Gel electrophoresis

- **Add 25 mL 0.8% agarose gel (HOT!) into a beaker. INSTRUCTOR!**
- **Assemble the gel tray with the red rubber holders, but do not put the comb into it.**
- **When the agarose gel cooled to 40°C, add 2 µL Gelstar fluorescence dye to the gel. INSTRUCTOR! Then, pour the cooled gel into the assembled gel tray!**
- **Put the comb into the gel tray. (INSTRUCTOR WILL CHECK IT)**
- **While you are waiting for the gel solidification, practice the sample injection on the practising gel and make 4 different samples.**
- **When the gel is solidified, remove the comb and then the (red) rubber holders CAREFULLY! SLOWLY!**
- **Put the gel with the gel tray into the gel tank in appropriate direction. DNA fragments migrate towards the positive (RED) polarity!**
- **Slowly pour approx. 400 mL TBE 10x running buffer into the gel tank, but the liquid level does NOT reach MAX FILL label! DO NOT MOVE THE GEL TANK ANYMORE!**
- **Inject 2 µL sample into the wells using a micropipette. You have 4 samples and every sample should be injected two times as follows:**

  1st sample into 1st and 8th wells

  2nd sample into 2nd and 7th wells.

  3rd sample into 3rd and 4th wells.

  4th sample into 5th and 6th wells.
- **Put the plastic cover onto the gel tank and connect the electrodes (red cable into red hole, black cable into black hole). DO NOT MOVE THE GEL TANK!**
- **Set up the high voltage power supply. INSTRUCTOR!**
- **Start the electrophoresis with START button. INSTRUCTOR!**
- **When the faster blue dye marker almost reaches the end of the gel (~1 cm), switch off the voltage (press STOP button). INSTRUCTOR!**
- **Carefully remove the electrodes and the plastic cover.**
- **Take out the gel with the gel tray and dry the bottom of the gel tray with paper towels.**
- **Use the Dark Reader device to visualize the separated bands and take a photo. INSTRUCTOR!**