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

The pooled standard deviation for Oxygen:Dissolved:Bottle for the range 0.192 to 6.962 ml/l was 0.012,

$k = 7$ (1 outlier removed) where k is the number of pairs of duplicates.

Precision calculation for duplicate samples:

Precision was determined by analyzing replicate samples drawn from one Niskin.

Pooled standard deviation of pairs of samples (Sp) was calucalated by:

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

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

Determination of outliers

Outliers are discarded on the basis of Chauvenet's criteria. The statistic is calculated by the difference

between the outlier and the mean, divided by the stdev.

If this absolute value is greater than the critical value of the Chauvenet criterion for the given n,

the datapoint can be discarded.

The Chauvenet Statistic assumes a normal distribution.

Duplicate analysis for samples drawn from a single Niskin bottle:

Event Number	Sample Number	Station	Pressure dbar	Oxy:Dis 1 ml/l	Oxy:Dis 2 ml/l	Rejected yes / no
2	5	Si03	124.5	0.384	0.199	yes
4	19	P2	24.5	5.792	5.794	
9	62	P4	799.4	0.192	0.216	
18	138	P8	100.4	6.214	6.236	
27	212	P12	74.5	6.714	6.698	
35	292	P16	123.0	5.955	5.945	
38	368	P20	24.1	6.962	6.937	
40	412	P26	125.1	5.948	5.949	

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Precision statement for samples drawn from duplicate Niskin bottles closed at same pressure:
The pooled standard deviation for Oxygen:Dissolved:Bottle for the range 0.439 to 6.793 ml/l was 0.015,
        k = 4 (1 outlier removed) where k is the number of pairs of duplicates.

Duplicate Niskins at the same pressure

Event Number	Sample Number	Station	Nominal Pressure dbar	Oxy:Dis 1 ml/l	Oxy:Dis 2 ml/l	Rejected yes / no	Comment
4	25 / 26	P2	5	6.793	6.77		
9	59 / 60	P4	1250	0.449	0.439		
27	196 / 197	P12	2500	1.126	1.821	yes	
35	278 / 279	P16	2500	1.882	1.901		
38	350 / 351	P20	2500	1.958	1.929		

Note: even though the precision statement for samples drawn from duplicate Niskin bottles (not true duplicates)
        is calculated using the same formula as the precision statement for duplicates samples drawn
        from one single Niskin, this process is mainly used to identify problem samples and is not being
        used as a measure of analysis precision.