

- 13** A well-lagged copper calorimeter of mass 57 g is filled with 250 g of paraffin. The calorimeter and paraffin are both initially at 25 °C.

What will be the increase in the temperature of the paraffin if a lead cube of mass 400 g and temperature 150 °C is placed in the paraffin?

heat capacity of copper calorimeter = 21.7 J K⁻¹

specific heat capacity of paraffin = 2130 J kg⁻¹ K⁻¹

specific heat capacity of lead = 130 J kg⁻¹ K⁻¹

A 8.93 °C

B 9.21 °C

C 10.7 °C

D 12.9 °C