

6. Which types of salinity and temperature should be archived?

Since 1978 we have gone to sea and collected and then archived Practical Salinity S_p (PSS-78), *in situ* temperature t (now ITS-90) and pressure p at known values of longitude, latitude and time. Under TEOS-10, nothing about this data collection and storage changes. Our instruments still need to measure properly calibrated data of (S_p, t, p) at known longitude, latitude and time. These are also exactly the same data that should continue to be archived in national oceanographic archives.

In particular, it cannot be over-emphasized that **NONE** of Reference Salinity S_R , Absolute Salinity S_A or Preformed Salinity S_* should **EVER** be submitted to or stored in national oceanographic databases. This resonates with the practice under EOS-80 regarding temperature; we archive the measured quantity, *in situ* temperature t , not the calculated quantity, potential temperature θ . Similarly, just as potential temperature is not stored in national databases, so too Conservative Temperature should **NEVER** be submitted to or stored in such national databases. In short, such databases should store measured (not calculated) quantities, and for this purpose, Practical Salinity is regarded as a measured quantity.