

MicroCal iTC200 Training Quiz

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Read the following before the MicroCal iTC200 training:

- iTC200 Microcalorimeter User's Manual
- [Essential reading for any ITC user](#) (Foster lab website)

1. What basic thermodynamic parameters can be obtained from an ITC experiment?
2. What is the temperature range in which the iTC200 instrument can be operated?
3. What should the reference cell be filled with?
4. What are the volumes of cell and syringe samples required for running an experiment on the iTC200?
5. How can you achieve buffer matching between the titrant and analyte?
6. What is the C value, and what is a good range of values for obtaining an accurate K_d ?
7. If the macromolecule in the cell has n binding sites and a concentration of $[M]$, what should the ligand concentration in the syringe be?
8. During the experiment, when does the iTC200 start rotating the syringe (stirring stage)?
9. What should the final molar ratio between the ligand and macromolecule be?
10. What are some of the possible reasons for the measured stoichiometric ratio "n" not matching with the expected value?