00000	G	-	-	-	-	*
17 *	68.00000	C	-	-	-	C-NEN 6633	*
4 *	77.96000	B	-	-	-	-	*
27 *	80.80000	A	-	-	-	NEN 6633	*
10 *	86.10000	A	-	-	-	NEN 6633	*
25 *	86.15000	A	Z	-	Z	HUIS	*
1 *	86.21500	A	-	-	-	C-NEN 6633	*
21 *	87.80000	A	-	-	-	NEN 6633	*
3 *	88.16000	A	-	-	-	NEN 6633	*
2 *	89.32835	A	-	-	-	-	*
7 *	91.31500	A	?	?	?	NEN 6633	*
13 *	91.60000	A	-	-	-	C-NEN 6633	*
22 *	91.90000	A	-	-	-	-	*
24 *	93.36500	A	-	-	-	G-NEN 6633	*
18 *	94.85000	A	-	-	-	C-NEN 6633	*
11 *	102.45000	B	-	-	-	C-NEN 6633	*
28 *	104.70000	B	-	-	-	NEN 6633	*

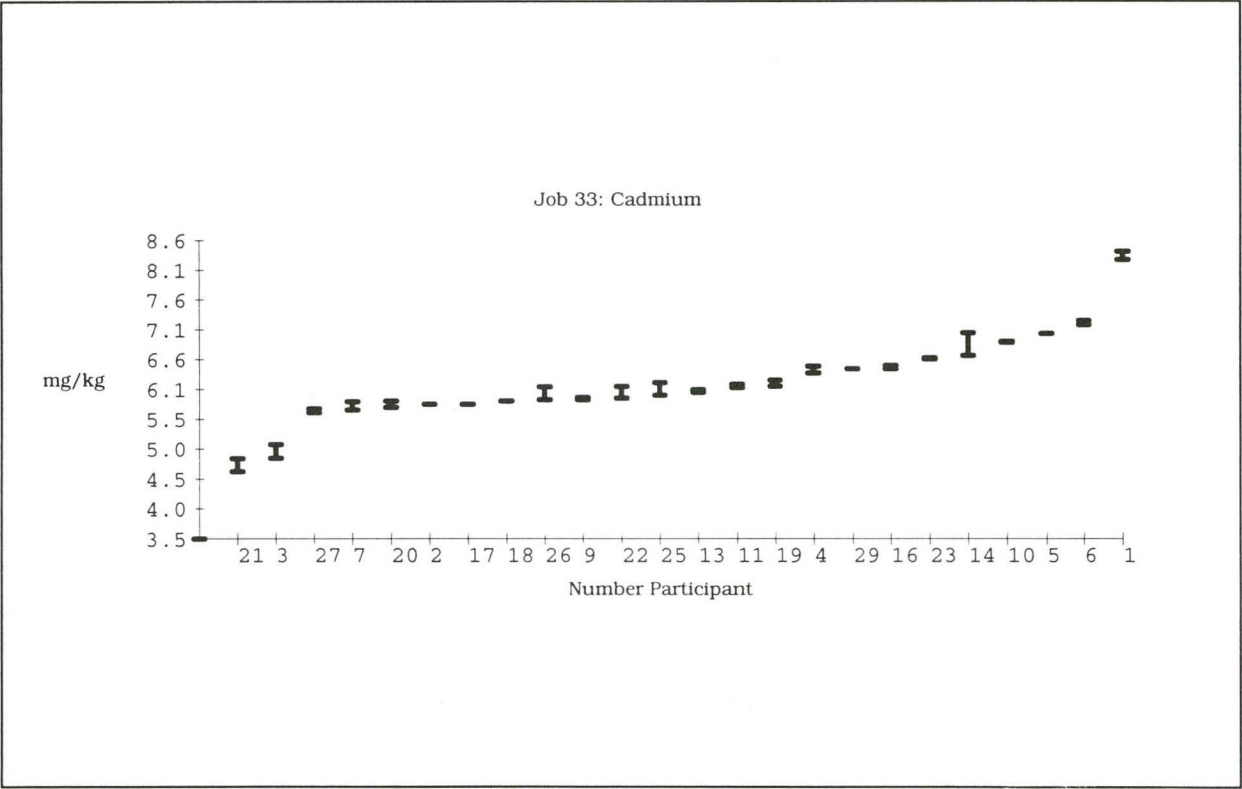
General Mean = 88.79333
Between lab standard deviation SL = 8.24685
Coefficient of variation = 9 %
Number of laboratories = 16

A: Number of laboratories with	Z	-scores between 0 and 1	; 12
B: Number of laboratories with	Z	-scores between 1 and 2	; 3
C: Number of laboratories with	Z	-scores between 2 and 3	; 1
D: Number of laboratories with	Z	-scores larger than 3	; 0

Job 33 : 99092, 99096

Cadmium, Cd in mg/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	8.16900 *	8.36600 *	8.26750 *	1.7 % *	
2 *	5.80000 *	5.80000 *	5.80000 *	.0 % *	
3 *	5.04000 *	4.71000 *	4.87500 *	4.8 % *	
4 *	6.40900 *	6.25300 *	6.33100 *	1.7 % *	
5 *	7.00000 *	7.00000 *	7.00000 *	.0 % *	
6 *	7.10000 *	7.20000 *	7.15000 *	1.0 % *	
7 *	5.60000 *	5.80000 *	5.70000 *	2.5 % *	
8 *			.00000 *	0 % *	- N.V.
9 *	5.85000 *	5.90000 *	5.87500 *	.6 % *	
10 *	6.86000 *	6.84000 *	6.85000 *	.2 % *	
11 *	6.04000 *	6.12000 *	6.08000 *	.9 % *	
12 *			.00000 *	0 % *	- N.V.
13 *	6.03000 *	5.97000 *	6.00000 *	.7 % *	
14 *	6.35000 *	6.90000 *	6.62500 *	5.9 % *	
15 *			.00000 *	0 % *	- N.V.
16 *	6.44000 *	6.36000 *	6.40000 *	.9 % *	
17 *	5.80000 *	5.80000 *	5.80000 *	.0 % *	
18 *	5.85000 *	5.85000 *	5.85000 *	.0 % *	
19 *	6.03300 *	6.17700 *	6.10500 *	1.7 % *	
20 *	5.82000 *	5.67000 *	5.74500 *	1.8 % *	
21 *	4.80000 *	4.50000 *	4.65000 *	4.6 % *	
22 *	6.04000 *	5.76000 *	5.90000 *	3.4 % *	
23 *	6.55000 *	6.58000 *	6.56500 *	.3 % *	
24 *	6.15000 *	5.22000 *	5.68500 *	11.6 % *	
25 *	6.10000 *	5.80000 *	5.95000 *	3.6 % *	
26 *	5.71000 *	6.03000 *	5.87000 *	3.9 % *	
27 *	5.60000 *	5.70000 *	5.65000 *	1.3 % *	
28 *	6.10000 *	8.20000 *	7.15000 *	20.8 % *	
29 *	6.40000 *	6.40000 *	6.40000 *	.0 % *	



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

26 laboratory observations

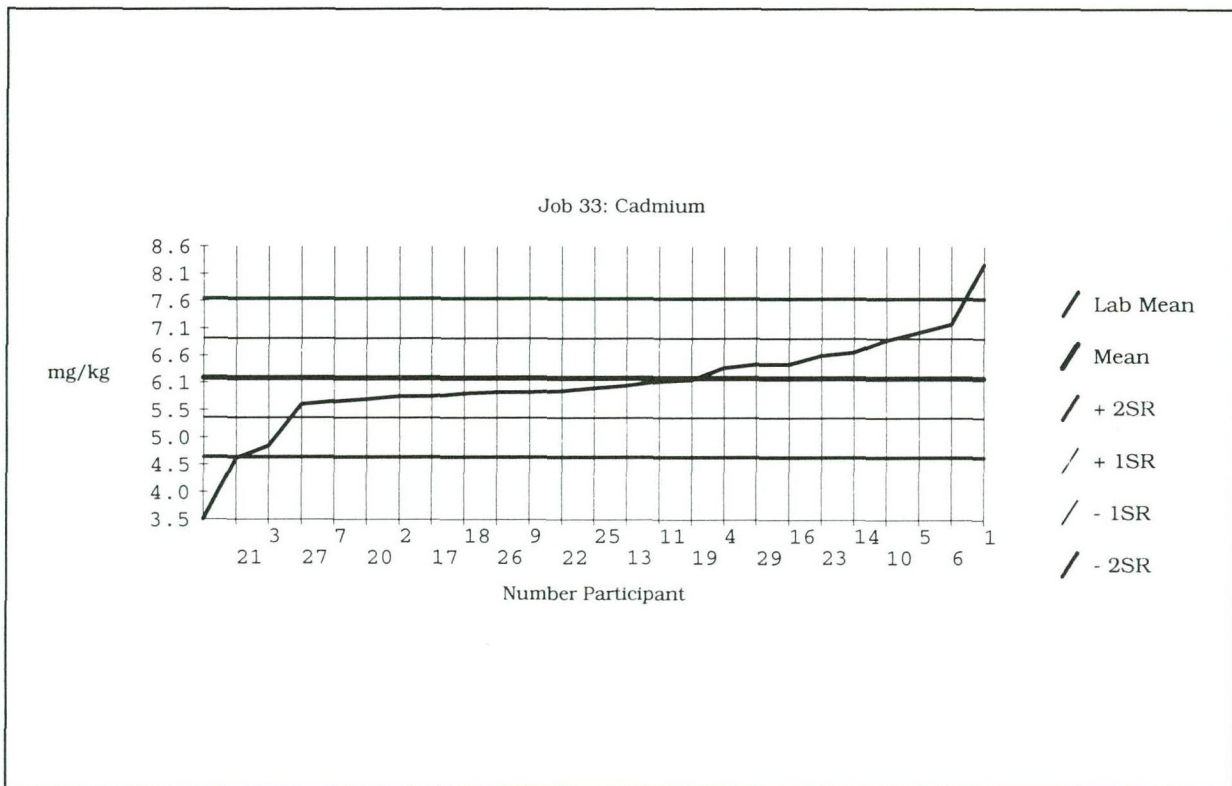
Maximum absolute difference from Normal distribution: 0.14727. Critical value: 0.31100. KS-test passed

COCHRAN; 1 % ; replicas: 2

Cyc *	Lab *	Average *	Variance *	Result *	Value
1 *	28 *	7.15000 *	1.48492 *	.70745 *	.40201
2 *	24 *	5.68500 *	.65761 *	.47426 *	.41309

Summary

1. Eliminations due to
 - 1.1 Repeatability = 2
 - 1.2 Reproducibility = 0
 - 1.3 Manual rejected = 0
2. General Mean = 6.14327
3. Repeatability
 - 3.1 Standard deviation $Sr = .14133$
 - 3.2 Coefficient of variation = 2 %
4. Reproducibility
 - 4.1 Standard deviation $SR = .73997$
 - 4.2 Coefficient of variation = 12 %



Job Classification

Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
8 *	.00000 *	G *	? *	? *	? *	? *	*
15 *	.00000 *	G *	? *	? *	? *	? *	*
12 *	.00000 *	G *	- *	- *	- *	- *	*
21 *	4.65000 *	C *	- *	- *	CB *	NEN 6426	*
3 *	4.87500 *	B *	- *	- *	- *	NEN 5770	*
27 *	5.65000 *	A *	- *	- *	- *	NEN 6426	*
24 *	5.68500 *	W *	TA *	- *	BAF *	G-NEN 6458	*
7 *	5.70000 *	A *	? *	? *	? *	NEN 6452	*
20 *	5.74500 *	A *	- *	- *	CB *	NEN 6426	*
2 *	5.80000 *	A *	- *	- *	- *	NEN 6426	*
17 *	5.80000 *	A *	TA *	F *	CB *	C-NEN 6426	*
18 *	5.85000 *	A *	TAM *	- *	AAC *	C-NEN 5762	*
26 *	5.87000 *	A *	TA *	- *	AAC *	C-NEN 5762	*
9 *	5.87500 *	A *	TAM *	- *	CB *	NEN 6426	*
22 *	5.90000 *	A *	- *	- *	- *	- *	*
25 *	5.95000 *	A *	TAM *	- *	CB *	G-NEN 6426/ NVN 7	*
13 *	6.00000 *	A *	TAM *	- *	BAF *	G-NEN 6458	*
11 *	6.08000 *	A *	TA *	- *	CB *	C-NEN 6426	*
19 *	6.10500 *	A *	TAM *	- *	AAC *	NVN5770/NEN6452	*
4 *	6.33100 *	A *	- *	- *	- *	- *	*
29 *	6.40000 *	A *	TAM *	- *	CB *	HUIS	*
16 *	6.40000 *	A *	TAM *	- *	CB *	C-NEN 6426	*
23 *	6.56500 *	A *	TCM *	- *	BAF *	- *	*
14 *	6.62500 *	A *	TAM *	- *	D *	HUIS	*
10 *	6.85000 *	A *	TAM *	- *	AAC *	C-NEN 5762	*
5 *	7.00000 *	B *	- *	- *	- *	- *	*
6 *	7.15000 *	B *	TAM *	- *	CB *	HUIS	*
28 *	7.15000 *	W *	- *	- *	- *	- *	*
1 *	8.26750 *	C *	- *	- *	- *	- *	*

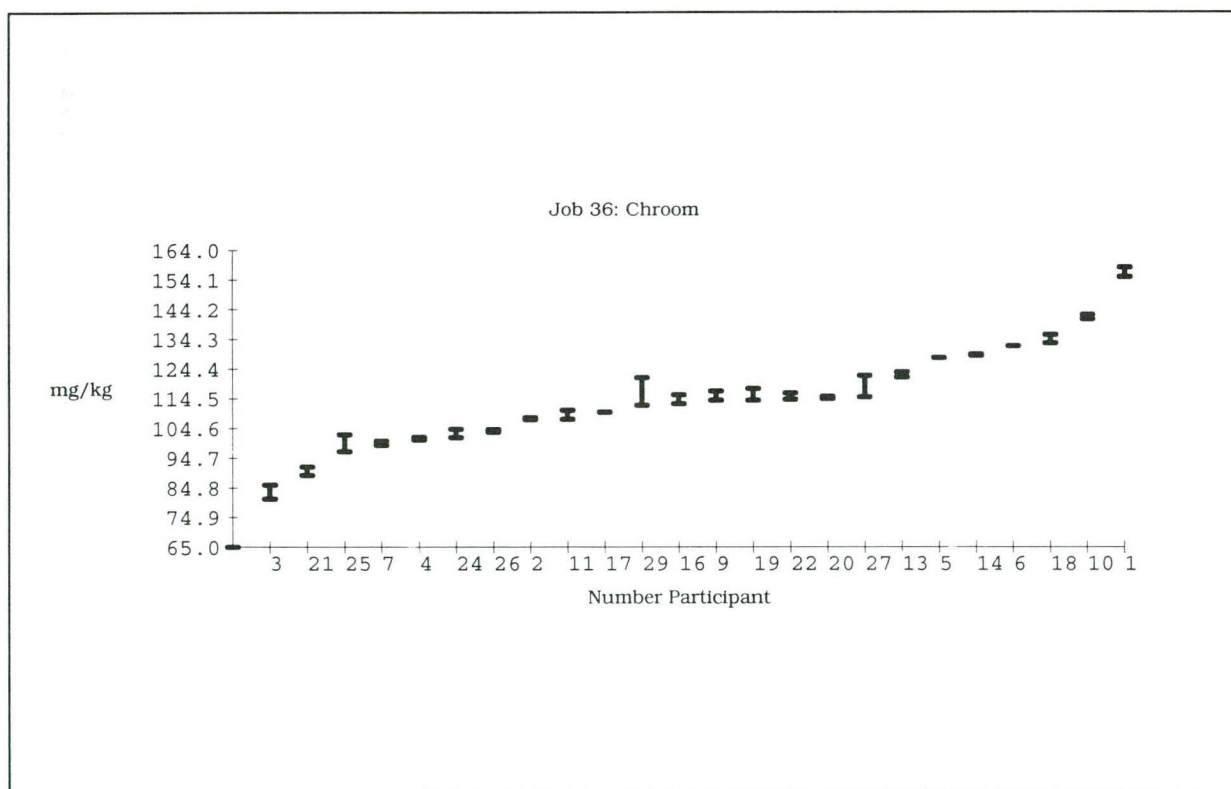
General Mean = 6.14327
Between lab standard deviation SL = .72634
Coefficient of variation = 12 %
Number of laboratories = 24

A: Number of laboratories with	Z	-scores between 0 and 1	; 19
B: Number of laboratories with	Z	-scores between 1 and 2	; 3
C: Number of laboratories with	Z	-scores between 2 and 3	; 2
D: Number of laboratories with	Z	-scores larger than 3	; 0

Job 36 : 99092, 99096

Chroom, Cr in mg/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	*
1 *	152.80000	157.30000	155.05000	2.1 %	*
2 *	108.00000	107.00000	107.50000	.7 %	*
3 *	84.40000	77.80000	81.10000	5.8 %	*
4 *	101.50000	100.30000	100.90000	.8 %	*
5 *	128.00000	128.00000	128.00000	.0 %	*
6 *	132.00000	132.00000	132.00000	.0 %	*
7 *	98.00000	100.00000	99.00000	1.4 %	*
8 *			.00000	0 %	* - N.V.
9 *	111.90000	116.10000	114.00000	2.6 %	*
10 *	140.00000	142.00000	141.00000	1.0 %	*
11 *	105.70000	109.80000	107.75000	2.7 %	*
12 *			.00000	0 %	* - N.V.
13 *	120.50000	122.80000	121.65000	1.3 %	*
14 *	129.14000	128.37000	128.75500	.4 %	*
15 *			.00000	0 %	* - N.V.
16 *	114.90000	110.80000	112.85000	2.6 %	*
17 *	110.00000	110.00000	110.00000	.0 %	*
18 *	131.00000	135.00000	133.00000	2.1 %	*
19 *	116.70000	111.30000	114.00000	3.3 %	*
20 *	114.00000	115.00000	114.50000	.6 %	*
21 *	91.00000	87.00000	89.00000	3.2 %	*
22 *	115.80000	112.70000	114.25000	1.9 %	*
23 *			.00000	0 %	* - N.V.
24 *	103.60000	99.59000	101.59500	2.8 %	*
25 *	101.00000	93.00000	97.00000	5.8 %	*
26 *	104.00000	103.00000	103.50000	.7 %	*
27 *	110.00000	120.00000	115.00000	6.1 %	*
28 *	120.00000	160.00000	140.00000	20.2 %	*
29 *	118.80000	105.70000	112.25000	8.3 %	*



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

25 laboratory observations

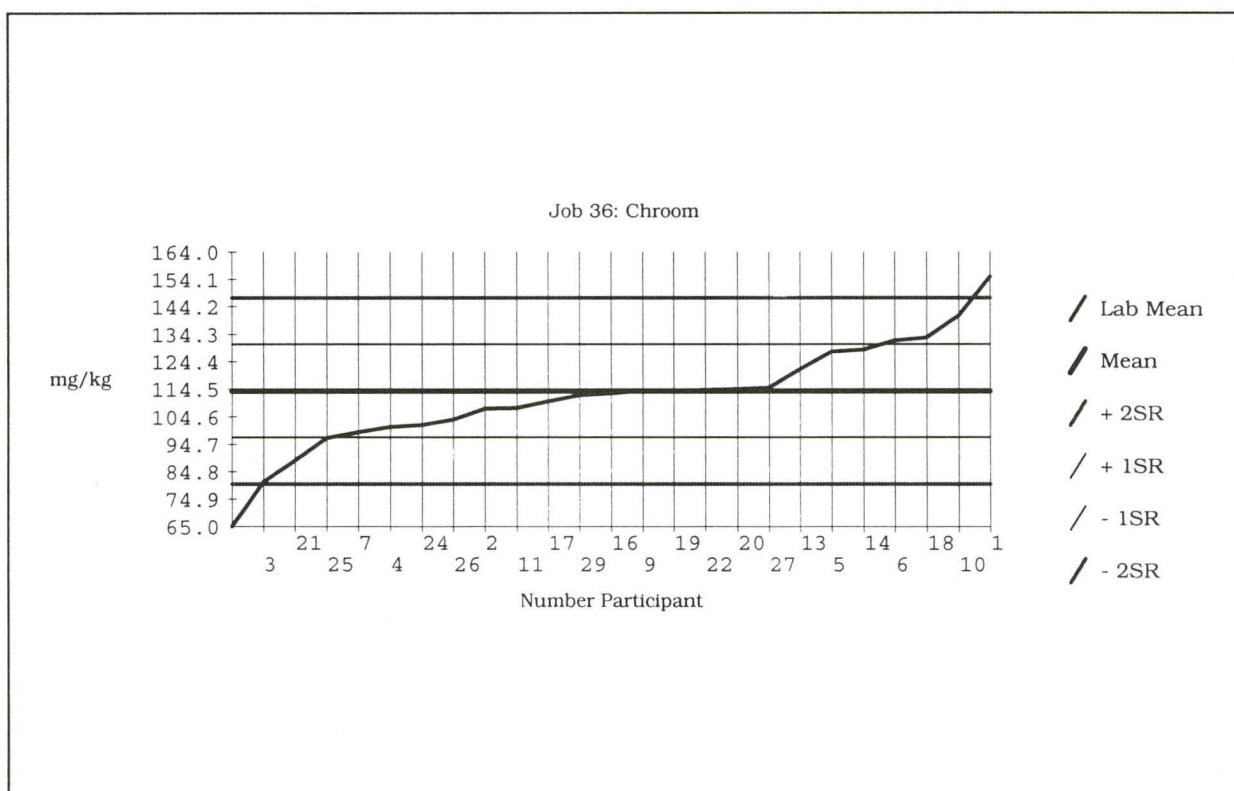
Maximum absolute difference from Normal distribution: 0.18000. Critical value: 0.31700. KS-test passed

COCHRAN; 1 % ; replicas: 2

Cyc *	Lab *	Average *	Variance *	Result *	Value
1 *	28 *	140.00000 *	28.28427 *	.74217 *	.41309

Summary

1. Eliminations due to
 - 1.1 Repeatability = 1
 - 1.2 Reproducibility = 0
 - 1.3 Manual rejected = 0
2. General Mean = 113.90208
3. Repeatability
 - 3.1 Standard deviation $S_r = 3.40298$
 - 3.2 Coefficient of variation = 3 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = 16.76492$
 - 4.2 Coefficient of variation = 15 %



Job Classification

Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
8 *	.00000 *	G *	? *	? *	? *	? *	*
15 *	.00000 *	G *	? *	? *	? *	? *	*
12 *	.00000 *	G *	- *	- *	- *	- *	*
23 *	.00000 *	G *	- *	- *	- *	- *	*
3 *	81.10000 *	B *	- *	- *	- *	NEN 5770	*
21 *	89.00000 *	B *	- *	- *	CB *	NEN 6426	*
25 *	97.00000 *	B *	TAM *	- *	CB *	G-NEN 6426/ NVN 7	*
7 *	99.00000 *	A *	? *	? *	? *	NEN 6448	*
4 *	100.90000 *	A *	- *	- *	- *	- *	*
24 *	101.59500 *	A *	TA *	- *	AAG *	G-NEN 6448	*
26 *	103.50000 *	A *	TA *	- *	AAC *	G-NEN 5767	*
2 *	107.50000 *	A *	- *	- *	- *	NEN 6426	*
11 *	107.75000 *	A *	TA *	- *	CB *	C-NEN 6426	*
17 *	110.00000 *	A *	TA *	F *	CB *	C-NEN 6426	*
29 *	112.25000 *	A *	TAM *	- *	CB *	HUIS	*
16 *	112.85000 *	A *	TAM *	- *	CB *	C-NEN 6426	*
19 *	114.00000 *	A *	TAM *	- *	AAC *	NVN5770/NEN6448	*
9 *	114.00000 *	A *	TAM *	- *	CB *	NEN 6426	*
22 *	114.25000 *	A *	- *	- *	- *	- *	*
20 *	114.50000 *	A *	- *	- *	CB *	NEN 6426	*
27 *	115.00000 *	A *	- *	- *	- *	NEN 6426	*
13 *	121.65000 *	A *	TAM *	- *	CB *	G-NEN 6426	*
5 *	128.00000 *	A *	- *	- *	- *	- *	*
14 *	128.75500 *	A *	TAM *	- *	D *	HUIS	*
6 *	132.00000 *	B *	? *	? *	? *	HUIS	*
18 *	133.00000 *	B *	TAM *	- *	AAC *	C-NEN 5767	*
28 *	140.00000 *	W *	- *	- *	- *	- *	*
10 *	141.00000 *	B *	TAM *	- *	AAC *	C-NEN 5767	*
1 *	155.05000 *	C *	- *	- *	- *	- *	*

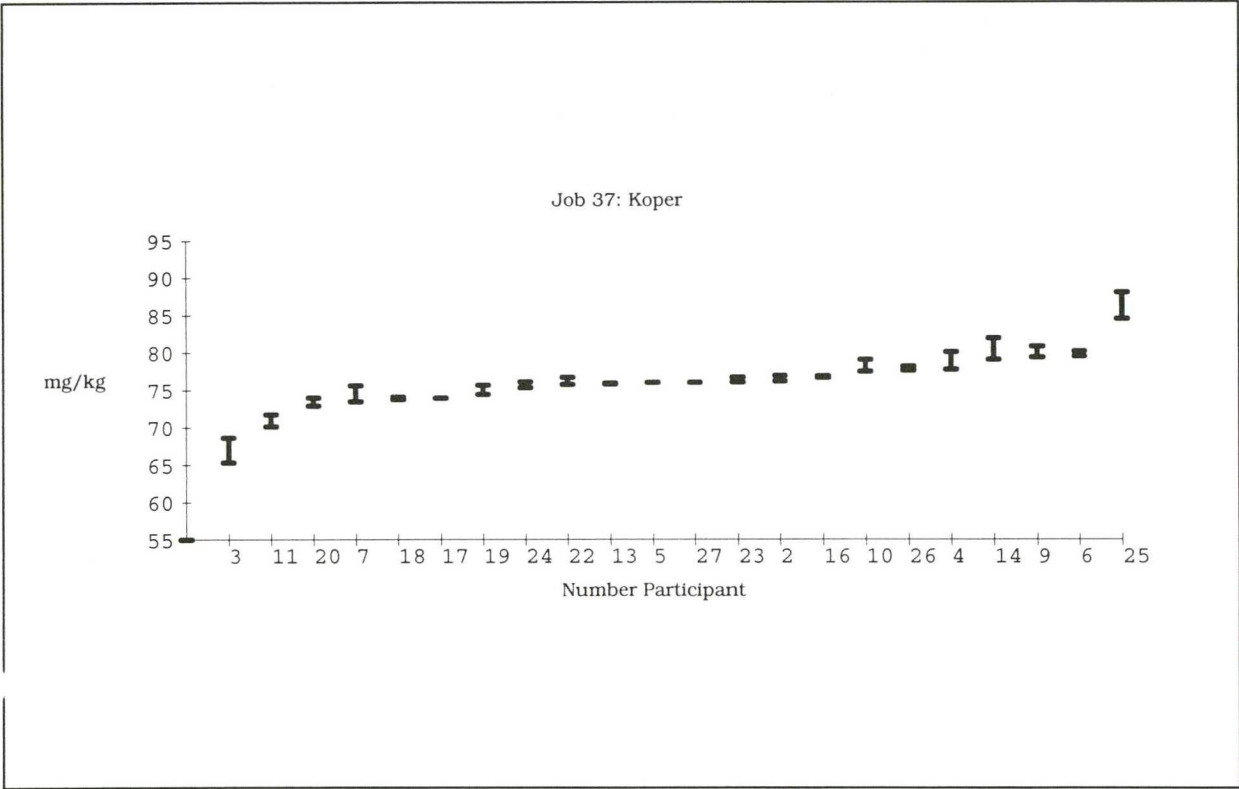
General Mean = 113.90208
Between lab standard deviation SL = 16.41592
Coefficient of variation = 14 %
Number of laboratories = 24

A: Number of laboratories with	Z	-scores between 0 and 1	; 17
B: Number of laboratories with	Z	-scores between 1 and 2	; 6
C: Number of laboratories with	Z	-scores between 2 and 3	; 1
D: Number of laboratories with	Z	-scores larger than 3	; 0

Job 37 : 99092, 99096

Koper, Cu in mg/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	97.66000 *	101.00000 *	99.33000 *	2.4 % *	
2 *	76.70000 *	75.70000 *	76.20000 *	.9 % *	
3 *	67.70000 *	63.00000 *	65.35000 *	5.1 % *	
4 *	79.41000 *	76.04000 *	77.72500 *	3.1 % *	
5 *	76.00000 *	76.00000 *	76.00000 *	.0 % *	
6 *	79.00000 *	80.00000 *	79.50000 *	.9 % *	
7 *	72.00000 *	75.00000 *	73.50000 *	2.9 % *	
8 *			.00000 *	0 % *	- N.V.
9 *	80.40000 *	78.30000 *	79.35000 *	1.9 % *	
10 *	78.60000 *	76.40000 *	77.50000 *	2.0 % *	
11 *	71.30000 *	69.10000 *	70.20000 *	2.2 % *	
12 *			.00000 *	0 % *	- N.V.
13 *	75.70000 *	75.90000 *	75.80000 *	.2 % *	
14 *	76.99000 *	81.12000 *	79.05500 *	3.7 % *	
15 *			.00000 *	0 % *	- N.V.
16 *	76.80000 *	76.47000 *	76.63500 *	.3 % *	
17 *	74.00000 *	74.00000 *	74.00000 *	.0 % *	
18 *	73.60000 *	74.00000 *	73.80000 *	.4 % *	
19 *	75.30000 *	73.60000 *	74.45000 *	1.6 % *	
20 *	72.10000 *	73.70000 *	72.90000 *	1.6 % *	
21 *	61.00000 *	58.00000 *	59.50000 *	3.6 % *	
22 *	76.42000 *	75.10000 *	75.76000 *	1.2 % *	
23 *	76.51000 *	75.67000 *	76.09000 *	.8 % *	
24 *	74.79000 *	75.90000 *	75.34500 *	1.0 % *	
25 *	87.00000 *	82.00000 *	84.50000 *	4.2 % *	
26 *	77.20000 *	78.00000 *	77.60000 *	.7 % *	
27 *	76.00000 *	76.00000 *	76.00000 *	.0 % *	
28 *	77.00000 *	110.00000 *	93.50000 *	25.0 % *	
29 *	94.60000 *	83.60000 *	89.10000 *	8.7 % *	



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

26 laboratory observations

Maximum absolute difference from Normal distribution: 0.23205. Critical value: 0.31100. KS-test passed

COCHRAN; 1 % ; replicas: 2

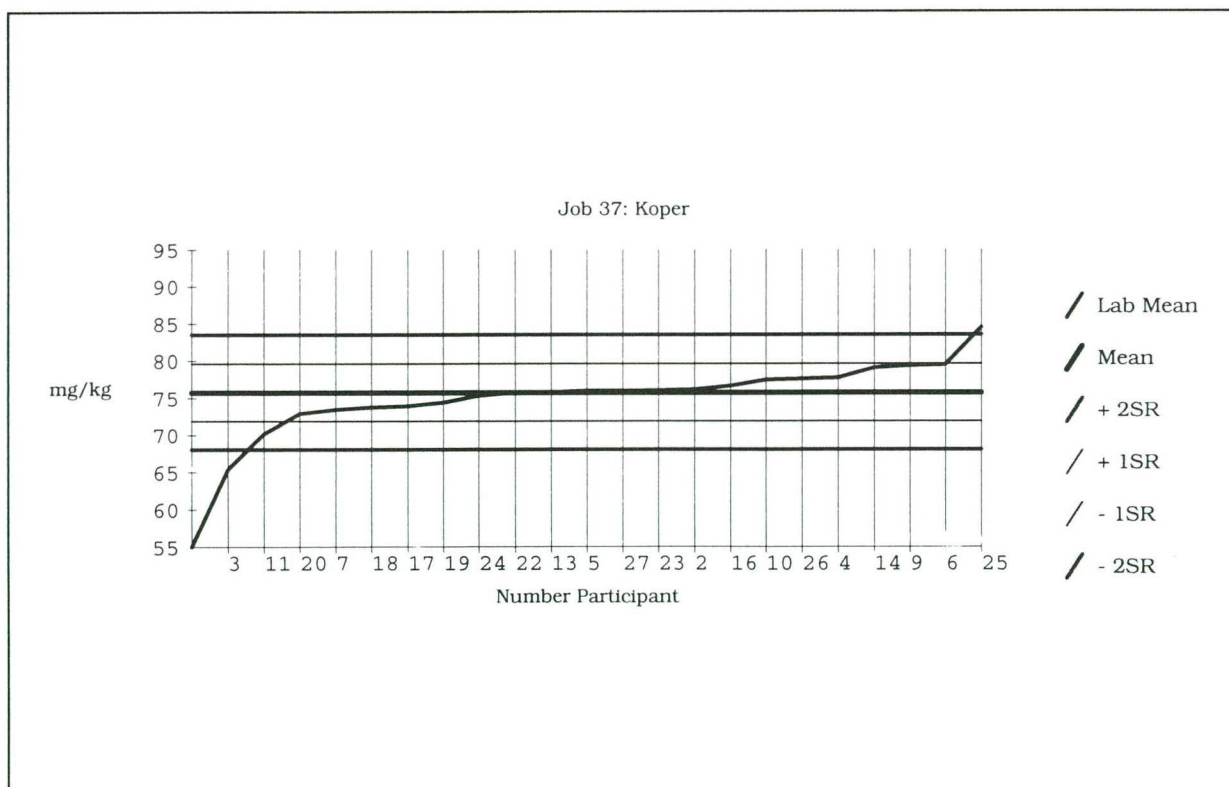
Cyc *	Lab *	Average *	Variance *	Result *	Value
1 *	28 *	93.50000 *	23.33452 *	.81218 *	.40201
2 *	29 *	89.10000 *	7.77817 *	.48049 *	.41309

GRUBBS; 1 % ; replicas: 2

Cyc *	Lab *	D/S *	Average *	Variance *	Result *	Value
1 *	1 *	S *	99.33000 *	2.36174 *	3.35431 *	3.11200
2 *	21 *	S *	59.50000 *	2.12132 *	3.14222 *	3.08700

Summary

1. Eliminations due to
 - 1.1 Repeatability = 2
 - 1.2 Reproducibility = 2
 - 1.3 Manual rejected = 0
2. General Mean = 75.78455
3. Repeatability
 - 3.1 Standard deviation $S_r = 1.58597$
 - 3.2 Coefficient of variation = 2 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = 3.86297$
 - 4.2 Coefficient of variation = 5 %



Job Classification

Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
8 *	.00000 *	G *	? *	? *	? *	? *	*
15 *	.00000 *	G *	? *	? *	? *	? *	*
12 *	.00000 *	G *	- *	- *	- *	- *	*
21 *	59.50000 *	R *	- *	- *	CB *	NEN 6426	*
3 *	65.35000 *	C *	- *	- *	- *	NEN 5770	*
11 *	70.20000 *	B *	TA *	- *	CB *	C-NEN 6426	*
20 *	72.90000 *	A *	- *	- *	CB *	NEN 6426	*
7 *	73.50000 *	A *	? *	? *	? *	NEN 6451	*
18 *	73.80000 *	A *	TAM *	- *	AAC *	C-NEN 5758	*
17 *	74.00000 *	A *	TA *	F *	CB *	C-NEN 6426	*
19 *	74.45000 *	A *	TAM *	- *	AAC *	NVN5770/NEN6451	*
24 *	75.34500 *	A *	TA *	- *	AAG *	C-NEN 6451	*
22 *	75.76000 *	A *	- *	- *	- *	- *	*
13 *	75.80000 *	A *	TAM *	- *	CB *	G-NEN 6426	*
27 *	76.00000 *	A *	- *	- *	- *	NEN 6426	*
5 *	76.00000 *	A *	- *	- *	- *	- *	*
23 *	76.09000 *	A *	TCM *	- *	BAE *	- *	*
2 *	76.20000 *	A *	- *	- *	- *	NEN 6426	*
16 *	76.63500 *	A *	TAM *	- *	CB *	C-NEN 6426	*
10 *	77.50000 *	A *	TAM *	- *	AAC *	C-NEN 5768	*
26 *	77.60000 *	A *	TA *	- *	AAC *	C-NEN 5758	*
4 *	77.72500 *	A *	- *	- *	- *	- *	*
14 *	79.05500 *	A *	TAM *	- *	D *	HUIS	*
9 *	79.35000 *	A *	TAM *	- *	CB *	NEN 6426	*
6 *	79.50000 *	B *	TAM *	? *	CB *	HUIS	*
25 *	84.50000 *	C *	TAM *	- *	CB *	G-NEN 6426/ NVN 7	*
29 *	89.10000 *	W *	TAM *	- *	CB *	HUIS	*
28 *	93.50000 *	W *	- *	- *	- *	NVN 5770	*
1 *	99.33000 *	R *	- *	- *	- *	- *	*

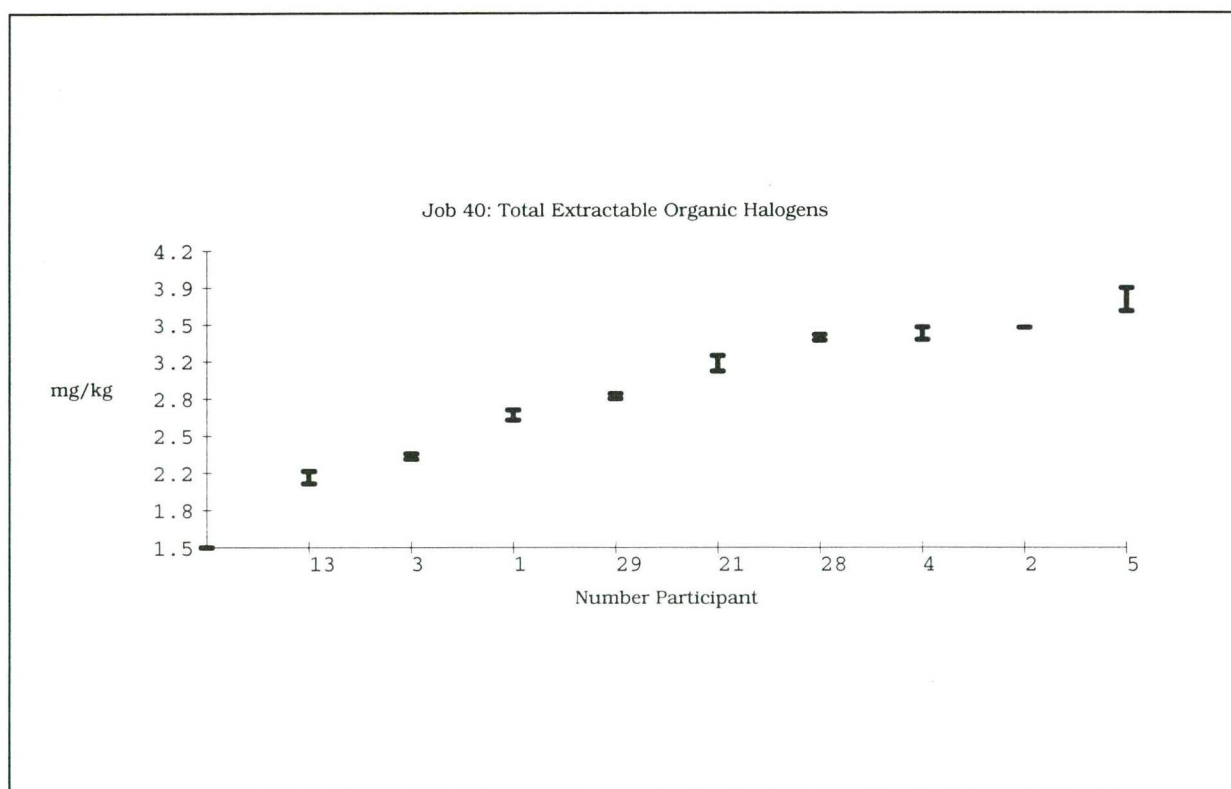
General Mean = 75.78455
Between lab standard deviation SL = 3.52239
Coefficient of variation = 5 %
Number of laboratories = 22

A: Number of laboratories with Z-scores between 0 and 1 ; 18
B: Number of laboratories with Z-scores between 1 and 2 ; 2
C: Number of laboratories with Z-scores between 2 and 3 ; 2
D: Number of laboratories with Z-scores larger than 3 ; 0

Job 40 : 99092, 99096

Total Extractable Organic Halogens, EOX in mg/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	2.72400	2.59200	2.65800	3.5 %	*
2 *	3.50000	3.50000	3.50000	.0 %	*
3 *	2.27000	2.34000	2.30500	2.1 %	*
4 *	3.31000	3.47000	3.39000	3.3 %	*
5 *	3.80000	3.50000	3.65000	5.8 %	*
6 *			.00000	0 %	* - N.V.
7 *			.00000	0 %	* - N.V.
8 *			.00000	0 %	* - N.V.
9 *			.00000	0 %	* - N.V.
10 *			.00000	0 %	* - N.V.
11 *			.00000	0 %	* - N.V.
12 *			.00000	0 %	* - N.V.
13 *	2.00000	2.16000	2.08000	5.4 %	*
14 *			.00000	0 %	* - N.V.
15 *			.00000	0 %	* - N.V.
16 *			.00000	0 %	* - N.V.
17 *			.00000	0 %	* - N.V.
18 *			.00000	0 %	* - N.V.
19 *			.00000	0 %	* - N.V.
20 *			.00000	0 %	* - N.V.
21 *	3.20000	3.00000	3.10000	4.6 %	*
22 *	2.67400	1.09900	1.88650	59.0 %	*
23 *			.00000	0 %	* - N.V.
24 *			.00000	0 %	* - N.V.
25 *			.00000	0 %	* - N.V.
26 *			.00000	0 %	* - N.V.
27 *			.00000	0 %	*
28 *	3.42000	3.35000	3.38500	1.5 %	*
29 *	2.82000	2.88600	2.85300	1.6 %	*



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

10 laboratory observations

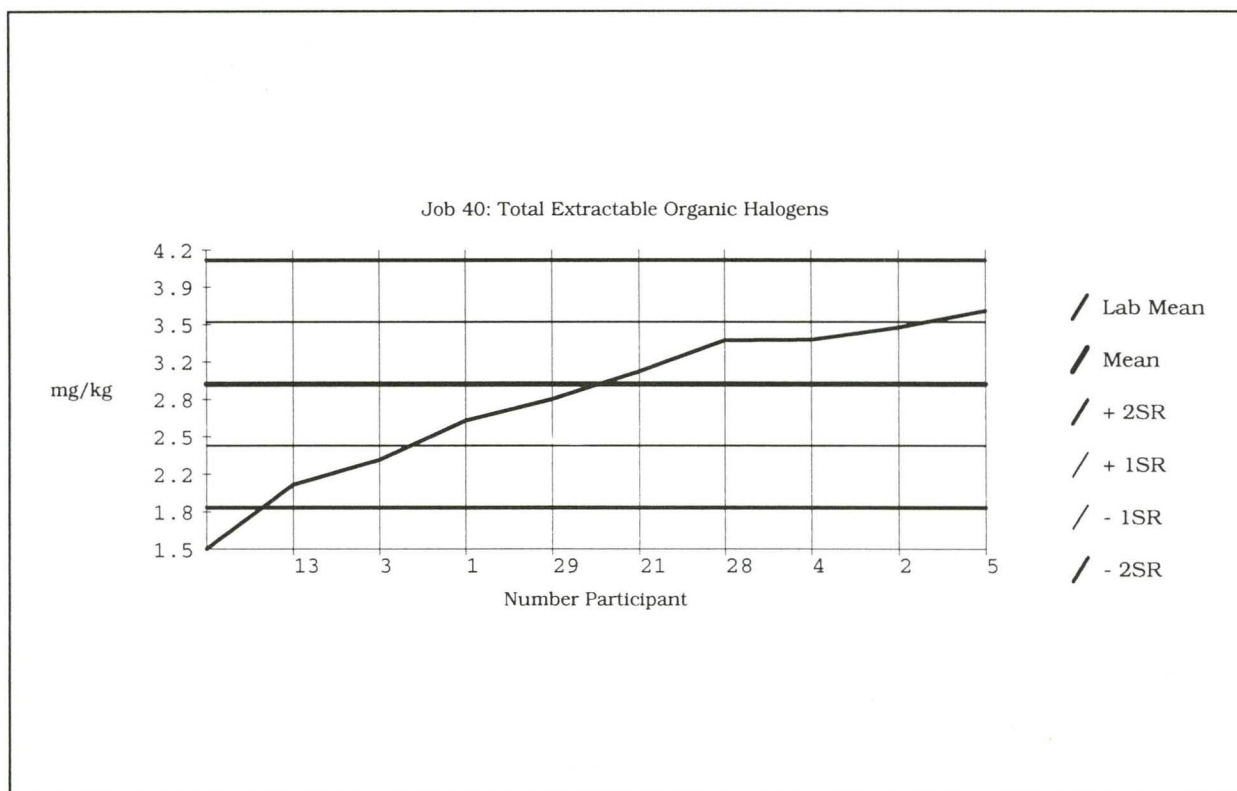
Maximum absolute difference from Normal distribution: 0.12122. Critical value: 0.48900. KS-test passed

COCHRAN; 1 % ; replicas: 2

Cyc	Lab	Average	Variance	Result	Value
1	22	1.88650	1.11369	.92100	.71757

Summary

1. Eliminations due to
 - 1.1 Repeatability = 1
 - 1.2 Reproducibility = 0
 - 1.3 Manual rejected = 0
2. General Mean = 2.99122
3. Repeatability
 - 3.1 Standard deviation $S_r = .10872$
 - 3.2 Coefficient of variation = 4 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = .55873$
 - 4.2 Coefficient of variation = 19 %



Job Classification

Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
7 *	.00000	G	* ?	* ?	* ?	* ?	*
19 *	.00000	G	* -	* -	* -	* -	*
24 *	.00000	G	* -	* -	* -	* -	*
8 *	.00000	G	* ?	* ?	* ?	* ?	*
14 *	.00000	G	* -	* -	* -	* -	*
25 *	.00000	G	* -	* -	* -	* -	*
9 *	.00000	G	* -	* -	* -	* -	*
15 *	.00000	G	* ?	* ?	* ?	* ?	*
20 *	.00000	G	* -	* -	* -	* -	*
26 *	.00000	G	* -	* -	* -	* -	*
10 *	.00000	G	* -	* -	* -	* -	*
16 *	.00000	G	* -	* -	* -	* -	*
27 *	.00000	G	* -	* -	* -	* -	*
11 *	.00000	G	* -	* -	* -	* -	*
17 *	.00000	G	* -	* -	* -	* -	*
12 *	.00000	G	* -	* -	* -	* -	*
18 *	.00000	G	* -	* -	* -	* -	*
23 *	.00000	G	* -	* -	* -	* -	*
6 *	.00000	G	* -	* -	* -	* -	*
22 *	1.88650	W	* -	* -	* -	* -	*
13 *	2.08000	B	* LA	* -	* -	* O-NEN 5777	*
3 *	2.30500	B	* LE	* -	* -	* NEN 5735	*
1 *	2.65800	A	* L	* -	* Z	* C-NEN 5735	*
29 *	2.85300	A	* LE	* -	* Z	* HUIS	*
21 *	3.10000	A	* LH	* -	* -	* NEN 5777	*
28 *	3.38500	A	* -	* -	* -	* NEN 5735	*
4 *	3.39000	A	* -	* -	* -	* -	*
2 *	3.50000	A	* -	* -	* -	* -	*
5 *	3.65000	B	* -	* -	* -	* -	*

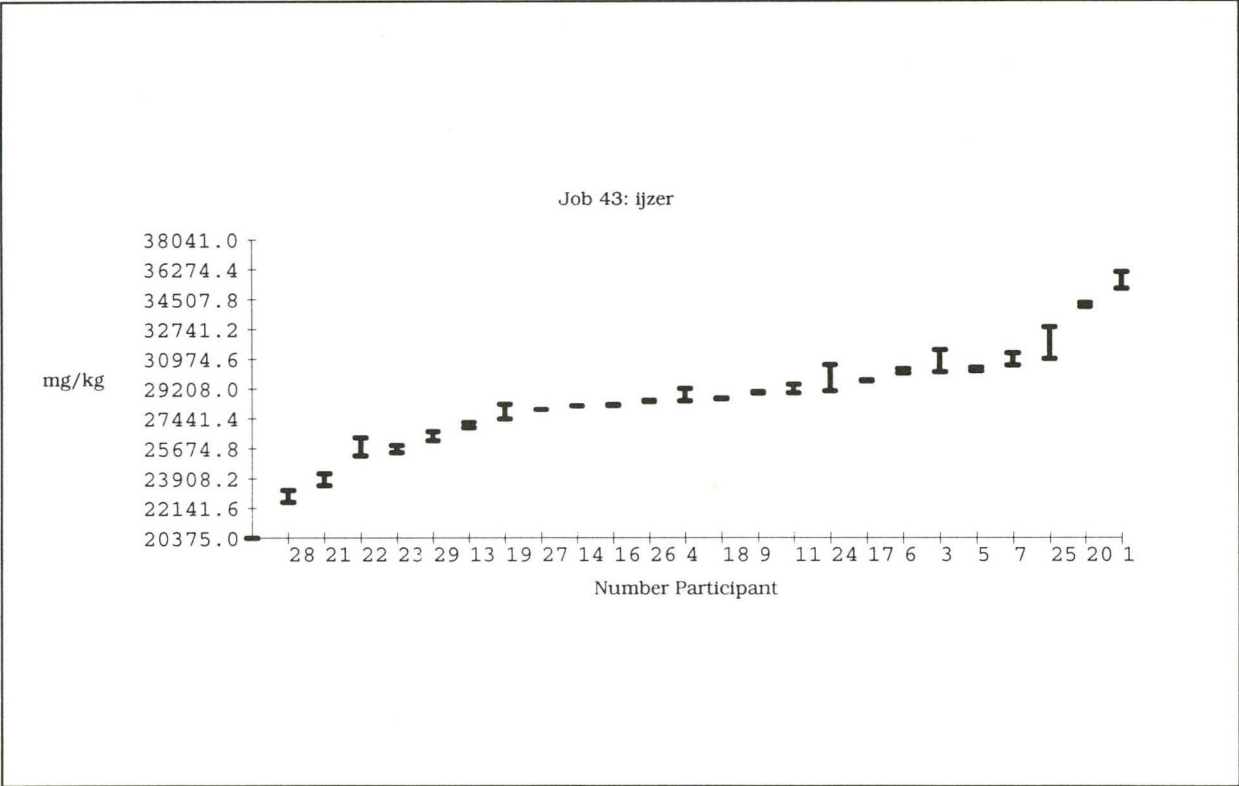
General Mean = 2.99122
Between lab standard deviation SL = .54805
Coefficient of variation = 18 %
Number of laboratories = 9

A: Number of laboratories with	Z	-scores between 0 and 1	; 6
B: Number of laboratories with	Z	-scores between 1 and 2	; 3
C: Number of laboratories with	Z	-scores between 2 and 3	; 0
D: Number of laboratories with	Z	-scores larger than 3	; 0

Job 43 : 99092, 99096

ijzer, Fe in mg/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	35820.00000 *	34450.00000 *	35135.00000 *	2.8 % *	
2 *			.00000 *	0 % *	- N.V.
3 *	31125.00000 *	29258.00000 *	30191.50000 *	4.4 % *	
4 *	27960.00000 *	29010.00000 *	28485.00000 *	2.6 % *	
5 *	30400.00000 *	30100.00000 *	30250.00000 *	.7 % *	
6 *	29900.00000 *	30300.00000 *	30100.00000 *	.9 % *	
7 *	30100.00000 *	31100.00000 *	30600.00000 *	2.3 % *	
8 *			.00000 *	0 % *	- N.V.
9 *	28900.00000 *	29000.00000 *	28950.00000 *	.2 % *	
10 *			.00000 *	0 % *	- N.V.
11 *	28605.00000 *	29323.00000 *	28964.00000 *	1.8 % *	
12 *			.00000 *	0 % *	- N.V.
13 *	27126.00000 *	26696.00000 *	26911.00000 *	1.1 % *	
14 *	28200.00000 *	28190.00000 *	28195.00000 *	.0 % *	
15 *			.00000 *	0 % *	- N.V.
16 *	28252.00000 *	28180.00000 *	28216.00000 *	.2 % *	
17 *	29600.00000 *	29700.00000 *	29650.00000 *	.2 % *	
18 *	28548.00000 *	28639.00000 *	28593.50000 *	.2 % *	
19 *	26816.00000 *	28046.00000 *	27431.00000 *	3.2 % *	
20 *	33870.00000 *	34210.00000 *	34040.00000 *	.7 % *	
21 *	24000.00000 *	23000.00000 *	23500.00000 *	3.0 % *	
22 *	26009.00000 *	24537.00000 *	25273.00000 *	4.1 % *	
23 *	25163.00000 *	25739.00000 *	25451.00000 *	1.6 % *	
24 *	30180.00000 *	27980.00000 *	29080.00000 *	5.3 % *	
25 *	32290.00000 *	29630.00000 *	30960.00000 *	6.1 % *	
26 *	28500.00000 *	28400.00000 *	28450.00000 *	.2 % *	
27 *	28000.00000 *	28000.00000 *	28000.00000 *	.0 % *	
28 *	23000.00000 *	22000.00000 *	22500.00000 *	3.1 % *	
29 *	26523.00000 *	25761.00000 *	26142.00000 *	2.1 % *	



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

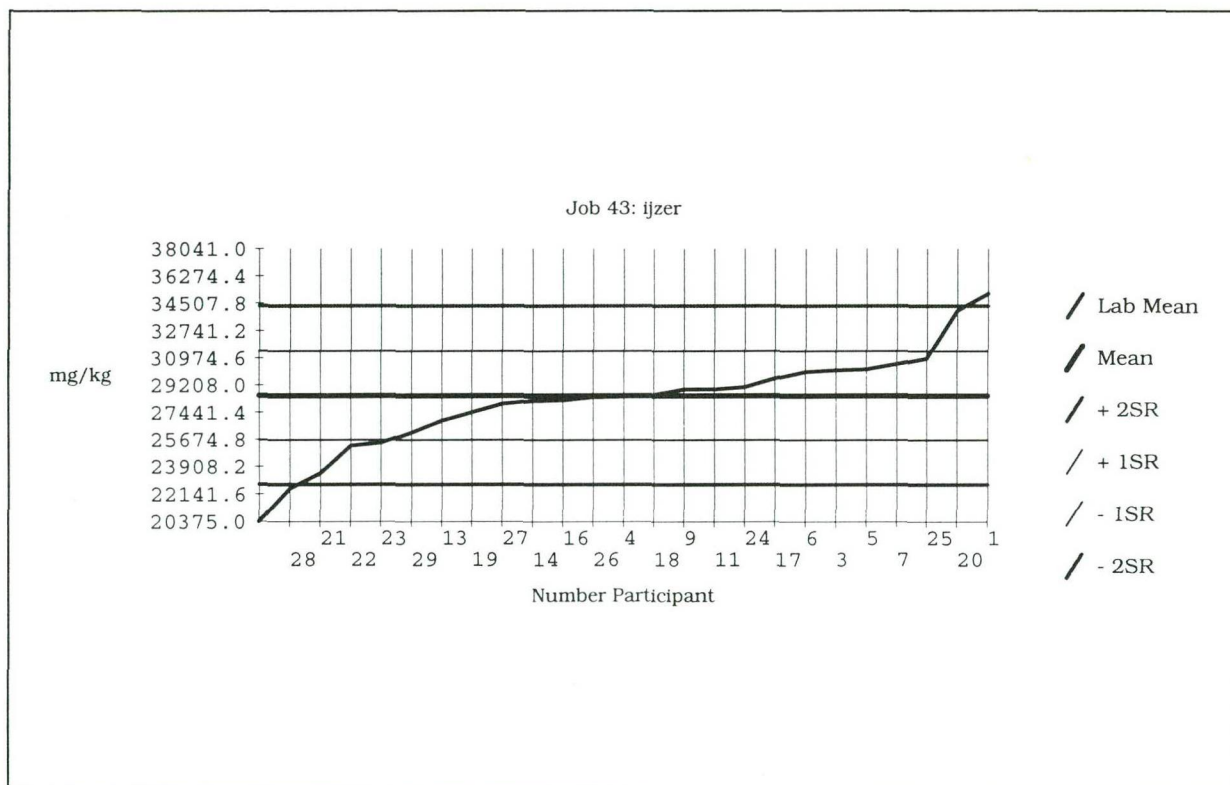
24 laboratory observations

Maximum absolute difference from Normal distribution: 0.11433. Critical value: 0.32300. KS-test passed

No outliers found

Summary

1. Eliminations due to
 - 1.1 Repeatability = 0
 - 1.2 Reproducibility = 0
 - 1.3 Manual rejected = 0
2. General Mean = 28544.50000
3. Repeatability
 - 3.1 Standard deviation $S_r = 751.14332$
 - 3.2 Coefficient of variation = 3 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = 2893.40088$
 - 4.2 Coefficient of variation = 10 %



Job Classification

Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *
8 *	.00000 *	G *	? *	? *	? *	? *
2 *	.00000 *	G *	- *	- *	- *	- *
15 *	.00000 *	G *	? *	? *	? *	? *
10 *	.00000 *	G *	- *	- *	- *	- *
12 *	.00000 *	G *	- *	- *	- *	- *
28 *	22500.00000 *	C *	- *	- *	- *	NVN 5770
21 *	23500.00000 *	B *	- *	- *	CB *	NEN 6426
22 *	25273.00000 *	B *	- *	- *	- *	- *
23 *	25451.00000 *	B *	TCM *	- *	D *	- *
29 *	26142.00000 *	A *	TAM *	- *	CB *	HUIS
13 *	26911.00000 *	A *	TAM *	- *	CB *	G-NEN 6426
19 *	27431.00000 *	A *	TAM *	- *	AAC *	NVN5770/NEN6460
27 *	28000.00000 *	A *	- *	- *	- *	NEN 6426
14 *	28195.00000 *	A *	TAM *	- *	AAC *	HUIS
16 *	28216.00000 *	A *	TAM *	- *	CB *	NEN 6426
26 *	28450.00000 *	A *	TA *	- *	AAC *	HUIS
4 *	28485.00000 *	A *	- *	- *	- *	- *
18 *	28593.50000 *	A *	TAM *	- *	AAC *	C-NEN 6460
9 *	28950.00000 *	A *	TAM *	- *	CB *	NEN 6426
11 *	28964.00000 *	A *	TA *	- *	CB *	C-NEN 6426
24 *	29080.00000 *	A *	TA *	- *	AAC *	C-NEN 6460
17 *	29650.00000 *	A *	TA *	F *	AAC *	HUIS
6 *	30100.00000 *	A *	TAM *	? *	CB *	HUIS
3 *	30191.50000 *	A *	- *	- *	- *	NEN 5770
5 *	30250.00000 *	A *	- *	- *	- *	- *
7 *	30600.00000 *	A *	? *	? *	? *	NEN 6460
25 *	30960.00000 *	A *	TAM *	- *	CB *	G-NEN 6426/ NVN 7
20 *	34040.00000 *	B *	- *	- *	CB *	NEN 6426
1 *	35135.00000 *	C *	- *	- *	- *	- *

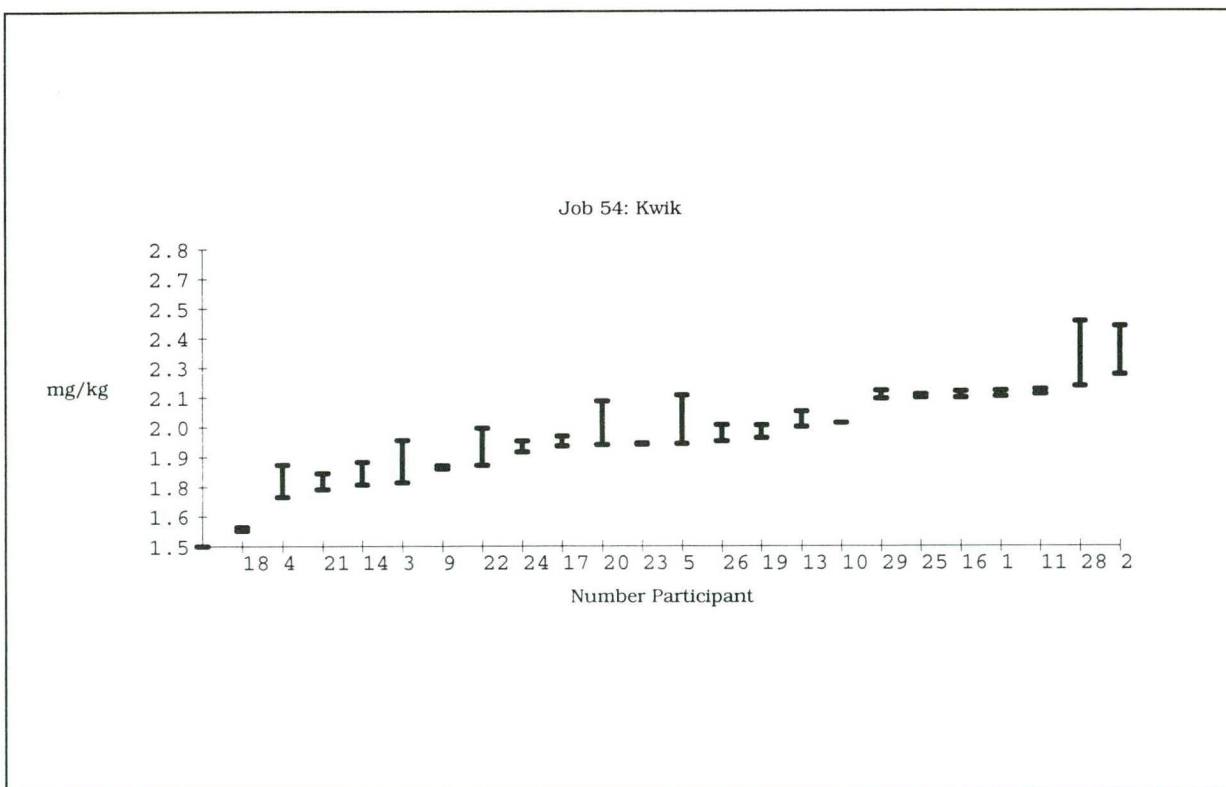
General Mean = 28544.50000
Between lab standard deviation SL = 2794.19977
Coefficient of variation = 10 %
Number of laboratories = 24

A: Number of laboratories with	Z	-scores between 0 and 1	; 18
B: Number of laboratories with	Z	-scores between 1 and 2	; 4
C: Number of laboratories with	Z	-scores between 2 and 3	; 2
D: Number of laboratories with	Z	-scores larger than 3	; 0

Job 54 : 99092, 99096

Kwik, Hg in mg/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	2.13800	2.17300	2.15550	1.1 %	*
2 *	2.10000	2.40000	2.25000	9.4 %	*
3 *	1.91000	1.65000	1.78000	10.3 %	*
4 *	1.81500	1.61700	1.71600	8.2 %	*
5 *	2.10000	1.80000	1.95000	10.9 %	*
6 *			.00000	0 %	* - N.V.
7 *	.37000	.21000	.29000	39.0 %	*
8 *			.00000	0 %	* - N.V.
9 *	1.83000	1.85000	1.84000	.8 %	*
10 *	2.04000	2.04000	2.04000	.0 %	*
11 *	2.18000	2.15000	2.16500	1.0 %	*
12 *			.00000	0 %	* - N.V.
13 *	2.07000	1.97400	2.02200	3.4 %	*
14 *	1.70000	1.84000	1.77000	5.6 %	*
15 *			.00000	0 %	* - N.V.
16 *	2.13000	2.17000	2.15000	1.3 %	*
17 *	1.97000	1.91000	1.94000	2.2 %	*
18 *	1.58000	1.56000	1.57000	.9 %	*
19 *	2.01400	1.93500	1.97450	2.8 %	*
20 *	2.08000	1.81000	1.94500	9.8 %	*
21 *	1.80000	1.70000	1.75000	4.0 %	*
22 *	1.97000	1.74000	1.85500	8.8 %	*
23 *	1.95000	1.94200	1.94600	.3 %	*
24 *	1.94800	1.88000	1.91400	2.5 %	*
25 *	2.16000	2.14000	2.15000	.7 %	*
26 *	1.91000	2.01000	1.96000	3.6 %	*
27 *			.00000	0 %	* - N.V.
28 *	2.00000	2.40000	2.20000	12.9 %	*
29 *	2.17000	2.12000	2.14500	1.6 %	*



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

24 laboratory observations

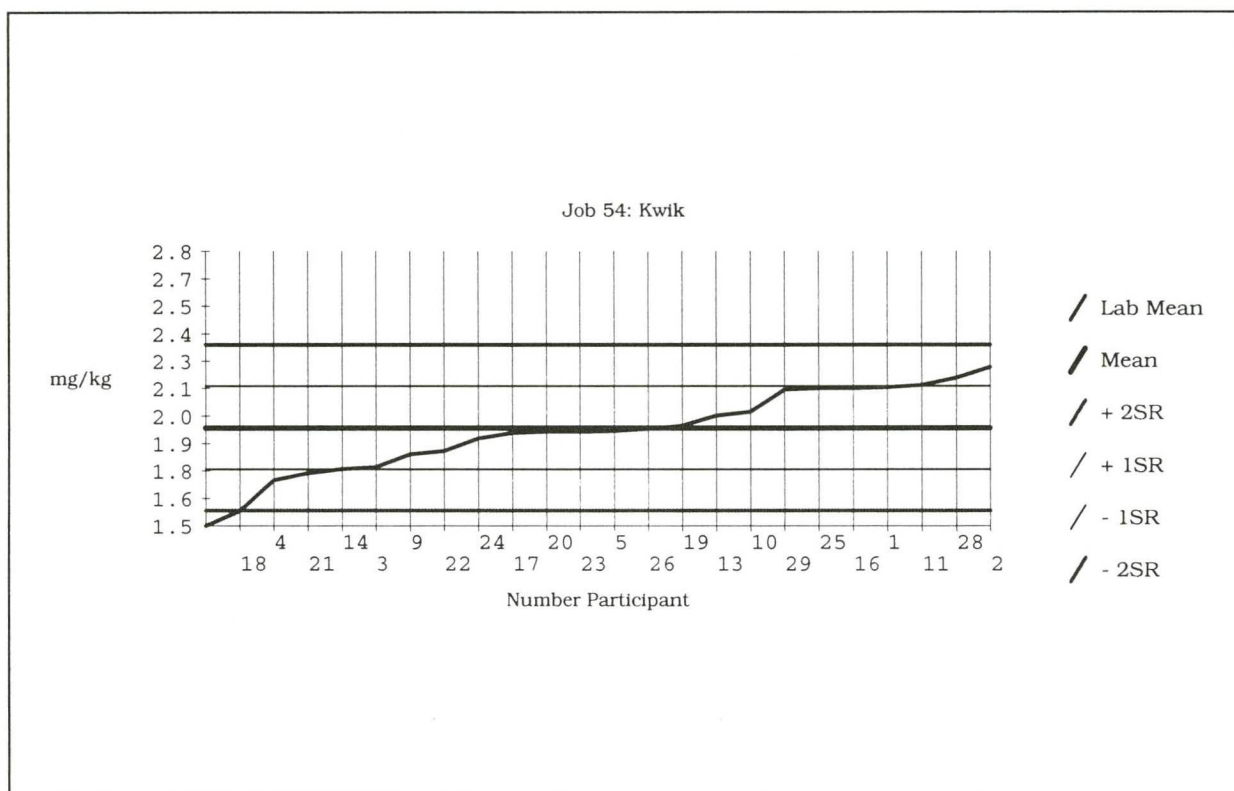
Maximum absolute difference from Normal distribution: 0.19417. Critical value: 0.32300. KS-test passed

GRUBBS; 1 % ; replicas: 2

Cyc *	Lab *	D/S *	Average *	Variance *	Result *	Value
1 *	7 *	S *	.29000 *	.11314 *	4.18733 *	3.11200

Summary

1. Eliminations due to
 - 1.1 Repeatability = 0
 - 1.2 Reproducibility = 1
 - 1.3 Manual rejected = 0
2. General Mean = 1.96470
3. Repeatability
 - 3.1 Standard deviation $S_r = .11826$
 - 3.2 Coefficient of variation = 6 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = .19597$
 - 4.2 Coefficient of variation = 10 %



Job Classification

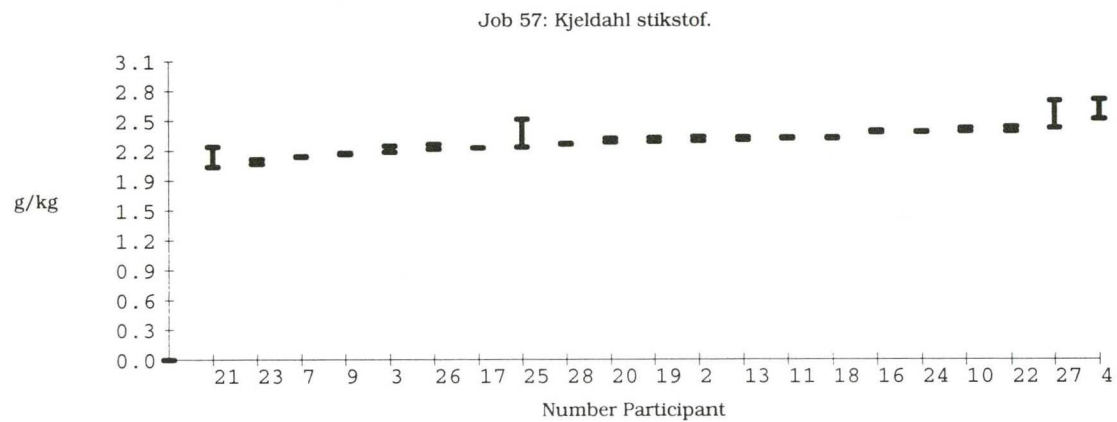
Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
8 *	.00000 *	G *	? *	? *	? *	? *	*
15 *	.00000 *	G *	? *	? *	? *	? *	*
27 *	.00000 *	G *	- *	- *	- *	- *	*
12 *	.00000 *	G *	- *	- *	- *	- *	*
6 *	.00000 *	G *	? *	? *	? *	? *	*
7 *	.29000 *	R *	? *	? *	? *	? *	*
18 *	1.57000 *	C *	TAM *	- *	- *	O-NEN 5779	*
4 *	1.71600 *	B *	- *	- *	- *	C-O-NEN 5779	*
21 *	1.75000 *	B *	- *	- *	F *	O-NEN 5779	*
14 *	1.77000 *	B *	TAM *	- *	F *	HUIS	*
3 *	1.78000 *	B *	- *	- *	- *	NEN 6449	*
9 *	1.84000 *	A *	- *	- *	CVA *	- *	*
22 *	1.85500 *	A *	- *	- *	- *	- *	*
24 *	1.91400 *	A *	TA *	- *	FUU *	HUIS	*
17 *	1.94000 *	A *	TA *	F *	CVA *	C-O-NEN 577	*
20 *	1.94500 *	A *	- *	- *	CB *	NEN-EN 1483	*
23 *	1.94600 *	A *	TCM *	- *	D *	- *	*
5 *	1.95000 *	A *	- *	- *	- *	- *	*
26 *	1.96000 *	A *	TA *	- *	CVA *	HUIS	*
19 *	1.97450 *	A *	TAM *	- *	CVA *	NVN5770/EN1483	*
13 *	2.02200 *	A *	TAM *	- *	CVA *	G-NEN 6445	*
10 *	2.04000 *	A *	TAM *	- *	- *	HUIS	*
29 *	2.14500 *	B *	TAM *	- *	CB *	HUIS	*
25 *	2.15000 *	B *	TAM *	- *	F *	NEN 5779/NVN 5770	*
16 *	2.15000 *	B *	TAM *	- *	F *	HUIS	*
1 *	2.15550 *	B *	- *	- *	- *	- *	*
11 *	2.16500 *	B *	TA *	- *	CVA *	A-NEN 6439	*
28 *	2.20000 *	B *	- *	- *	- *	NVN 5770	*
2 *	2.25000 *	B *	- *	- *	- *	- *	*

General Mean = 1.96470
Between lab standard deviation SL = .15626
Coefficient of variation = 8 %
Number of laboratories = 23

A: Number of laboratories with |Z|-scores between 0 and 1 ; 11
B: Number of laboratories with |Z|-scores between 1 and 2 ; 11
C: Number of laboratories with |Z|-scores between 2 and 3 ; 1
D: Number of laboratories with |Z|-scores larger than 3 ; 0

Job 57 : 99092, 99096
Kjeldahl stikstof., N in g/kg Sediment (Lake)
Lab * X1 * X2 * Average * %Variance *

1	*		*		*	.00000	*	0	%	*	- N.V.
2	*	2.24000	*	2.30000	*	2.27000	*	1.9	%	*	
3	*	2.20000	*	2.11000	*	2.15500	*	3.0	%	*	
4	*	2.64000	*	2.35000	*	2.49500	*	8.2	%	*	
5	*		*		*	.00000	*	0	%	*	- N.V.
6	*		*		*	.00000	*	0	%	*	- N.V.
7	*	2.10000	*	2.11000	*	2.10500	*	.3	%	*	
8	*		*		*	.00000	*	0	%	*	- N.V.
9	*	2.14000	*	2.12000	*	2.13000	*	.7	%	*	
10	*	2.34000	*	2.39000	*	2.36500	*	1.5	%	*	
11	*	2.30000	*	2.28000	*	2.29000	*	.6	%	*	
12	*		*		*	.00000	*	0	%	*	- N.V.
13	*	2.30000	*	2.26000	*	2.28000	*	1.2	%	*	
14	*		*		*	.00000	*	0	%	*	- N.V.
15	*		*		*	.00000	*	0	%	*	- N.V.
16	*	2.37000	*	2.34000	*	2.35500	*	.9	%	*	
17	*	2.20000	*	2.20000	*	2.20000	*	.0	%	*	
18	*	2.30000	*	2.28000	*	2.29000	*	.6	%	*	
19	*	2.23000	*	2.29000	*	2.26000	*	1.9	%	*	
20	*	2.28200	*	2.22600	*	2.25400	*	1.8	%	*	
21	*	1.85000	*	2.15000	*	2.00000	*	10.6	%	*	
22	*	2.33000	*	2.40000	*	2.36500	*	2.1	%	*	
23	*	2.06700	*	2.00000	*	2.03350	*	2.3	%	*	
24	*	2.36300	*	2.35500	*	2.35900	*	.2	%	*	
25	*	2.00000	*	2.41000	*	2.20500	*	13.1	%	*	
26	*	2.22000	*	2.15000	*	2.18500	*	2.3	%	*	
27	*	2.20000	*	2.60000	*	2.40000	*	11.8	%	*	
28	*	2.24000	*	2.23000	*	2.23500	*	.3	%	*	
29	*		*		*	.00000	*	0	%	*	



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

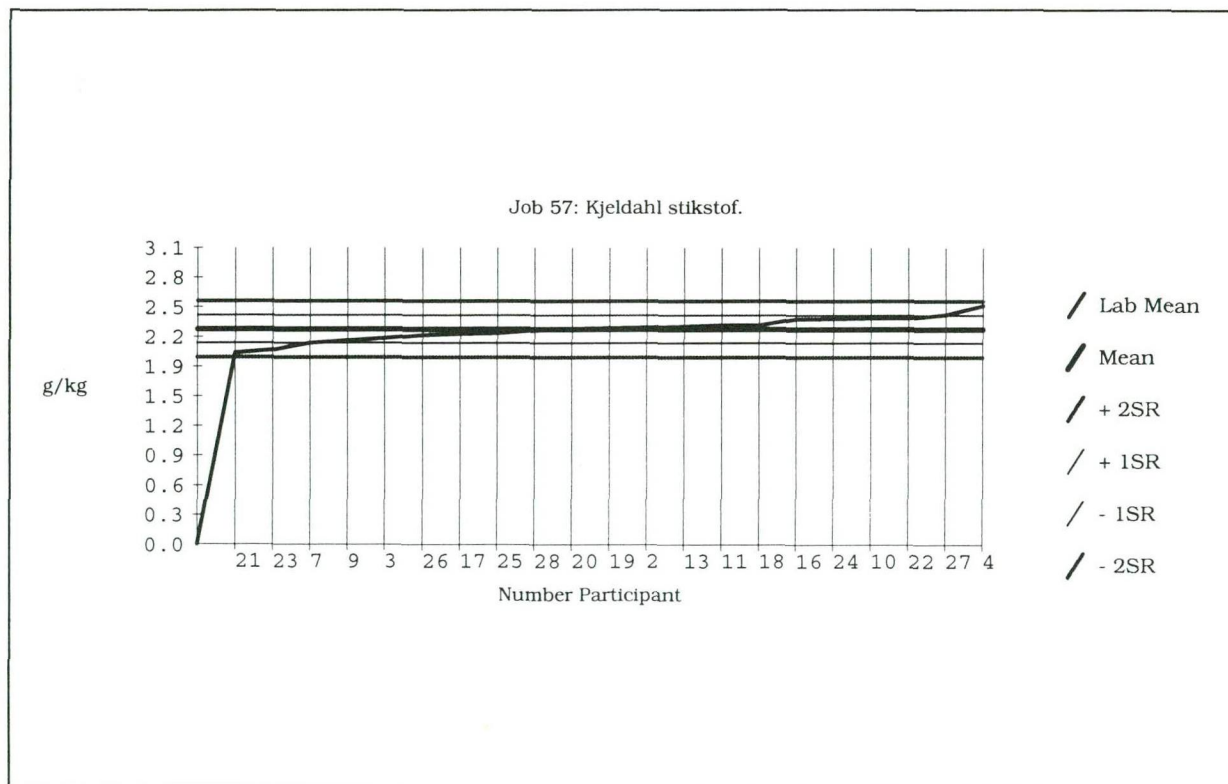
21 laboratory observations

Maximum absolute difference from Normal distribution: 0.08499. Critical value: 0.34400. KS-test passed

No outliers found

Summary

1. Eliminations due to
 - 1.1 Repeatability = 0
 - 1.2 Reproducibility = 0
 - 1.3 Manual rejected = 0
2. General Mean = 2.24912
3. Repeatability
 - 3.1 Standard deviation $S_r = .11354$
 - 3.2 Coefficient of variation = 5 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = .14632$
 - 4.2 Coefficient of variation = 7 %



Job Classification

Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
1 *	.00000 *	G *	- *	- *	- *	- *	*
8 *	.00000 *	G *	? *	? *	? *	? *	*
14 *	.00000 *	G *	- *	- *	- *	- *	*
15 *	.00000 *	G *	? *	? *	? *	? *	*
5 *	.00000 *	G *	- *	- *	- *	- *	*
12 *	.00000 *	G *	- *	- *	- *	- *	*
29 *	.00000 *	G *	- *	- *	- *	- *	*
6 *	.00000 *	G *	. *	. *	. *	. *	*
21 *	2.00000 *	C *	- *	- *	- *	NEN 6646	*
23 *	2.03350 *	B *	TD *	- *	E *	- *	*
7 *	2.10500 *	B *	? *	? *	? *	NEN-ISO 5663	*
9 *	2.13000 *	A *	TD *	- *	Z *	NEN 6663	*
3 *	2.15500 *	A *	- *	- *	- *	NEN 6646	*
26 *	2.18500 *	A *	- *	- *	- *	NEN 6646	*
17 *	2.20000 *	A *	- *	- *	- *	HUIS	*
25 *	2.20500 *	A *	TB *	- *	Z *	NEN 6641	*
28 *	2.23500 *	A *	- *	- *	- *	NEN 6641	*
20 *	2.25400 *	A *	- *	- *	- *	NVN 6645/NEN 6646	*
19 *	2.26000 *	A *	TD *	Z *	E *	HUIS	*
2 *	2.27000 *	A *	- *	- *	- *	- *	*
13 *	2.28000 *	A *	- *	- *	- *	C-NEN 6641/6646	*
11 *	2.29000 *	A *	- *	- *	- *	C-NEN 6642	*
18 *	2.29000 *	A *	- *	- *	- *	C-NEN-ISO 5663	*
16 *	2.35500 *	A *	- *	- *	- *	HUIS	*
24 *	2.35900 *	A *	- *	- *	E *	NEN 6663	*
10 *	2.36500 *	A *	- *	- *	- *	C-NEN 6641	*
22 *	2.36500 *	A *	- *	- *	- *	- *	*
27 *	2.40000 *	B *	- *	- *	- *	NEN-ISO 5663	*
4 *	2.49500 *	C *	- *	- *	- *	- *	*

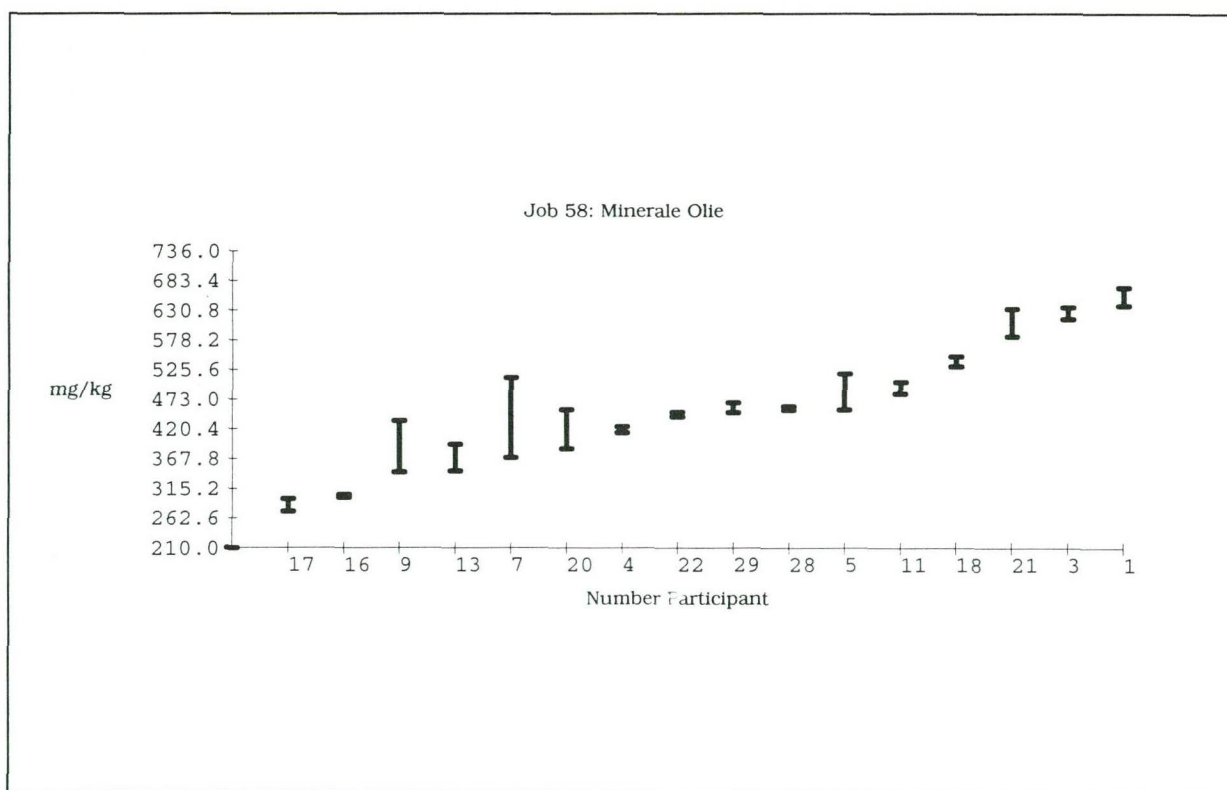
General Mean = 2.24912
Between lab standard deviation SL = .09230
Coefficient of variation = 4 %
Number of laboratories = 21

A: Number of laboratories with	Z	-scores between 0 and 1	; 16
B: Number of laboratories with	Z	-scores between 1 and 2	; 3
C: Number of laboratories with	Z	-scores between 2 and 3	; 2
D: Number of laboratories with	Z	-scores larger than 3	; 0

Job 58 : 99092, 99096

Minerale Olie, MINOL in mg/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	662.80000	617.50000	640.15000	5.0 %	*
2 *	*	*	.00000	0 %	* - N.V.
3 *	631.00000	601.00000	616.00000	3.4 %	*
4 *	422.00000	407.00000	414.50000	2.6 %	*
5 *	500.00000	410.00000	455.00000	14.0 %	*
6 *	*	*	.00000	0 %	* - N.V.
7 *	470.00000	270.00000	370.00000	38.2 %	*
8 *	*	*	.00000	0 %	* - N.V.
9 *	280.10000	408.30000	344.20000	26.3 %	*
10 *	*	*	.00000	0 %	* - N.V.
11 *	469.30000	497.70000	483.50000	4.2 %	*
12 *	*	*	.00000	0 %	* - N.V.
13 *	380.00000	312.00000	346.00000	13.9 %	*
14 *	*	*	.00000	0 %	* - N.V.
15 *	*	*	.00000	0 %	* - N.V.
16 *	296.00000	303.00000	299.50000	1.7 %	*
17 *	260.00000	290.00000	275.00000	7.7 %	*
18 *	519.00000	544.00000	531.50000	3.3 %	*
19 *	*	*	.00000	0 %	* - N.V.
20 *	337.00000	435.00000	386.00000	18.0 %	*
21 *	620.00000	550.00000	585.00000	8.5 %	*
22 *	437.00000	448.00000	442.50000	1.8 %	*
23 *	*	*	.00000	0 %	* - N.V.
24 *	*	*	.00000	0 %	* - N.V.
25 *	*	*	.00000	0 %	* - N.V.
26 *	*	*	.00000	0 %	* - N.V.
27 *	*	*	.00000	0 %	* - N.V.
28 *	459.00000	449.00000	454.00000	1.6 %	*
29 *	437.00000	462.00000	449.50000	3.9 %	*



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

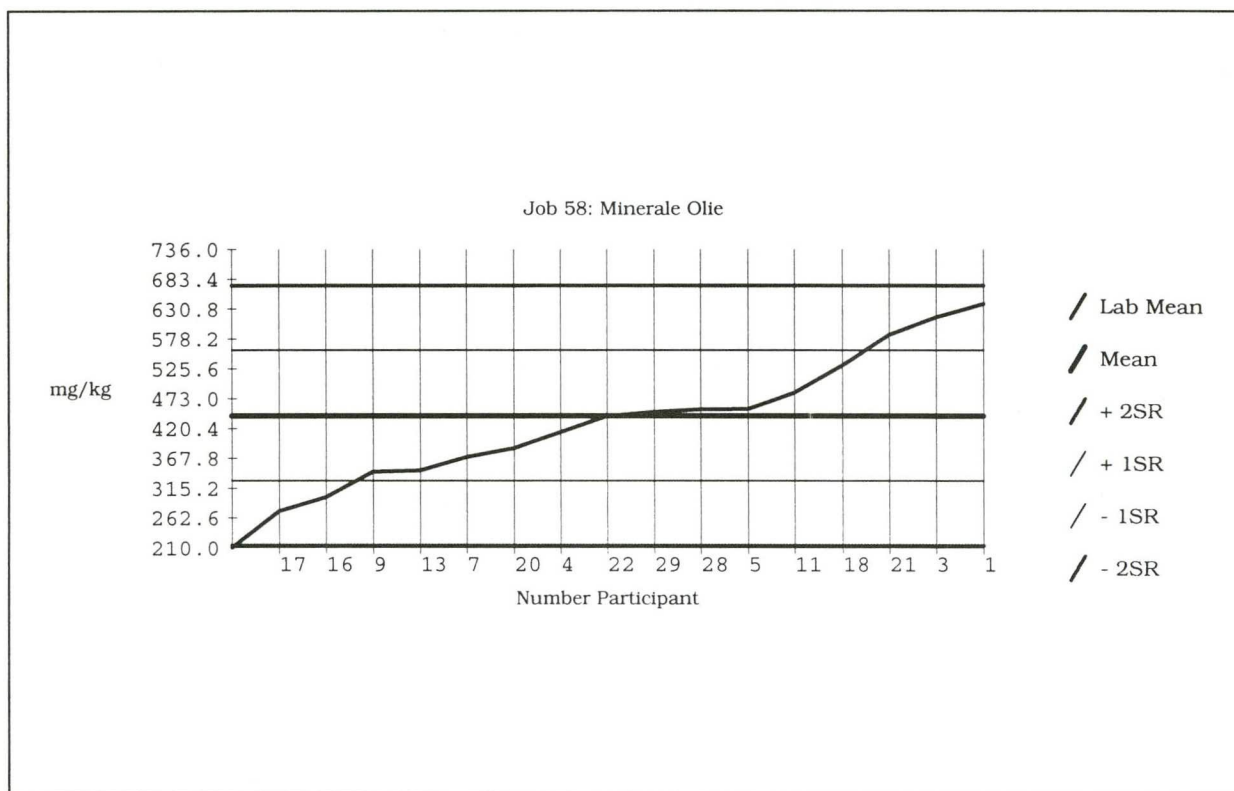
16 laboratory observations

Maximum absolute difference from Normal distribution: 0.14370. Critical value: 0.39200. KS-test passed

No outliers found

Summary

1. Eliminations due to
 - 1.1 Repeatability = 0
 - 1.2 Reproducibility = 0
 - 1.3 Manual rejected = 0
2. General Mean = 443.27188
3. Repeatability
 - 3.1 Standard deviation $S_r = 53.05271$
 - 3.2 Coefficient of variation = 12 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = 114.66656$
 - 4.2 Coefficient of variation = 26 %



Job Classification

Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
19 *	.00000 *	G *	- *	- *	- *	- *	*
24 *	.00000 *	G *	- *	- *	- *	- *	*
8 *	.00000 *	G *	? *	? *	? *	? *	*
14 *	.00000 *	G *	- *	- *	- *	- *	*
25 *	.00000 *	G *	- *	- *	- *	- *	*
2 *	.00000 *	G *	- *	- *	- *	- *	*
15 *	.00000 *	G *	? *	? *	? *	? *	*
26 *	.00000 *	G *	- *	- *	- *	- *	*
10 *	.00000 *	G *	- *	- *	- *	- *	*
27 *	.00000 *	G *	- *	- *	- *	- *	*
12 *	.00000 *	G *	- *	- *	- *	- *	*
23 *	.00000 *	G *	- *	- *	- *	- *	*
6 *	.00000 *	G *	- *	- *	- *	- *	*
17 *	275.00000 *	B *	- *	- *	- *	HUIS	*
16 *	299.50000 *	B *	LE *	A *	GSF *	C-NEN 5733	*
9 *	344.20000 *	A *	LF *	A *	IR *	NEN 6675	*
13 *	346.00000 *	A *	LE *	A *	GSF *	NEN 5718/5733	*
7 *	370.00000 *	A *	? *	? *	? *	NEN 6675	*
20 *	386.00000 *	A *	LE *	A *	GDF *	HUIS	*
4 *	414.50000 *	A *	- *	- *	- *	- *	*
22 *	442.50000 *	A *	- *	- *	- *	- *	*
29 *	449.50000 *	A *	L *	A *	IR *	HUIS	*
28 *	454.00000 *	A *	- *	- *	- *	- *	*
5 *	455.00000 *	A *	- *	- *	- *	- *	*
11 *	483.50000 *	A *	- *	- *	- *	C-NEN 5733	*
18 *	531.50000 *	A *	LA *	C *	GSF *	HUIS	*
21 *	585.00000 *	B *	LA *	Z *	GSF *	2e O-NEN 5733	*
3 *	616.00000 *	B *	- *	- *	GDF *	NEN 5733	*
1 *	640.15000 *	B *	LA *	A *	GSF *	HUIS	*

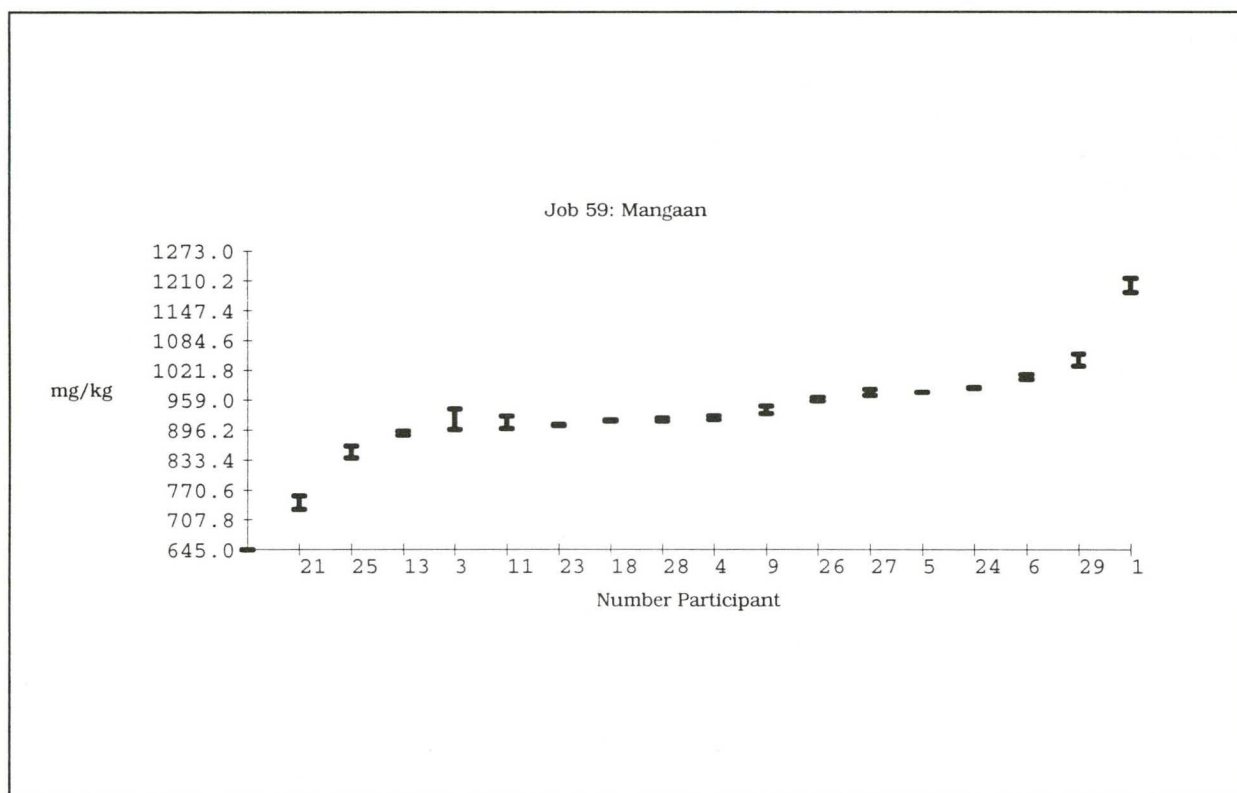
General Mean = 443.27188
Between lab standard deviation SL = 101.65545
Coefficient of variation = 23 %
Number of laboratories = 16

A: Number of laboratories with |Z|-scores between 0 and 1 ; 11
B: Number of laboratories with |Z|-scores between 1 and 2 ; 5
C: Number of laboratories with |Z|-scores between 2 and 3 ; 0
D: Number of laboratories with |Z|-scores larger than 3 ; 0

Job 59 : 99092, 99096

Mangaan, Mn in mg/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	1207.00000	1166.00000	1186.50000	2.4 %	*
2 *			.00000	0 %	* - N.V.
3 *	928.00000	867.00000	897.50000	4.8 %	*
4 *	913.20000	923.80000	918.50000	.8 %	*
5 *	976.00000	976.00000	976.00000	.0 %	*
6 *	996.00000	1010.00000	1003.00000	1.0 %	*
7 *			.00000	0 %	* - N.V.
8 *			.00000	0 %	* - N.V.
9 *	920.00000	942.00000	931.00000	1.7 %	*
10 *			.00000	0 %	* - N.V.
11 *	881.20000	917.90000	899.55000	2.9 %	*
12 *			.00000	0 %	* - N.V.
13 *	891.50000	880.50000	886.00000	.9 %	*
14 *	997.44000	1129.67000	1063.55500	8.8 %	*
15 *			.00000	0 %	* - N.V.
16 *			.00000	0 %	* - N.V.
17 *			.00000	0 %	* - N.V.
18 *	917.00000	913.00000	915.00000	.3 %	*
19 *			.00000	0 %	* - N.V.
20 *			.00000	0 %	* - N.V.
21 *	750.00000	710.00000	730.00000	3.9 %	*
22 *			.00000	0 %	* - N.V.
23 *	907.50000	903.60000	905.55000	.3 %	*
24 *	985.00000	982.70000	983.85000	.2 %	*
25 *	856.00000	820.00000	838.00000	3.0 %	*
26 *	952.00000	963.00000	957.50000	.8 %	*
27 *	959.00000	978.00000	968.50000	1.4 %	*
28 *	920.00000	910.00000	915.00000	.8 %	*
29 *	1049.00000	1013.00000	1031.00000	2.5 %	*



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

18 laboratory observations

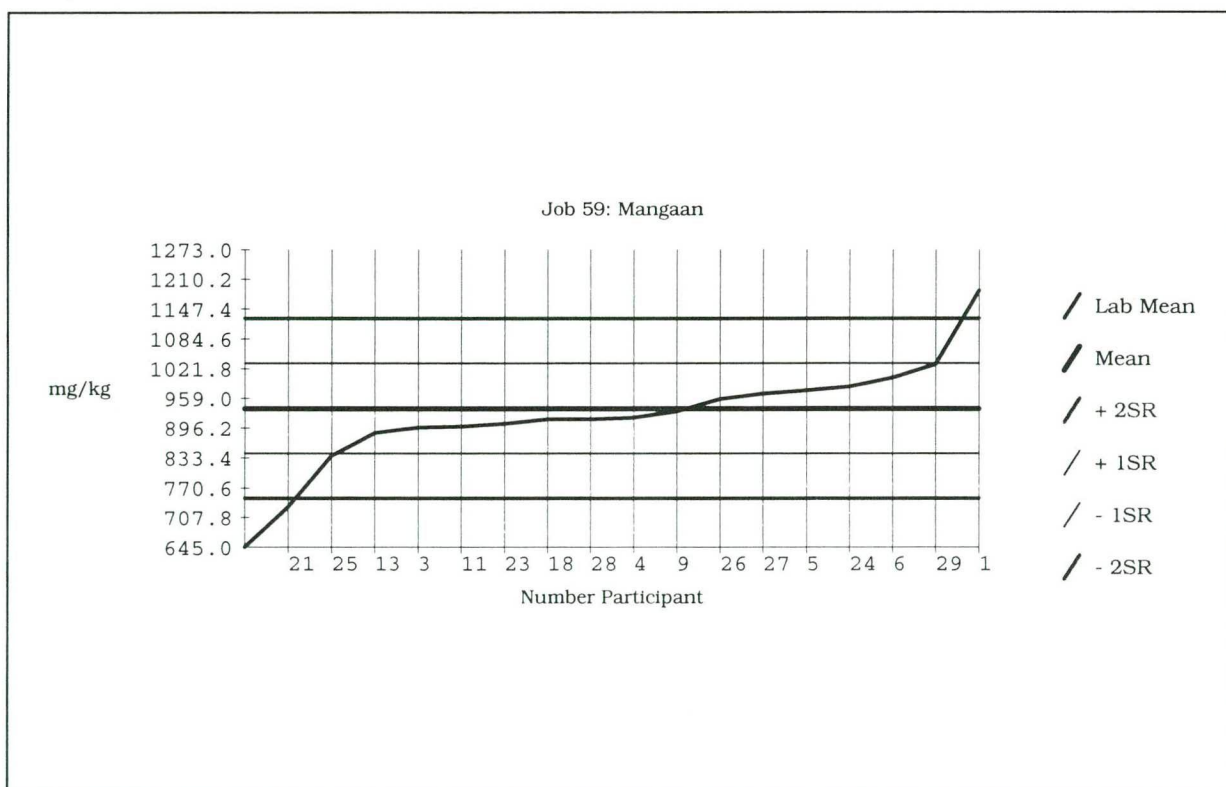
Maximum absolute difference from Normal distribution: 0.11868. Critical value: 0.37100. KS-test passed

COCHRAN; 1 % ; replicas: 2

Cyc *	Lab *	Average *	Variance *	Result *	Value
1 *	14 *	1063.55500 *	93.50073 *	.58365 *	.51357

Summary

1. Eliminations due to
 - 1.1 Repeatability = 1
 - 1.2 Reproducibility = 0
 - 1.3 Manual rejected = 0
2. General Mean = 937.79118
3. Repeatability
 - 3.1 Standard deviation Sr = 19.15321
 - 3.2 Coefficient of variation = 2 %
4. Reproducibility
 - 4.1 Standard deviation SR = 94.88279
 - 4.2 Coefficient of variation = 10 %



Job Classification

Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
7 *	.00000 *	G *	? *	? *	? *	? *	*
19 *	.00000 *	G *	- *	- *	- *	- *	*
8 *	.00000 *	G *	? *	? *	? *	? *	*
2 *	.00000 *	G *	- *	- *	- *	- *	*
15 *	.00000 *	G *	? *	? *	? *	? *	*
20 *	.00000 *	G *	- *	- *	- *	- *	*
10 *	.00000 *	G *	- *	- *	- *	- *	*
16 *	.00000 *	G *	- *	- *	- *	- *	*
17 *	.00000 *	G *	- *	- *	- *	- *	*
22 *	.00000 *	G *	- *	- *	- *	- *	*
12 *	.00000 *	G *	- *	- *	- *	- *	*
21 *	730.00000 *	C *	- *	- *	CB *	NEN 6426	*
25 *	838.00000 *	B *	TAM *	- *	CB *	G-NEN 6426/NVN 73	*
13 *	886.00000 *	A *	TAM *	- *	CB *	G-NEN 6426	*
3 *	897.50000 *	A *	- *	- *	- *	NEN 5770	*
11 *	899.55000 *	A *	TA *	- *	CB *	C-NEN 6426	*
23 *	905.55000 *	A *	TCM *	- *	D *	- *	*
28 *	915.00000 *	A *	- *	- *	- *	NVN 5770	*
18 *	915.00000 *	A *	TAM *	- *	AAC *	C-NEN 6461	*
4 *	918.50000 *	A *	- *	- *	- *	- *	*
9 *	931.00000 *	A *	TAM *	- *	CB *	NEN 6426	*
26 *	957.50000 *	A *	TA *	- *	AAC *	HUIS	*
27 *	968.50000 *	A *	- *	- *	- *	NEN 6426	*
5 *	976.00000 *	A *	- *	- *	- *	- *	*
24 *	983.85000 *	A *	TA *	- *	AAC *	C-NEN 6461	*
6 *	1003.00000 *	A *	TAM *	? *	CB *	HUIS	*
29 *	1031.00000 *	A *	TAM *	- *	CB *	HUIS	*
14 *	1063.55500 *	W *	TAM *	- *	D *	HUIS	*
1 *	1186.50000 *	C *	- *	- *	- *	- *	*

General Mean = 937.79118
Between lab standard deviation SL = 92.92953
Coefficient of variation = 10 %
Number of laboratories = 17

A: Number of laboratories with Z-scores between 0 and 1 ; 14
B: Number of laboratories with Z-scores between 1 and 2 ; 1
C: Number of laboratories with Z-scores between 2 and 3 ; 2
D: Number of laboratories with Z-scores larger than 3 ; 0

Job 62 : 99092, 99096

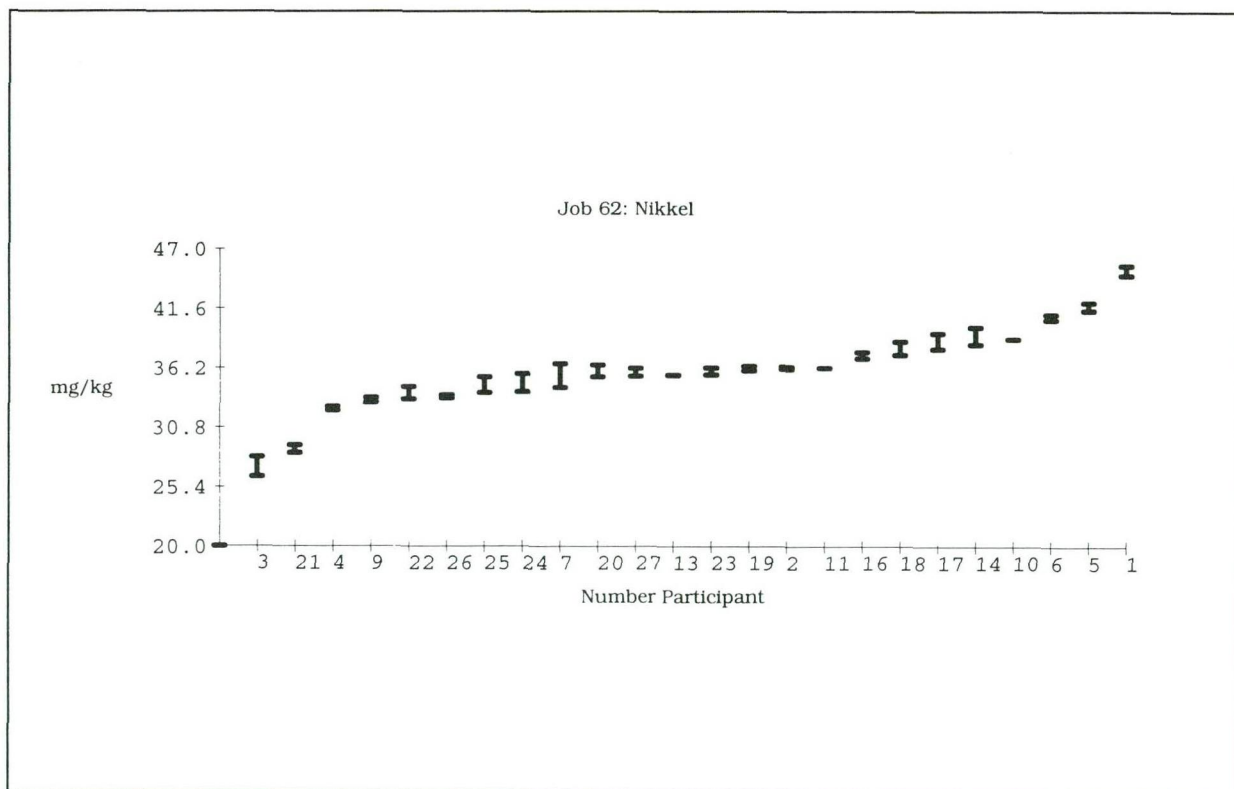
Nikkel, Ni in mg/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	44.06000	45.32000	44.69000	2.0 %	*
2 *	36.30000	36.00000	36.15000	.6 %	*
3 *	27.60000	25.10000	26.35000	6.7 %	*
4 *	32.16000	32.61000	32.38500	1.0 %	*
5 *	41.00000	42.00000	41.50000	1.7 %	*
6 *	40.30000	41.00000	40.65000	1.2 %	*
7 *	33.00000	36.00000	34.50000	6.1 %	*
8 *			.00000	0 %	*
9 *	32.80000	33.40000	33.10000	1.3 %	*
10 *	38.90000	38.90000	38.90000	.0 %	*
11 *	36.26000	36.26000	36.26000	.0 %	*
12 *			.00000	0 %	*
13 *	35.61000	35.59000	35.60000	.0 %	*
14 *	37.30000	39.49000	38.39500	4.0 %	*
15 *			.00000	0 %	*
16 *	37.54000	36.70000	37.12000	1.6 %	*
17 *	39.00000	37.00000	38.00000	3.7 %	*
18 *	36.60000	38.30000	37.45000	3.2 %	*
19 *	36.30000	35.70000	36.00000	1.2 %	*
20 *	36.20000	34.70000	35.45000	3.0 %	*
21 *	29.00000	28.00000	28.50000	2.5 %	*
22 *	34.20000	32.60000	33.40000	3.4 %	*
23 *	36.09000	35.18000	35.63500	1.8 %	*
24 *	35.22000	32.95000	34.08500	4.7 %	*
25 *	35.00000	33.00000	34.00000	4.2 %	*
26 *	33.70000	33.30000	33.50000	.8 %	*
27 *	35.00000	36.00000	35.50000	2.0 %	*
28 *	35.00000	47.00000	41.00000	20.7 %	*
29 *	41.10000	32.40000	36.75000	16.7 %	*

- N.V.

- N.V.

- N.V.



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

26 laboratory observations

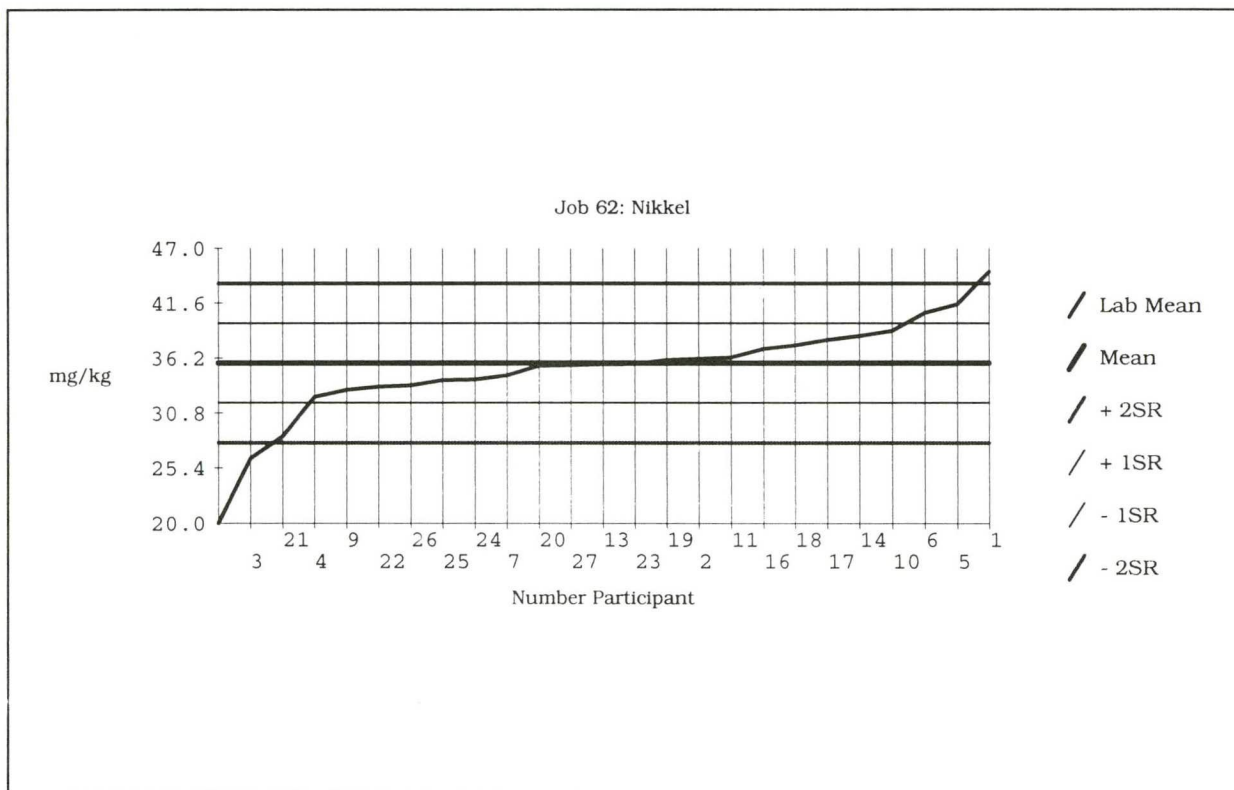
Maximum absolute difference from Normal distribution: 0.08349. Critical value: 0.31100. KS-test passed

COCHRAN; 1 % ; replicas: 2

Cyc *	Lab *	Average *	Variance *	Result *	Value
1 *	28 *	41.00000 *	8.48528 *	.53657 *	.40201
2 *	29 *	36.75000 *	6.15183 *	.60857 *	.41309

Summary

1. Eliminations due to
1.1 Repeatability = 2
1.2 Reproducibility = 0
1.3 Manual rejected = 0
2. General Mean = 35.71333
3. Repeatability
3.1 Standard deviation Sr = 1.00709
3.2 Coefficient of variation = 3 %
4. Reproducibility
4.1 Standard deviation SR = 3.91928
4.2 Coefficient of variation = 11 %



Job Classification

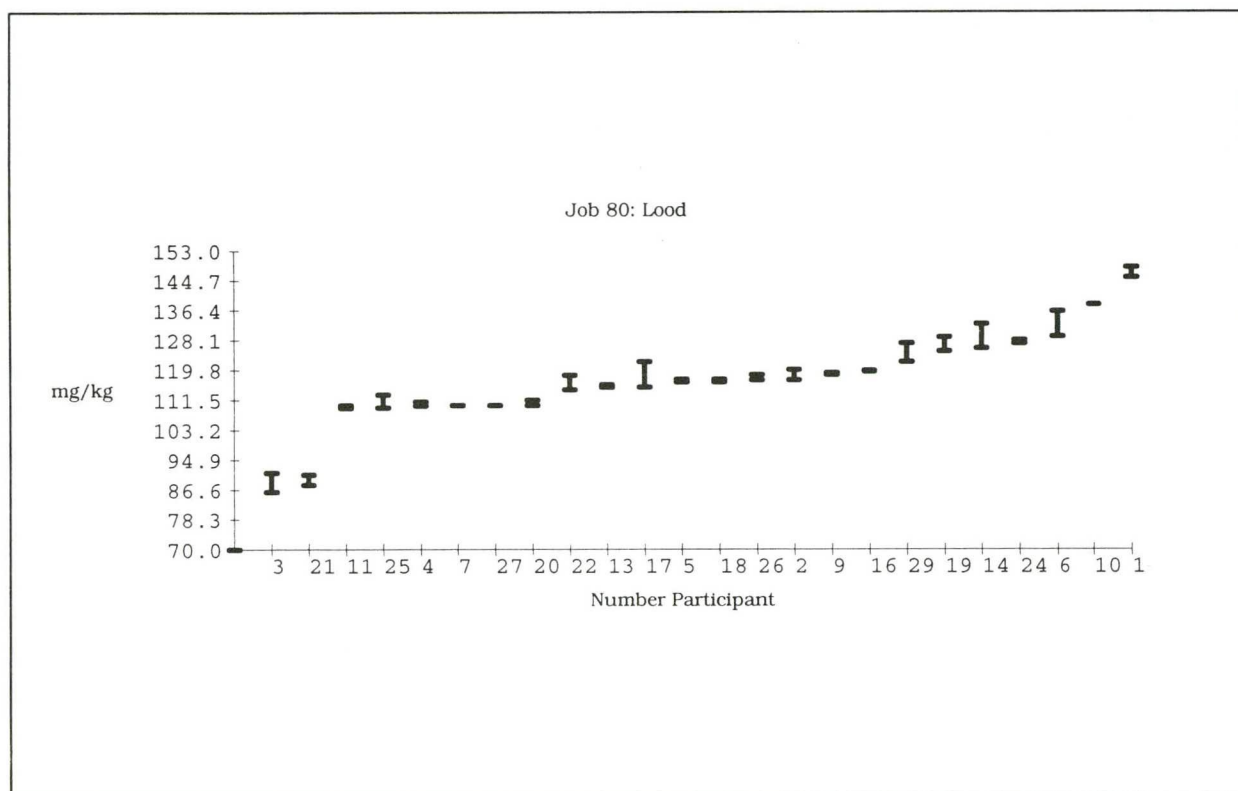
Lab	*	Mean	*	Clas	*	Ext	*	Clean	*	Det	*	Procedure	*
8	*	.00000	*	G	*	?	*	?	*	?	*	?	*
15	*	.00000	*	G	*	?	*	?	*	?	*	?	*
12	*	.00000	*	G	*	-	*	-	*	-	*	-	*
3	*	26.35000	*	C	*	-	*	-	*	-	*	NEN 5770	*
21	*	28.50000	*	B	*	-	*	-	*	CB	*	NEN 6426	*
4	*	32.38500	*	A	*	-	*	-	*	-	*	-	*
9	*	33.10000	*	A	*	TAM	*	-	*	CB	*	NEN 6426	*
22	*	33.40000	*	A	*	-	*	-	*	-	*	-	*
26	*	33.50000	*	A	*	TA	*	-	*	AAC	*	C-NEN 5765	*
25	*	34.00000	*	A	*	TAM	*	-	*	CB	*	G-NEN 6426/NVN 73	*
24	*	34.08500	*	A	*	TA	*	-	*	AAC	*	C-NEN 6456	*
7	*	34.50000	*	A	*	?	*	?	*	?	*	NEN 6456	*
20	*	35.45000	*	A	*	-	*	-	*	CB	*	NEN 6426	*
27	*	35.50000	*	A	*	-	*	-	*	-	*	NEN 6426	*
13	*	35.60000	*	A	*	TAM	*	-	*	BAF	*	G-NEN 6426	*
23	*	35.63500	*	A	*	TCM	*	-	*	BAF	*	-	*
19	*	36.00000	*	A	*	TAM	*	-	*	AAC	*	NVN5770/NEN6456	*
2	*	36.15000	*	A	*	-	*	-	*	-	*	NEN 6426	*
11	*	36.26000	*	A	*	TA	*	-	*	CB	*	C-NEN 6426	*
29	*	36.75000	*	W	*	TAM	*	-	*	CB	*	HUIS	*
16	*	37.12000	*	A	*	TAM	*	-	*	CB	*	C-NEN 6426	*
18	*	37.45000	*	A	*	TAM	*	-	*	AAC	*	C-NEN 5765	*
17	*	38.00000	*	A	*	TA	*	F	*	CB	*	C-NEN 6426	*
14	*	38.39500	*	A	*	TAM	*	-	*	D	*	HUIS	*
10	*	38.90000	*	A	*	TAM	*	-	*	AAC	*	C-NEN 5765	*
6	*	40.65000	*	B	*	TAM	*	?	*	CB	*	HUIS	*
28	*	41.00000	*	W	*	-	*	-	*	-	*	NVN 5770	*
5	*	41.50000	*	B	*	-	*	-	*	-	*	-	*
1	*	44.69000	*	C	*	-	*	-	*	-	*	-	*

General Mean = 35.71333
Between lab standard deviation SL = 3.78768
Coefficient of variation = 11 %
Number of laboratories = 24

A: Number of laboratories with	Z	-scores between 0 and 1	; 19
B: Number of laboratories with	Z	-scores between 1 and 2	; 3
C: Number of laboratories with	Z	-scores between 2 and 3	; 2
D: Number of laboratories with	Z	-scores larger than 3	; 0

Job 80 : 99092, 99096
 Lood, Pb in mg/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	143.50000	147.50000	145.50000	1.9 %	*
2 *	119.00000	115.00000	117.00000	2.4 %	*
3 *	89.80000	82.30000	86.05000	6.2 %	*
4 *	109.20000	110.70000	109.95000	1.0 %	*
5 *	117.00000	116.00000	116.50000	.6 %	*
6 *	124.00000	134.00000	129.00000	5.5 %	*
7 *	110.00000	110.00000	110.00000	.0 %	*
8 *			.00000	0 %	* - N.V.
9 *	118.00000	118.80000	118.40000	.5 %	*
10 *	138.00000	138.00000	138.00000	.0 %	*
11 *	108.80000	109.80000	109.30000	.6 %	*
12 *			.00000	0 %	* - N.V.
13 *	115.50000	114.50000	115.00000	.6 %	*
14 *	120.98000	130.55000	125.76500	5.4 %	*
15 *			.00000	0 %	* - N.V.
16 *	119.00000	119.50000	119.25000	.3 %	*
17 *	120.00000	110.00000	115.00000	6.1 %	*
18 *	116.00000	117.00000	116.50000	.6 %	*
19 *	127.70000	122.20000	124.95000	3.1 %	*
20 *	111.00000	109.00000	110.00000	1.3 %	*
21 *	90.00000	86.00000	88.00000	3.2 %	*
22 *	117.20000	111.60000	114.40000	3.5 %	*
23 *			.00000	0 %	* - N.V.
24 *	127.80000	126.30000	127.05000	.8 %	*
25 *	112.00000	107.00000	109.50000	3.2 %	*
26 *	116.00000	118.00000	117.00000	1.2 %	*
27 *	110.00000	110.00000	110.00000	.0 %	*
28 *	110.00000	150.00000	130.00000	21.8 %	*
29 *	118.40000	125.60000	122.00000	4.2 %	*



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

25 laboratory observations

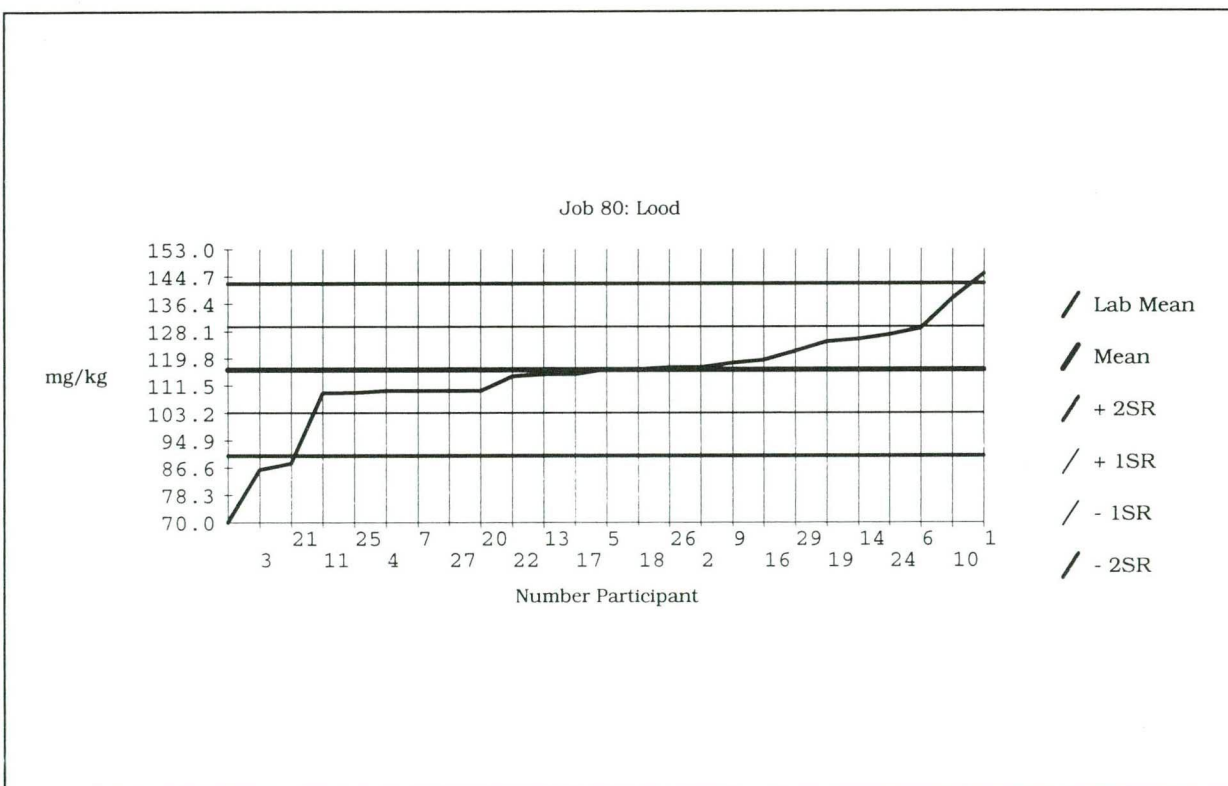
Maximum absolute difference from Normal distribution: 0.15425. Critical value: 0.31700. KS-test passed

COCHRAN; 1 % ; replicas: 2

Cyc *	Lab *	Average *	Variance *	Result *	Value
1 *	28 *	130.00000 *	28.28427 *	.74361 *	.41309

Summary

1. Eliminations due to
 - 1.1 Repeatability = 1
 - 1.2 Reproducibility = 0
 - 1.3 Manual rejected = 0
2. General Mean = 116.42146
3. Repeatability
 - 3.1 Standard deviation $S_r = 3.39017$
 - 3.2 Coefficient of variation = 3 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = 13.05648$
 - 4.2 Coefficient of variation = 11 %



Job Classification

Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
8 *	.00000 *	G *	? *	? *	? *	? *	*
15 *	.00000 *	G *	? *	? *	? *	? *	*
12 *	.00000 *	G *	- *	- *	- *	- *	*
23 *	.00000 *	G *	- *	- *	- *	- *	*
3 *	86.05000 *	C *	- *	- *	- *	NEN 5770	*
21 *	88.00000 *	C *	- *	- *	CB *	NEN 6426	*
11 *	109.30000 *	A *	TA *	- *	CB *	C-NEN 6426	*
25 *	109.50000 *	A *	TAM *	- *	CB *	G-NEN 6426/NVN 73	*
4 *	109.95000 *	A *	- *	- *	- *	- *	*
7 *	110.00000 *	A *	? *	? *	? *	NEN 6453	*
20 *	110.00000 *	A *	- *	- *	CB *	NEN 6426	*
27 *	110.00000 *	A *	- *	- *	- *	NEN 6426	*
22 *	114.40000 *	A *	- *	- *	- *	- *	*
13 *	115.00000 *	A *	TAM *	- *	CB *	G-NEN 6426	*
17 *	115.00000 *	A *	TA *	F *	CB *	C-NEN 6426	*
5 *	116.50000 *	A *	- *	- *	- *	- *	*
18 *	116.50000 *	A *	TAM *	- *	AAC *	C-NEN 5761	*
2 *	117.00000 *	A *	- *	- *	- *	NEN 6426	*
26 *	117.00000 *	A *	TA *	- *	AAC *	C-NEN 5761	*
9 *	118.40000 *	A *	TAM *	- *	CB *	NEN 6426	*
16 *	119.25000 *	A *	TAM *	- *	CB *	C-NEN 6426	*
29 *	122.00000 *	A *	TAM *	- *	CB *	HUIS	*
19 *	124.95000 *	A *	TAM *	- *	AAC *	NVN5770/NEN6453	*
14 *	125.76500 *	A *	TAM *	- *	D *	HUIS	*
24 *	127.05000 *	A *	TA *	- *	AAC *	C-NEN 6453	*
6 *	129.00000 *	A *	TAM *	- *	BAF *	HUIS	*
28 *	130.00000 *	W *	- *	- *	- *	NVN 5770	*
10 *	138.00000 *	B *	TAM *	- *	AAC *	C-NEN 5761	*
1 *	145.50000 *	C *	- *	- *	- *	- *	*

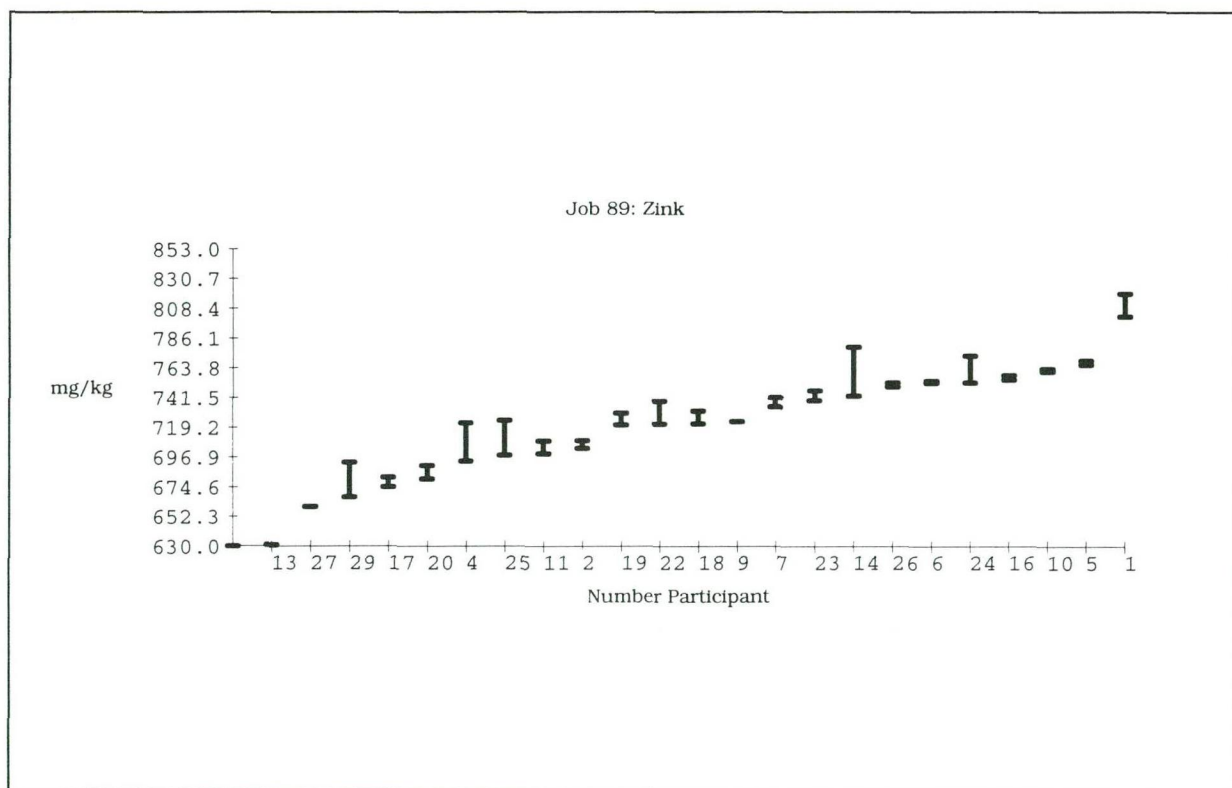
General Mean = 116.42146
Between lab standard deviation SL = 12.60866
Coefficient of variation = 11 %
Number of laboratories = 24

A: Number of laboratories with Z-scores between 0 and 1 ; 20
B: Number of laboratories with Z-scores between 1 and 2 ; 1
C: Number of laboratories with Z-scores between 2 and 3 ; 3
D: Number of laboratories with Z-scores larger than 3 ; 0

Job 89 : 99092, 99096

Zink, Zn in mg/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	791.30000	815.00000	803.15000	2.1 %	*
2 *	708.00000	700.00000	704.00000	.8 %	*
3 *	540.00000	499.00000	519.50000	5.6 %	*
4 *	674.10000	714.50000	694.30000	4.1 %	*
5 *	765.00000	769.00000	767.00000	.4 %	*
6 *	752.00000	754.00000	753.00000	.2 %	*
7 *	730.00000	740.00000	735.00000	1.0 %	*
8 *			.00000	0 %	* - N.V.
9 *	724.00000	724.00000	724.00000	.0 %	*
10 *	760.00000	763.00000	761.50000	.3 %	*
11 *	692.90000	706.60000	699.75000	1.4 %	*
12 *			.00000	0 %	* - N.V.
13 *	631.30000	631.00000	631.15000	.0 %	*
14 *	716.87000	769.06000	742.96500	5.0 %	*
15 *			.00000	0 %	* - N.V.
16 *	757.70000	753.00000	755.35000	.4 %	*
17 *	680.00000	670.00000	675.00000	1.0 %	*
18 *	729.00000	716.00000	722.50000	1.3 %	*
19 *	727.70000	714.80000	721.25000	1.3 %	*
20 *	688.00000	674.00000	681.00000	1.5 %	*
21 *	570.00000	550.00000	560.00000	2.5 %	*
22 *	734.00000	710.00000	722.00000	2.4 %	*
23 *	744.93000	734.78000	739.85500	1.0 %	*
24 *	767.40000	739.20000	753.30000	2.6 %	*
25 *	717.00000	680.00000	698.50000	3.7 %	*
26 *	748.00000	752.00000	750.00000	.4 %	*
27 *	660.00000	660.00000	660.00000	.0 %	*
28 *	660.00000	890.00000	775.00000	21.0 %	*
29 *	649.00000	685.60000	667.30000	3.9 %	*



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

26 laboratory observations

Maximum absolute difference from Normal distribution: 0.11772. Critical value: 0.31100. KS-test passed

COCHRAN; 1 % ; replicas: 2

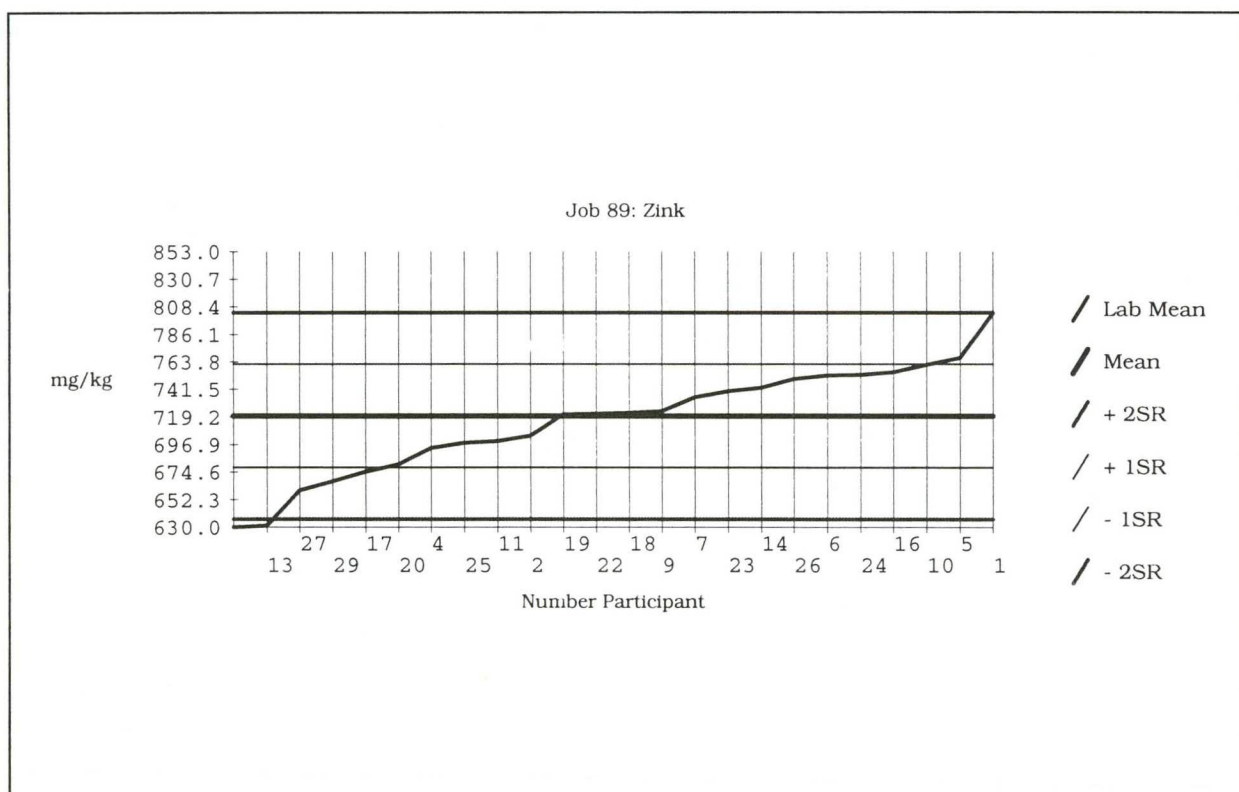
Cyc *	Lab *	Average *	Variance *	Result *	Value
1 *	28 *	775.00000 *	162.63456 *	.81220 *	.40201

GRUBBS; 1 % ; replicas: 2

Cyc *	Lab *	D/S *	Average *	Variance *	Result *	Value
1 *	21 *	D *	560.00000 *	14.14214 *	.37228 *	.43760
1 *	3 *	D *	519.50000 *	28.99138 *	.37228 *	.43760

Summary

1. Eliminations due to
 - 1.1 Repeatability = 1
 - 1.2 Reproducibility = 2
 - 1.3 Manual rejected = 0
2. General Mean = 720.08130
3. Repeatability
 - 3.1 Standard deviation $S_r = 14.85491$
 - 3.2 Coefficient of variation = 2 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = 41.77903$
 - 4.2 Coefficient of variation = 6 %



Job Classification

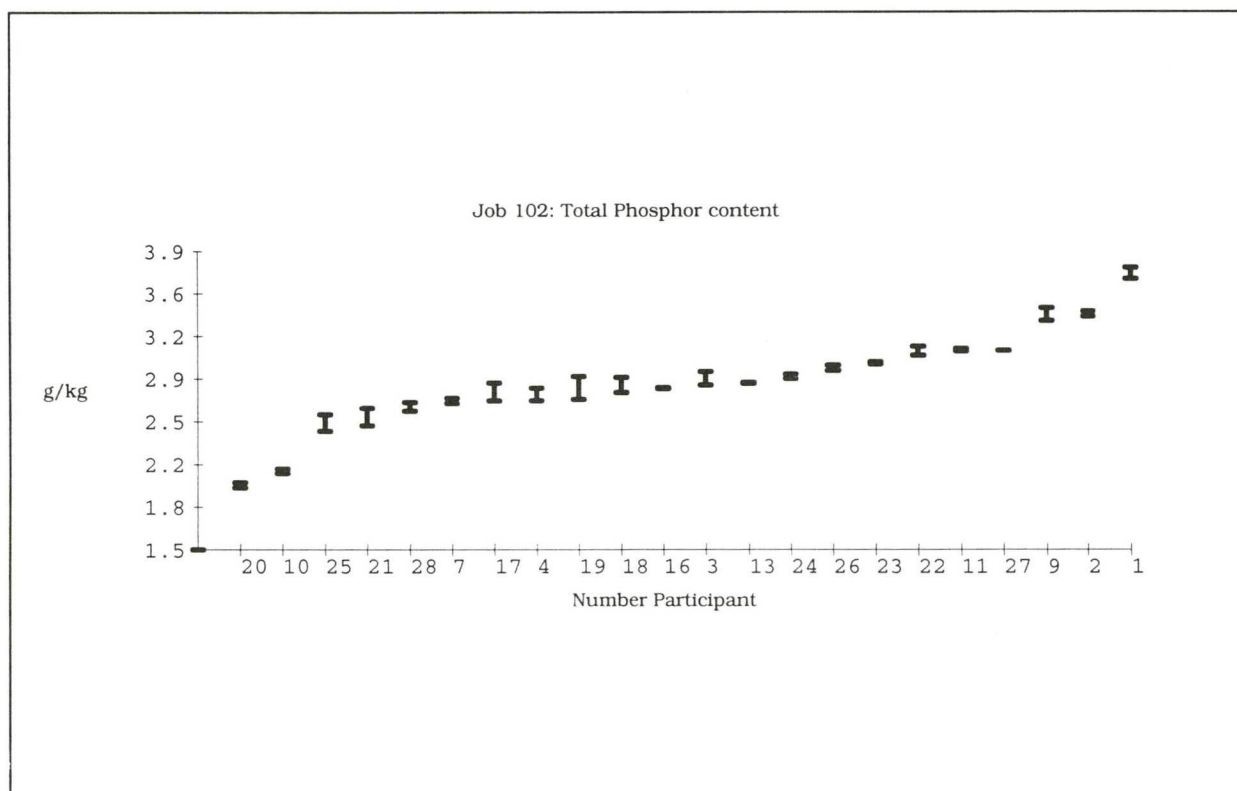
Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
8 *	.00000 *	G *	? *	? *	? *	? *	*
15 *	.00000 *	G *	? *	? *	? *	? *	*
12 *	.00000 *	G *	- *	- *	- *	- *	*
3 *	519.50000 *	R *	- *	- *	- *	NEN 5770	*
21 *	560.00000 *	R *	- *	- *	CB *	NEN 6426	*
13 *	631.15000 *	C *	TAM *	- *	CB *	G-NEN 6426	*
27 *	660.00000 *	B *	- *	- *	- *	NEN 6426	*
29 *	667.30000 *	B *	TAM *	- *	CB *	HUIS	*
17 *	675.00000 *	B *	TA *	F *	CB *	C-NEN 6426	*
20 *	681.00000 *	A *	- *	- *	CB *	NEN 6426	*
4 *	694.30000 *	A *	- *	- *	- *	- *	*
25 *	698.50000 *	A *	TAM *	- *	CB *	G-NEN 6426/NVN 73	*
11 *	699.75000 *	A *	TA *	- *	CB *	C-NEN 6426	*
2 *	704.00000 *	A *	- *	- *	- *	NEN 6426	*
19 *	721.25000 *	A *	TAM *	- *	AAC *	NVN5770/NEN6443	*
22 *	722.00000 *	A *	- *	- *	- *	- *	*
18 *	722.50000 *	A *	TAM *	- *	AAC *	C-NEN 5759	*
9 *	724.00000 *	A *	TAM *	- *	CB *	NEN 6426	*
7 *	735.00000 *	A *	? *	? *	? *	NEN 6443	*
23 *	739.85500 *	A *	TCM *	- *	AA *	- *	*
14 *	742.96500 *	A *	TAM *	- *	D *	HUIS	*
26 *	750.00000 *	A *	TA *	- *	AAC *	C-NEN 5759	*
6 *	753.00000 *	A *	TAM *	- *	CB *	HUIS	*
24 *	753.30000 *	A *	TA *	- *	AAC *	C-NEN 6443	*
16 *	755.35000 *	A *	TAM *	- *	CB *	C-NEN 6426	*
10 *	761.50000 *	B *	TAM *	- *	AAC *	C-NEN 5759	*
5 *	767.00000 *	B *	- *	- *	- *	- *	*
28 *	775.00000 *	W *	- *	- *	- *	NVN 5770	*
1 *	803.15000 *	C *	- *	- *	- *	- *	*

General Mean = 720.08130
Between lab standard deviation SL = 39.04893
Coefficient of variation = 5 %
Number of laboratories = 23

A: Number of laboratories with	Z	-scores between 0 and 1	; 16
B: Number of laboratories with	Z	-scores between 1 and 2	; 5
C: Number of laboratories with	Z	-scores between 2 and 3	; 2
D: Number of laboratories with	Z	-scores larger than 3	; 0

Job 102 : 99092, 99096
 Total Phosphor content, P in g/kg Sediment (Lake)

Lab *	X1 *	X2 *	Average *	%Variance *	
1 *	3.61400	3.74000	3.67700	2.4 %	*
2 *	3.40120	3.34280	3.37200	1.2 %	*
3 *	2.90000	2.75000	2.82500	3.8 %	*
4 *	2.63000	2.77000	2.70000	3.7 %	*
5 *			.00000	0 %	* - N.V.
6 *			.00000	0 %	* - N.V.
7 *	2.65000	2.71000	2.68000	1.6 %	*
8 *			.00000	0 %	* - N.V.
9 *	3.41100	3.27000	3.34050	3.0 %	*
10 *	2.09000	2.14000	2.11500	1.7 %	*
11 *	3.08000	3.11000	3.09500	.7 %	*
12 *			.00000	0 %	* - N.V.
13 *	2.84000	2.83000	2.83500	.2 %	*
14 *			.00000	0 %	* - N.V.
15 *			.00000	0 %	* - N.V.
16 *	2.80000	2.79000	2.79500	.3 %	*
17 *	2.80000	2.60000	2.70000	5.2 %	*
18 *	2.68000	2.85000	2.76500	4.3 %	*
19 *	2.84000	2.58000	2.71000	6.8 %	*
20 *	2.02800	1.96900	1.99850	2.1 %	*
21 *	2.40000	2.60000	2.50000	5.7 %	*
22 *	3.01000	3.11000	3.06000	2.3 %	*
23 *	3.00500	2.97900	2.99200	.6 %	*
24 *	2.90100	2.85000	2.87550	1.3 %	*
25 *	2.36000	2.55000	2.45500	5.5 %	*
26 *	2.97000	2.91000	2.94000	1.4 %	*
27 *	3.10000	3.10000	3.10000	.0 %	*
28 *	2.56600	2.66600	2.61600	2.7 %	*
29 *			.00000	0 %	*



Analysis

Kolmogorov-Smirnov test on assuming a Normal distribution. 1 % unreliability;

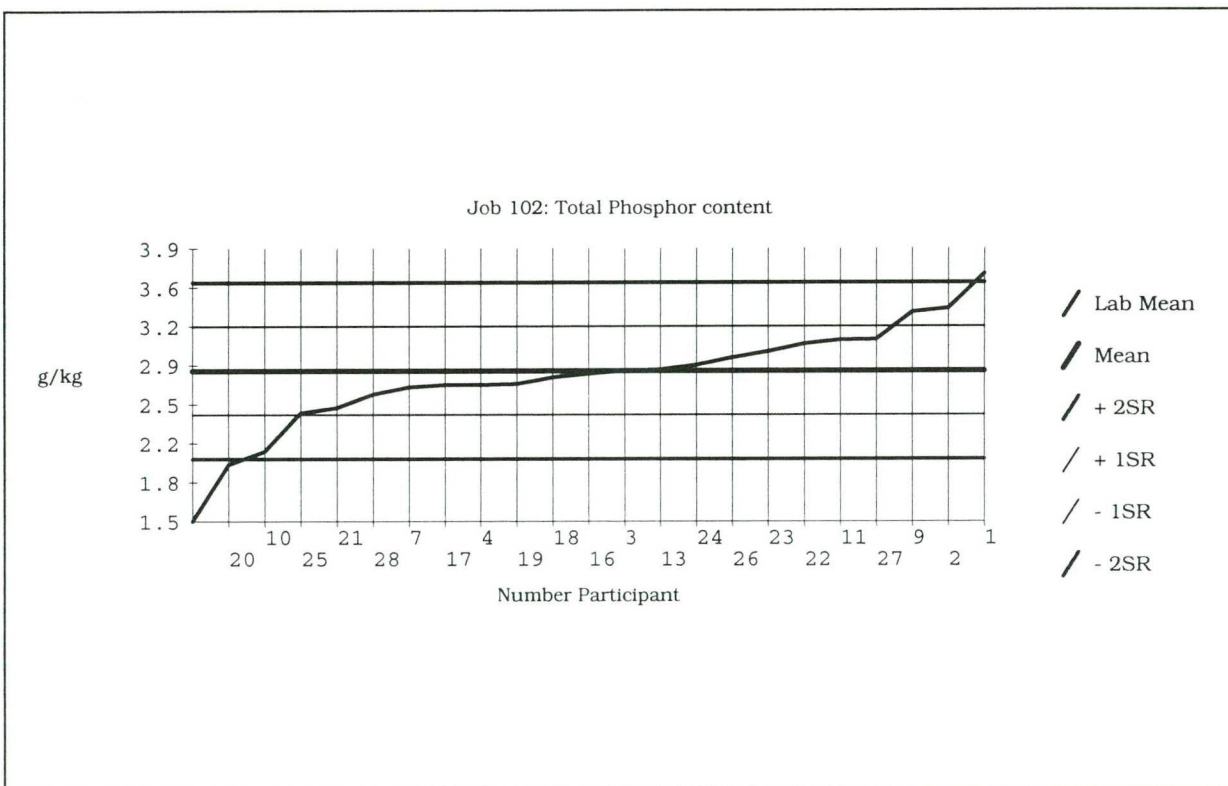
22 laboratory observations

Maximum absolute difference from Normal distribution: 0.09940. Critical value: 0.33700. KS-test passed

No outliers found

Summary

1. Eliminations due to
 - 1.1 Repeatability = 0
 - 1.2 Reproducibility = 0
 - 1.3 Manual rejected = 0
2. General Mean = 2.82484
3. Repeatability
 - 3.1 Standard deviation $S_r = .08679$
 - 3.2 Coefficient of variation = 3 %
4. Reproducibility
 - 4.1 Standard deviation $S_R = .38797$
 - 4.2 Coefficient of variation = 14 %



Job Classification

Lab *	Mean *	Clas *	Ext *	Clean *	Det *	Procedure *	
8 *	.00000 *	G *	? *	? *	? *	? *	*
14 *	.00000 *	G *	- *	- *	- *	- *	*
15 *	.00000 *	G *	? *	? *	? *	? *	*
5 *	.00000 *	G *	- *	- *	- *	- *	*
12 *	.00000 *	G *	- *	- *	- *	- *	*
29 *	.00000 *	G *	- *	- *	- *	- *	*
6 *	.00000 *	G *	- *	- *	- *	- *	*
20 *	1.99850 *	C *	- *	- *	- *	NVN 6645/NEN 6663	*
10 *	2.11500 *	B *	- *	- *	- *	NEN-EN 1189	*
25 *	2.45500 *	A *	TB *	- *	E *	NEN 6662/6479	*
21 *	2.50000 *	A *	- *	- *	- *	NEN 6663	*
28 *	2.61600 *	A *	- *	- *	- *	- *	*
7 *	2.68000 *	A *	? *	? *	? *	NEN 6645	*
17 *	2.70000 *	A *	- *	- *	- *	HUIS	*
4 *	2.70000 *	A *	- *	- *	- *	- *	*
19 *	2.71000 *	A *	TD *	- *	E *	HUIS	*
18 *	2.76500 *	A *	- *	- *	- *	C-NEN 6663	*
16 *	2.79500 *	A *	- *	- *	- *	HUIS	*
3 *	2.82500 *	A *	- *	- *	- *	NEN 6641	*
13 *	2.83500 *	A *	- *	- *	- *	C-NEN 6662/6663	*
24 *	2.87550 *	A *	- *	- *	E *	NEN 6646	*
26 *	2.94000 *	A *	- *	- *	- *	NEN 6663	*
23 *	2.99200 *	A *	TCM *	- *	D *	- *	*
22 *	3.06000 *	A *	- *	- *	- *	- *	*
11 *	3.09500 *	A *	TA *	- *	CB *	C-NEN 6426	*
27 *	3.10000 *	A *	- *	- *	- *	NEN 6663	*
9 *	3.34050 *	B *	TD *	- *	Z *	NEN 6663	*
2 *	3.37200 *	B *	- *	- *	- *	- *	*
1 *	3.67700 *	C *	TAM *	- *	CB *	G-NEN 6426	*

General Mean = 2.82484
Between lab standard deviation SL = .37813
Coefficient of variation = 13 %
Number of laboratories = 22

A: Number of laboratories with	Z	-scores between 0 and 1	; 17
B: Number of laboratories with	Z	-scores between 1 and 2	; 3
C: Number of laboratories with	Z	-scores between 2 and 3	; 2
D: Number of laboratories with	Z	-scores larger than 3	; 0



Dit is een minder milieu belastende inbindmap

Deze BINDOMATIC ECO-map bestaat uit een achterzijde van recycled karton en een voorzijde van PVC-vrije folie.

● chloor-arm ● zwavelvrij ● onschadelijk in de vuilverbranding ● niet van invloed op de kwaliteit van het grond- en oppervlakte water

