

# Adapt pH

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**Where** On the "gel-bench" = bench over the autoclave = bench right to the flume hood

**Material needed**

Quantity	What
	Acid (e.g. HCl) or Base (e.g. NaOH)
	Medium, for which you want to adjust the pH.
	Glass pipette(s)
	Glass electrode

**Steps**

1. Place the medium on the magnetic stirrer.
2. Rinse the glass electrode. Don't hit the electrode with anything. Since it is glass it can break!
3. Measure pH by holding the electrode into the medium.
4. Add drops of acid with the glass pipette. Go slowly!! It reacts slowly therefore always wait for a moment until you add the next drops of acid. (The electrode is permanently in the medium. You can position it on the stand then you don't have to hold it all the time.)
5. If you add too much acid correct by adding drops of a base e.g. NaOH. (Change pipette!!)
6. Glass electrode has to be kept in saturated KCl. If you spill the KCl which is in the container where the electrode is stored you have to refill it!

**Warnings**

- Wear safety glasses since we are working with strong acids.
- Don't make the magnetic stirrer turn too rapidly! If the stirrer hits the glass electrode it will break!
- Use glass pipette for acids!!
- Don't touch medium with pipette!