

2009-03 Salinity Duplicates

Precision statement for replicate samples drawn from a single Niskin bottle, Autosol analysis:

The pooled standard deviation for Salinity: Bottle for the range 31.2869 to 34.6693 was 0.0006,
k = 6 (4 outliers removed) where k is the number of pairs of duplicates.

The pooled standard deviation of pairs of samples (Sp) was calculated by:

$$Sp = \text{SQRT}\{\text{sum}(d^2)/2k\}$$

where k is the number of pairs and d is the difference between pairs.

Duplicate samples from a single Niskin bottle - Autosol analysis.

Event Number	Sample Number	Station	Pressure dbar	Salinity 1	Salinity 2	Rejected yes / no	Comment
1	4	Si03	149.9	31.2869	31.2877		
4	16	P2	74.5	32.8134	32.8127		
9	59	P4	1248.8	34.4686	34.4676		
18	125	P8	2000.7	34.5918	34.5916		
27	197	P12	2500.0	34.6254	34.6267		
35	279	P16	2497.5	34.6320	34.6295	yes	Outlier, high std dev in first value
38	351	P20	2499.0	34.6333	34.6297	yes	Outlier.
38	370	P20	5.2	32.4712	32.4700	yes	Run on different days, 5m samples
40	397	P26	3500.3	34.6693	34.6688		
40	418	P26	4.9	32.5624	32.5604	yes	Run on different days, 5m samples

Precision statement for replicate samples drawn from a single Niskin bottle, Portasal analysis:

The pooled standard deviation for Salinity: Bottle for the range 34.4719 to 34.6366 was 0.0007,
k = 3 (1 outlier removed) where k is the number of pairs of duplicates.

The pooled standard deviation of pairs of samples (Sp) was calculated by:

$$Sp = \text{SQRT}\{\text{sum}(d^2)/2k\}$$

where k is the number of pairs and d is the difference between pairs.

Duplicate samples from a single Niskin bottle - Portasal analysis.

Event Number	Sample Number	Station	Pressure dbar	Salinity 1	Salinity 2	Rejected yes / no	Comment
9	59	P4	1248.8	34.4719	34.4730		
27	197	P12	2500.0	34.6366	34.6273	yes	
35	279	P16	2497.5	34.6331	34.6318		
38	351	P20	2499.0	34.6309	34.6310		