# A tool for calculating fundamental properties of sea water Software

The small tool is a stand-alone calculator for a couple of fundamental properties of sea water. This includes conductivity, conductivity ratio, PSS-78 salinity and depth from pressure with respect to latitudinal position and temperature. The user can modify single values while the respectively depending ones get changed automatically. Additionally the tool calculates depth, freezing point and sound speed. The software needs no installation and can be run from any storage device on systems with Windows<sup>™</sup> operating systems. No problems have been reported so far when running under emulated Windows<sup>™</sup>

systems on other systems.

### Disclaimer

The tool is for experimental and educational use only. It has been tested with the check values given by the UNESCO, but the author can not give a guarantee that values are congruent with officially listed ones. Especially, when extrapolating far beyond the range the polynomials are defined for.

## **Operating system**

The software was written for Windows 2000, XP and Vista operating systems. No guarantee is given for the operating systems Windows 95 and Windows 98. It was tested to run in emulated Windows environments on Mac OS X.

## Algorithms

#### Tool for calculating fundamental properties of sea water

Written by Jan Schulz Friday, 27 November 2009 14:44 - Last Updated Wednesday, 09 December 2009 21:18

The algorithms are published on this web-site and can be found in the <u>algorithm section on</u> <u>seawater</u>.

#### Download

File	Version	Description	File size

Seawater 0.1.0.63	Calc	ulator for fundamental prope	erties of sea water	
611 kB	27	t	h	Nov

#### Screenshot

Seawater propertie	
Latitude ["N]	30,000000
Temperature ("C]	40.000000
Pressure (dbar)	10000.000000
Conductivity (S/m)	8,102554
Conductivity ratio	1,888091
Salinity (PSS-78)	40.000000
Depth (m)	9712.653000
Freezing point ["C]	-9,742067
Sound speed (m/s)	1731,995394
late	mation