3. Script „Level 1“: Workflow of the Thin Layer Chromatography (TLC)

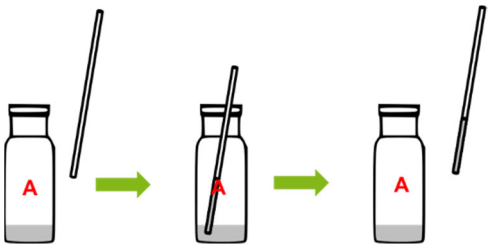
Layout – laboratory bench

- TLC chamber (closed) with little solvent
- 1 vial (with colourless liquid without lid) and a glass capillary for spotting
- tweezers
- UV lamp
- prepared TLC plate (line at the bottom approx. 5 mm from the edge)

Procedure for the thin layer chromatography (*working instructions*):

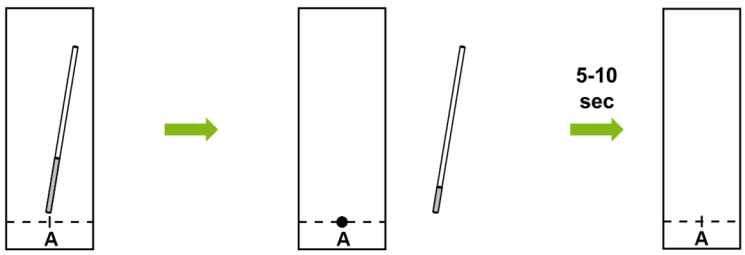
1. Fill the capillary with the sample solution:

The sample solutions are applied to the TLC plate using a capillary. One end of the capillary is briefly held in the solution until there is some liquid in the capillary.



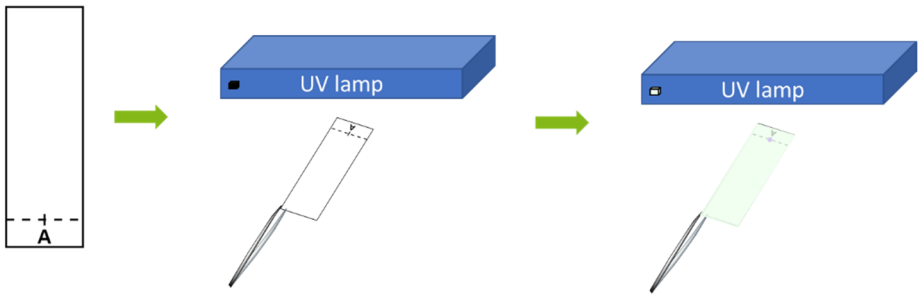
2. Dot sample solution A onto TLC plate:

The capillary is then placed on the drawn line at A on the TLC plate so that the capillary briefly touches the TLC plate, leaving a spot of sample approximately 2 mm in diameter. Then wait 5-10 seconds until the solvent has evaporated.



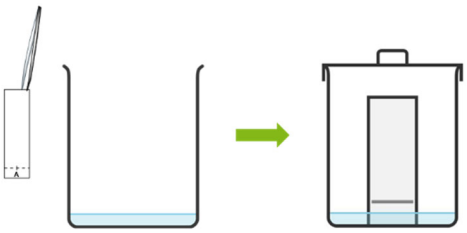
3. Placing the TLC under the UV lamp:

*The TLC plate is then carefully placed under the UV lamp **using tweezers**. The UV lamp is switched on and the result is viewed.*



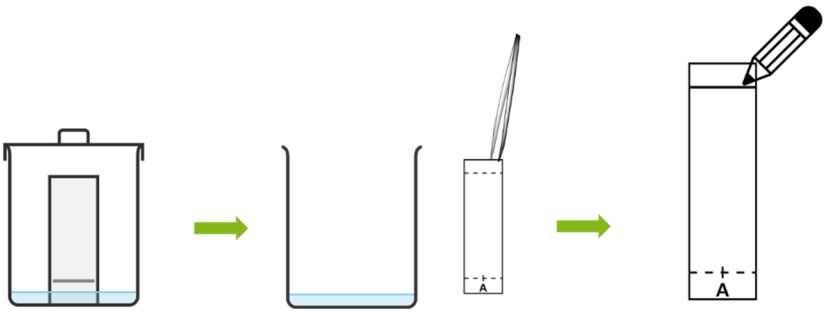
4. Place the TLC in the TLC chamber:

*The UV lamp is switched off. The TLC plate is then carefully placed in the TLC chamber **using tweezers** without "stirring up" the solvent in the chamber. The TLC chamber is closed with a lid.*



5. Remove the TLC plate from the TLC chamber:

As soon as the medium front reaches approx. 5 mm below the top edge of the TLC plate, the TLC plate is removed from the TLC chamber using tweezers. The medium front is marked with a pencil.



6. Viewing the developed TLC plate under the UV lamp:

The TLC plate is placed under the UV lamp. The UV lamp is turned on and the TLC plate is viewed. The spot is circled with a pencil to determine the retention time.