Supplementary Material

# Supplementary Data

Supporting calculations for Table 5

Emissivity formula:

Where,

E = energy flux (also called the radiant emittance),  
ε = emissivity,   
 = Stefan–Boltzmann constant (5.67x10-8 W m^-2 K^-4) and  
T = Temperature (in kelvin).

or equivalently:

Error propagation formula:

applied to the temperature-emissivity equation:

where:

Assuming , i.e. ignoring the uncertaintity in the measured emission, we have:

For a given temperature, 308.15K (35oC), and considering the Stefan Boltzman constant , we can obtain the error in temperature for different choices of . See Table 5.