Equilibrium Calculations

Chemistry

Using an ICE table to find Kc or an equilibrium concentration.

The ICE method.

1. **Write the balanced equation**
   Coefficients determine the change row.

2. **Initial row**
   Starting moles or concentrations.

3. **Change row**
   −x, +2x and so on, in the stoichiometric ratio.

4. **Equilibrium row**
   Initial plus change.

5. **Substitute into Kc**
   Convert moles to concentrations first if needed.

WATCH FOR

- Divide moles by total volume before substituting
- x may be negligible if K is very small
- Check the units of Kc — they vary with the equation

Kc units depend on the equation: for A ⇌ B they cancel; for A + B ⇌ C they are $dm^3\ mol^{-1}$. Work them out each time.