94. We denote the density of the liquid as $\rho$, the rate of liquid flowing in the calorimeter as $\mu$, the specific heat of the liquid as $c$, the rate of heat flow as $P$, and the temperature change as $\Delta T$. Consider a time duration $dt$, during this time interval, the amount of liquid being heated is $dm = \mu\rho dt$. The energy required for the heating is $dQ = Pdt = c(dm)\Delta T = c\mu\Delta T dt$. Thus,

$$c = \frac{P}{\rho\mu\Delta T} = \frac{250\,\mathrm{W}}{(8.0\times10^{-6}\,\mathrm{m^3/s})(0.85\times10^{3}\,\mathrm{kg/m^3})(15^{\circ}\mathrm{C})} = 2.5\times10^{3}\,\mathrm{J/kg\cdot C^{\circ}}\ .$$