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Solution: We see from a comparison of the two equations that

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Solution: We see from a comparison of the two equations that

$$s_{oct} = \frac{c_{p,oct}}{M_{m,oct}} = \frac{255.7 \text{ J/molK}}{114 \text{ g/mol}} = 1.97 \text{ J/g } ^\circ\text{C}$$