Figure 1 shows the graph of temperature against time. Some of the various calculated [1] and recorded values are listed in table 1.

Using the additive model in the graph, I calculated c as $0.45\,\mathrm{J\,g^{-1}}$.

This value of c agrees with various other values I've found:

- $c = 0.460\,548\,\mathrm{J\,g^{-1}}$ [1]
- $c = 0.450\,\mathrm{J\,g^{-1}}$ [2]
- $c = 0.444\,\mathrm{J\,g^{-1}}$ [3]

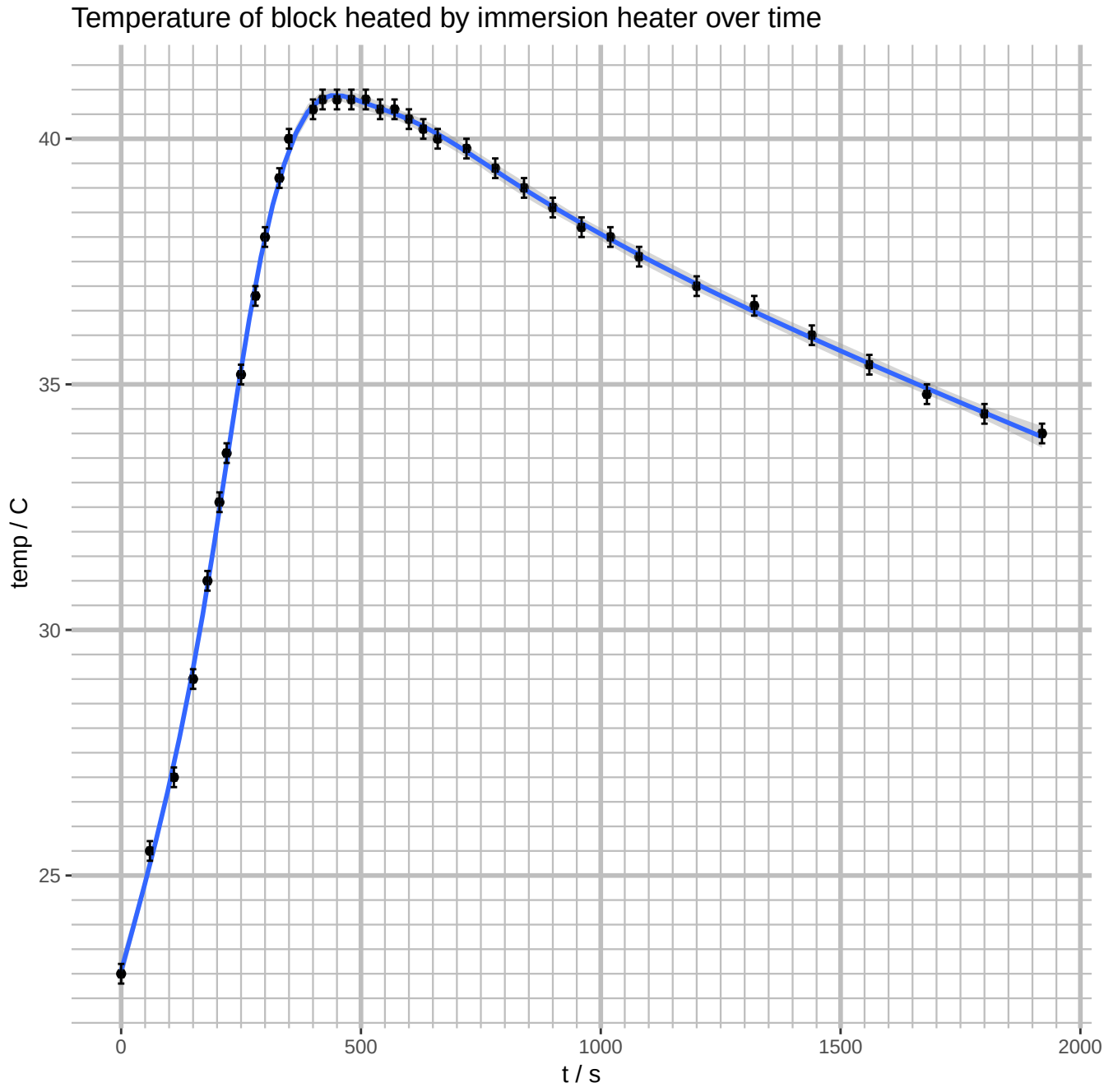

Figure 1: Graph of temperature against time

[1] https://github.com/elterminad0r/physics/tree/master/thermal_cap/analyse.r

t_1	446.8 s
t_2	1473.2 s
A_1	4537.0 s °C
A_2	21 070.4 s °C
$\theta_{\text{corrected max}}$	42.3 °C
θ_{start}	23.0 °C
t_{heat}	210.0 s
c	0.45 J g^{-1}

Table 1: Intermediate values in the calculation of c

References

[1] Engineers Edge [2015], 'Specific heat capacity of metals table'. Retrieved 12/7/18.
URL: *https://www.engineersedge.com/materials/specific_heat_capacity_of_metals_13259.htm*

[2] Leon, N. D. [2015], 'Indiana university northwest lecture notes'. Retrieved 12/7/18.
URL: *http://www.iun.edu/ cpanhd/C101webnotes/matter-and-energy/specificheat.html*

[3] Stretton, T. [2014], 'Chemistry pages databook'. Retrieved 12/7/18.
URL: *http://www2.ucdsb.on.ca/tiss/stretton/database/specific_heat_capacity_table.html*