**Answer on Question #53910 – Chemistry – General chemistry**

**Question:**

If the heat of vaporization of water at 25 degree Celsius is 44.0 kJ/mole, how much heat does your body lose when you sweat off 5.00 g of water at room temperature?

**Solution:**

5 g of water contains the following number of moles:

$\mu = m/M_w$, m – the mass of water, $M_w$ –the molecular weight of water, which equals 18 g/mole.

Thus, $\mu$ = 5 g / (18 g/mole) = 0.28 moles

The body loses the heat which is calculated according to the equation:

$Q = \Delta H_v \times \mu$ = 44.0 kJ/mole × 0.28 moles = 12.22 kJ

**Answer:** The lost heat at 25 degree Celsius is of 12.22 kJ