Session 1: Running a quick PCR

In this session we will use the EDVOTEK Quick PCR kit to amplify Lamda DNA

1. Label a new tube as DNA mix followed by your initials
2. Add your 1 PCR bead to this tube
3. Add 20ul of **diluted primer mix**
4. Add 5ul of **Lambda DNA mix** (your DNA template)
5. Mix well with a pipette and securely cap the tube
6. The solution should turn to an orange liquid, indicating that all reagents are present and mixed.
7. Spin tube
8. Hand tube to instructor who will load the samples into the Thermocycler

Programme for the thermocycler:

1. Denaturation at 94^{o}C for 3 minutes
2. 94^{o}C cycle for 30 seconds
3. 71^{o}C cycle for 30 seconds

Go to step 2 for an additional 19 cycles (repeats)

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Session 2: Gel Electrophoresis using Lonza Flashgel

In this process we will dye your DNA using a stain and use an electric current to pull the DNA across a special gel.

1. Label a 1.5 ml tube with your sample ID.
2. Set a 10 µl pipette to 3 µl.
3. **Add 3 µl the blue lonza flash gel loading dye** to the tube.
4. Set a 10 µl pipette to 2 µl.
5. **Add 2 µl of your PCR product** into the tube.
6. Using your pipette gently suck the liquids up and down in the tube to mix the loading dye and PCR sample together.
7. Set a 10µl pipette to 5 µl.
8. **Load 5 µl of the mixture** into a well of the gel.

The trainer will show you where to load the sample. Be careful not to puncture the gel, or the sample won't remain in the well

9. The trainer will turn on the power unit of the gel system.
10. Check the screen or gel. In a few minutes you will see bands appear on the gel.

If a band appears on the gel, this means there is DNA present. If a band does not appear, The PCR reaction was not successful. This could mean that DNA was not present in the sample or that the reaction failed.