

*Questions: the density of water at 4 degrees Celsius is  $1.00 \times 10^3 \text{ kg/m}^3$ . what is water's density at 94 degrees Celsius?*

*Solution) In general density can be changed by changing either the pressure or the temperature. Increasing the pressure will always increase the density of a material. Increasing the temperature generally decreases the density, but there are notable exceptions to this generalisation. For example, the density of water increases between its melting point at  $0^\circ\text{C}$  and  $4^\circ\text{C}$  and similar behaviour is observed in silicon at low temperatures.*

### ***Density of water***

<b>Temperature</b>		<b>Density (at 1 atm)</b>
<b>°C</b>	<b>°F</b>	<b>kg/m<sup>3</sup></b>
0.0	32.0	999.8425
4.0	39.2	999.9750
15.0	59.0	999.1026
20.0	68.0	998.2071
25.0	77.0	997.0479
37.0	98.6	993.3316
50.0	122.0	988.04
100.0	212.0	958.3665