



Coffee at a temperature T<sub>C</sub> and milk at a temperature T<sub>m</sub> are mixed. Derive the energy balance to determine the equilibrium mixing temperature.

## **Coffee properties:**

 $V_C$ ,  $c_C$ ,  $\rho_C$ 

## Solution:



## Milk properties:

 $V_{\rm m}$ ,  $c_{\rm m}$ ,  $\rho_{\rm m}$ 

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