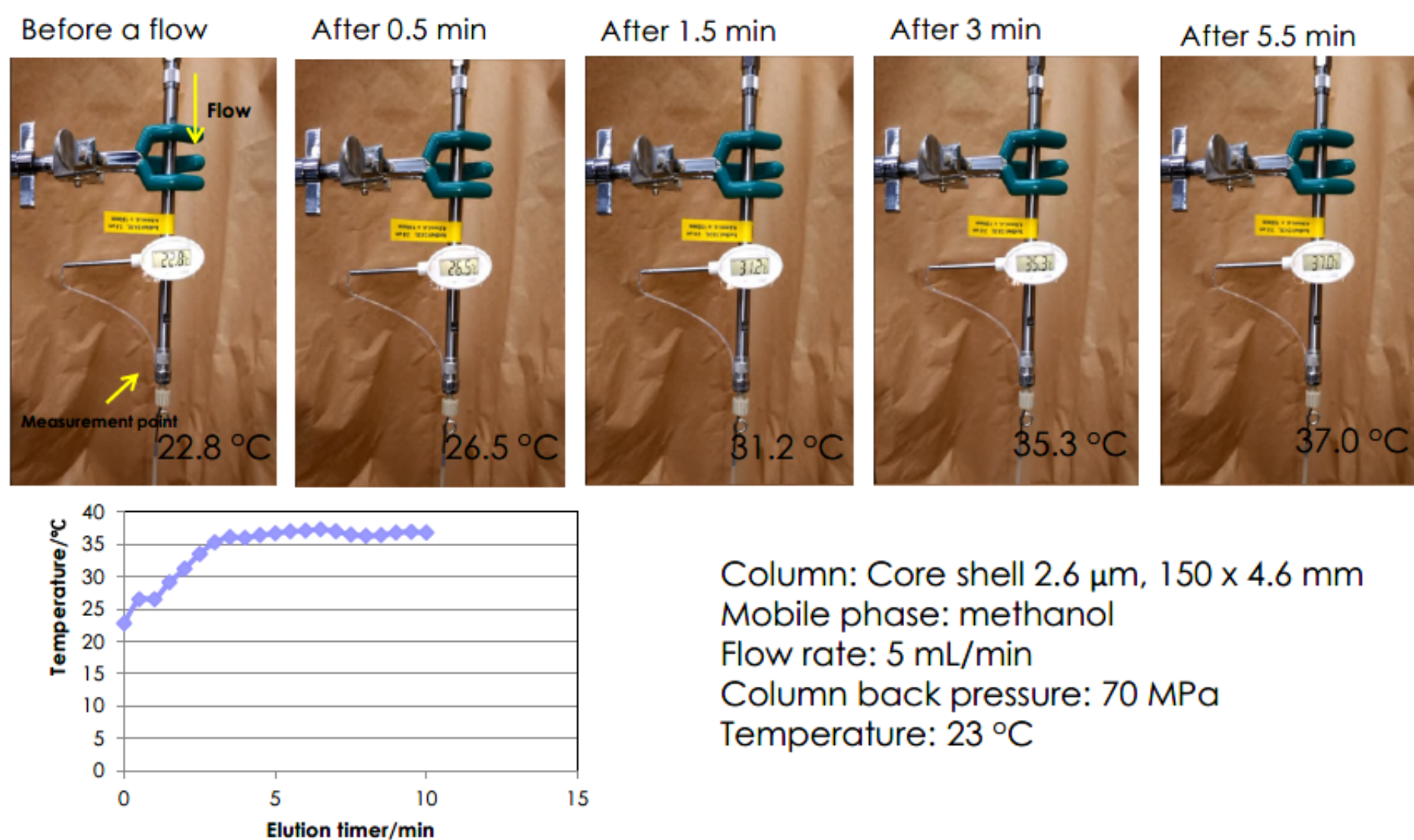


Generation of frictional heat



We measured the temperature of the surface of the column outlet when methanol flowed at 5 ml/min at 70 MPa

Initially temperature is 22.8 degree C, after 6 minutes, temperature then increased to 37 degree C. This means that frictional heat was generated in the column.

If frictional heat is not a problem at below 25 MPa pressure. So when a 5 μm or 3 μm column is used, nobody notices an issue with frictional heat.