Notes on the function gsw_SA_from_rho_CT_exact(rho,CT,p)

This function, **gsw_SA_from_rho_CT_exact**(rho,CT,p) calculates (using a "modified Newton-Raphson" iteration procedure of McDougall and Wotherspoon (2014)) the Absolute Salinity S_A corresponding to the input values of *in situ* density, Conservative Temperature, and pressure. Note that the density input is not density anomaly, that is, it has not had $1000 \ \text{kg m}^{-3}$ subtracted from it.

This function uses the full TEOS-10 Gibbs function $g(S_A, t, p)$ of IOC *et al*. (2010), being the sum of the IAPWS-09 and IAPWS-08 Gibbs functions.

This function, **gsw_SA_from_rho_CT_exact**(rho,CT,p) can be used to find the Absolute Salinity on a potential density surface that corresponds to a certain Conservative Temperature on that potential density surface. In this application, the pressure argument of **gsw_SA_from_rho_CT_exact**(rho,CT,p) is the reference pressure of the potential density and rho is the value of the potential density (surface).

References

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