7-11

$c_{p,voda} = 4183\ J/kg\cdot K$ $\quad m_{voda} = 3\ kg$ $\quad m_{vzorek} = 2\ g$

$c_{p,vzduch} = 993\ J/kg\cdot K$ $\quad m_{vzduch} = 100\ g$ $\quad \Delta t = 3{,}2\ °C$

$$\Delta H = (m_{voda}\, c_{p,voda} + m_{vzduch}\, c_{p,vzduch})\cdot \Delta t$$

$$= (3\cdot 4183 + 0{,}1\cdot 993)\cdot 3.2 = 40\,475\ J$$

$$\Delta H / m_{vzorek} = \frac{40\,475}{0{,}002} = \underline{\underline{20{,}24\ MJ/kg}}$$

pokud se zanedbá vzduch

$$\Delta H / m_{vzorek} = \frac{(3\cdot 4183 + 0)\cdot 3{,}2}{0{,}002} = \underline{\underline{20{,}08\ MJ/kg}}$$

7-11

voda $\quad$ 100 g - vzduchu $\quad$ 3 kg - voda $\quad$ $c_{p,voda} = 4200\ J/kg\cdot K$

2 g - vzorku $\quad$ $\Delta t = 3{,}2\ °C$ $\quad$ $c_{p,vzduch} = 993\ J/kg\cdot K$

$$\Delta H = (m_1 c_{p1} + m_2 c_{p2})\cdot \Delta t = (3\cdot 4200 + 0{,}1\cdot 993)\cdot 3{,}2$$

~~$\Delta H = 3968\ J$~~ $\quad \Delta H = 40{,}638\ kJ$

$$\frac{\Delta H}{m_{vzorek}} = \frac{\cancel{3968}}{\cancel{0{,}002}} = \frac{40{,}638}{0{,}002} = \underline{\underline{20{,}3\ MJ/kg}}$$

(při zanedbání vzduchu a při použití $c_{p,voda} = 4183\ J/kg\cdot K$)

~~(3·4183+0)~~ $\quad \frac{(3\cdot 4183 + 0)\cdot 3{,}2}{0{,}002} = \underline{\underline{20{,}08\ MJ/kg}}$