Experimental problem

The whole text given to the students:

At the workplace there are beyond other devices a test tube with 12 V electrical heating, a liquid with known specific heat ($c_0 = 2.1$ J/g°C) and an X material with unknown thermal properties. The X material is insoluble in the liquid.

Examine the thermal properties of the X crystal material between room temperature and 70 °C. Determine the thermal data of the X material. Tabulate and plot the measured data.

(You can use only the devices and materials prepared on the table. The damaged devices and the used up materials are not replaceable.)