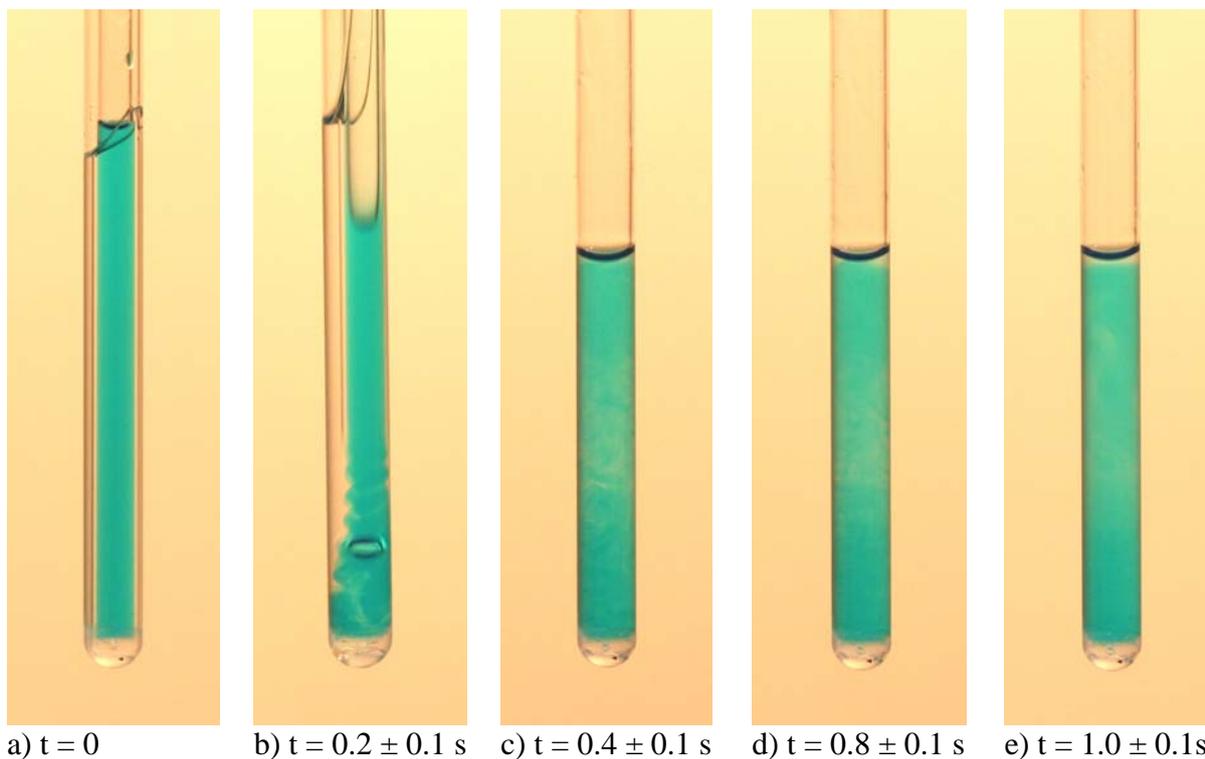


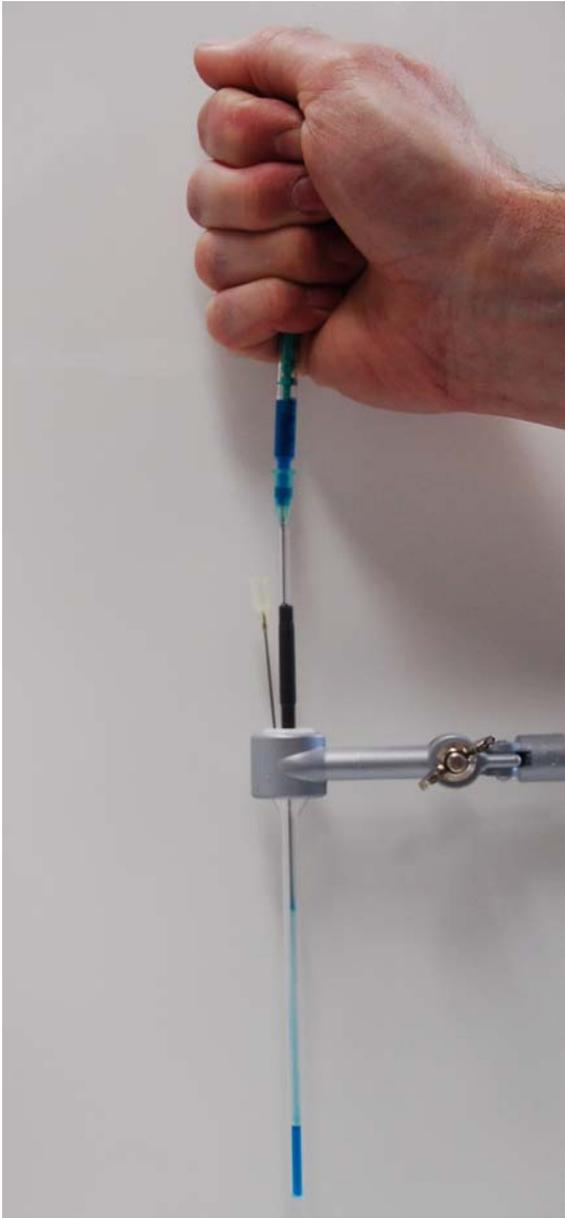
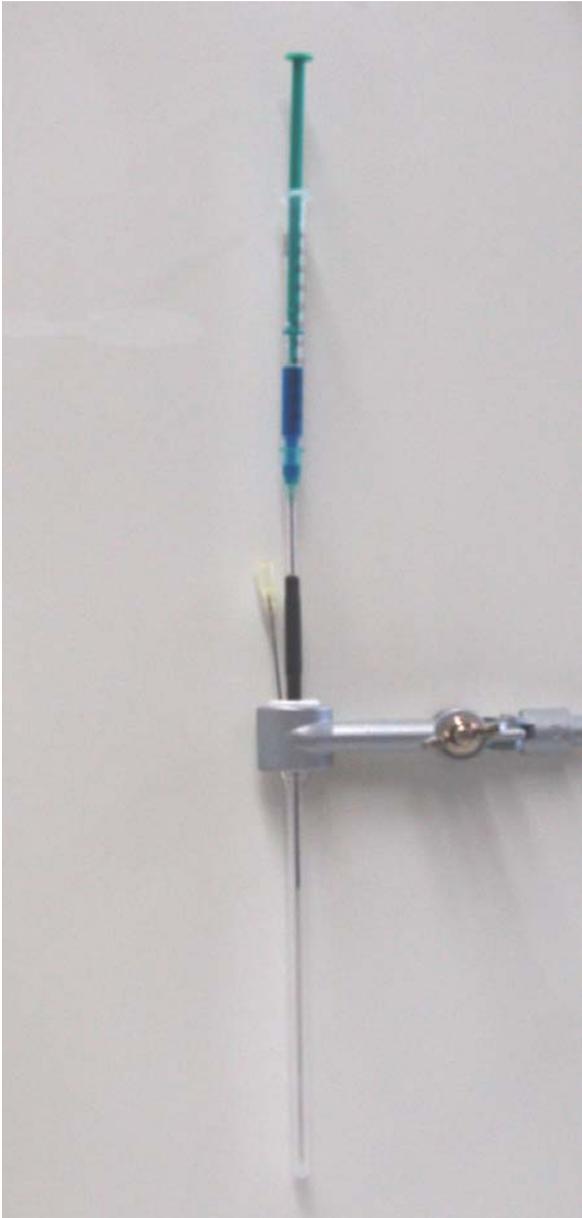
Visualization of the mixing process

In order to visualize the mixing the inner tube was filled with an organic dye dissolved in acetone while the external compartment contained pure acetone. Pictures were taken every 0.2 seconds (according to the manual of the camera manufacturer) while the insert was unscrewed and lifted rapidly. Since the camera and the pulling of the insert have not been triggered the imperfection in determining the time is about ± 0.1 s.

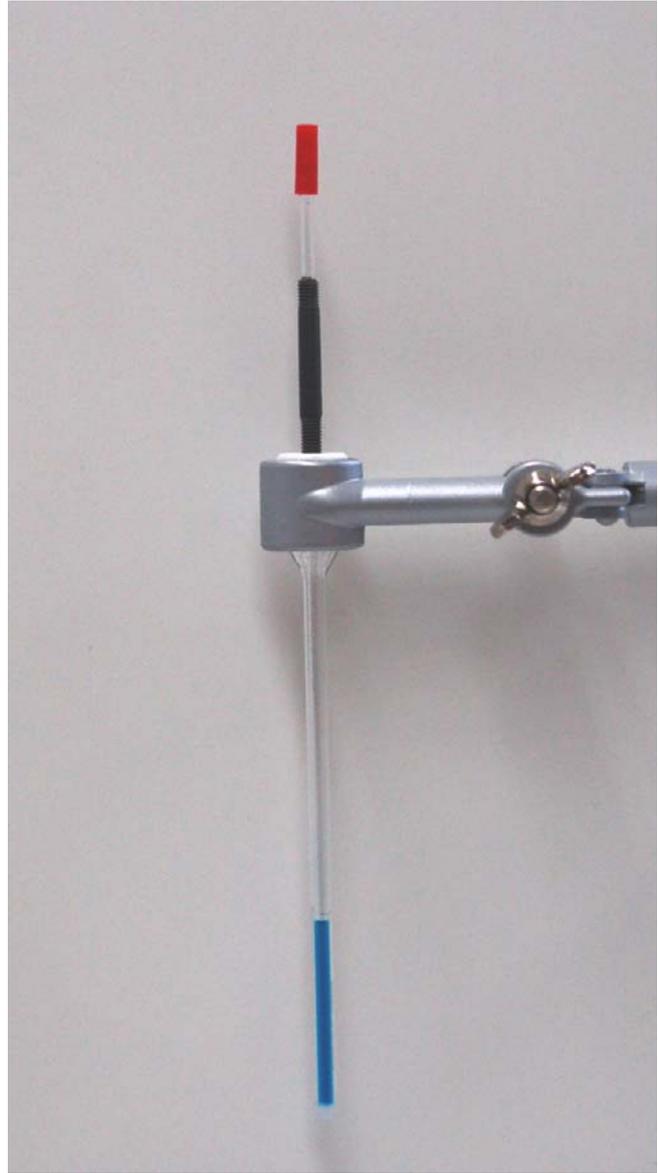
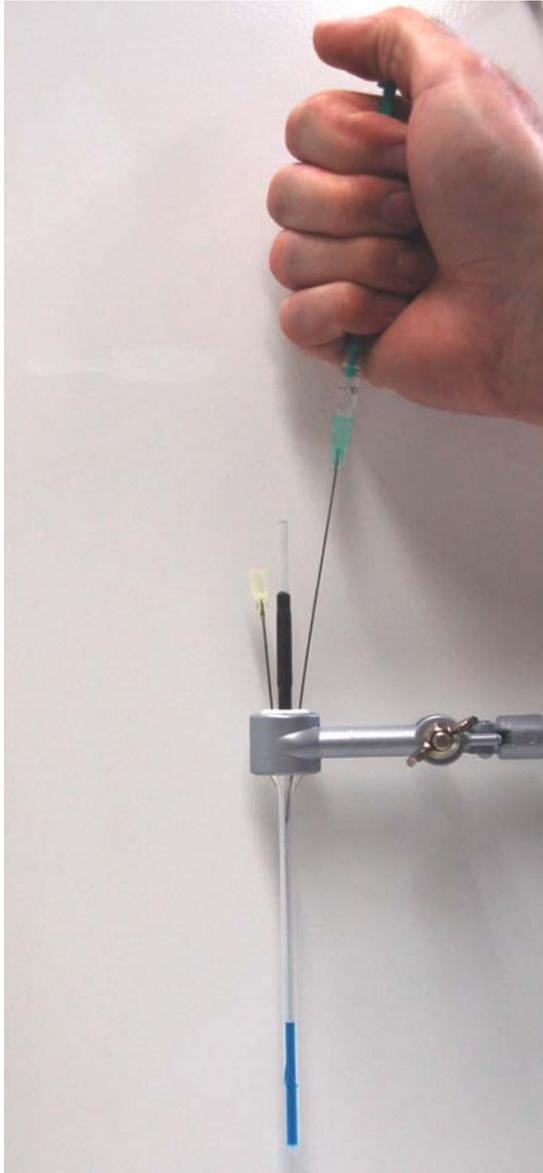


Mixing process in the co-axial NMR tube.

Tube filling

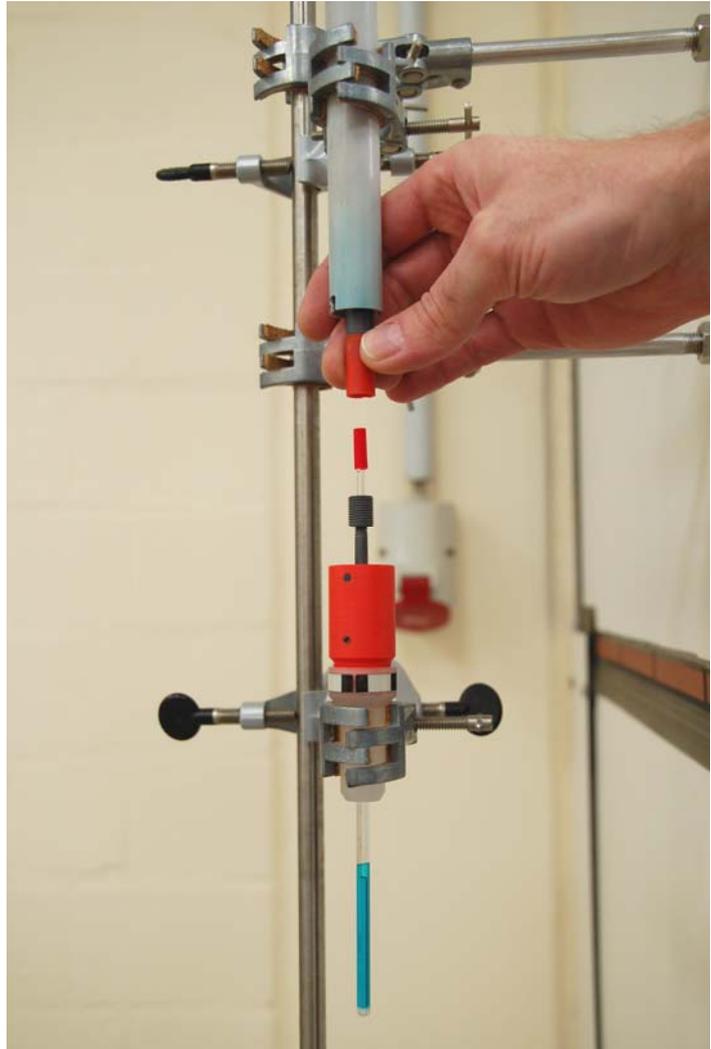


Filling of the insert by syringe.



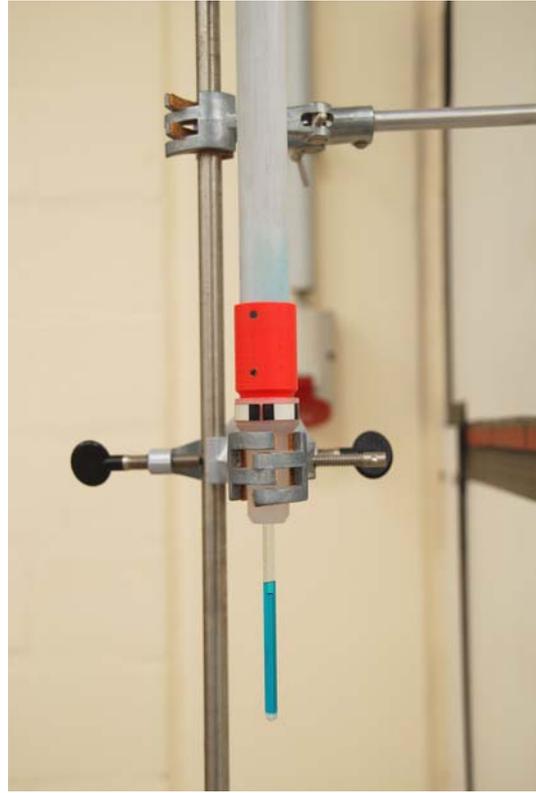
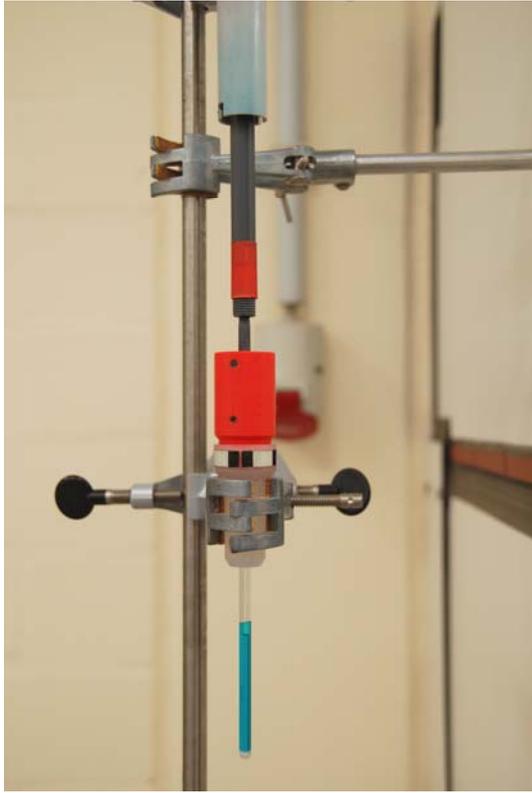
Left. Filling of the compartment in the external 5 mm tube by syringe through one of the small bores in the cap. The sealing in the cap is pierced. A small cannula in the second bore enables pressure equilibration during the filling. **Right.** Filled tube.

Mounting of the filled tube and Insertion into the magnet



Left. Filled tube with holder and attachment ready to be linked to the manipulator rods.

Right. Opener (inner rod) to be joined with the insert.



Left. After joining opening rod and insert. **Right.** Combining Placement rod and holder attachment.

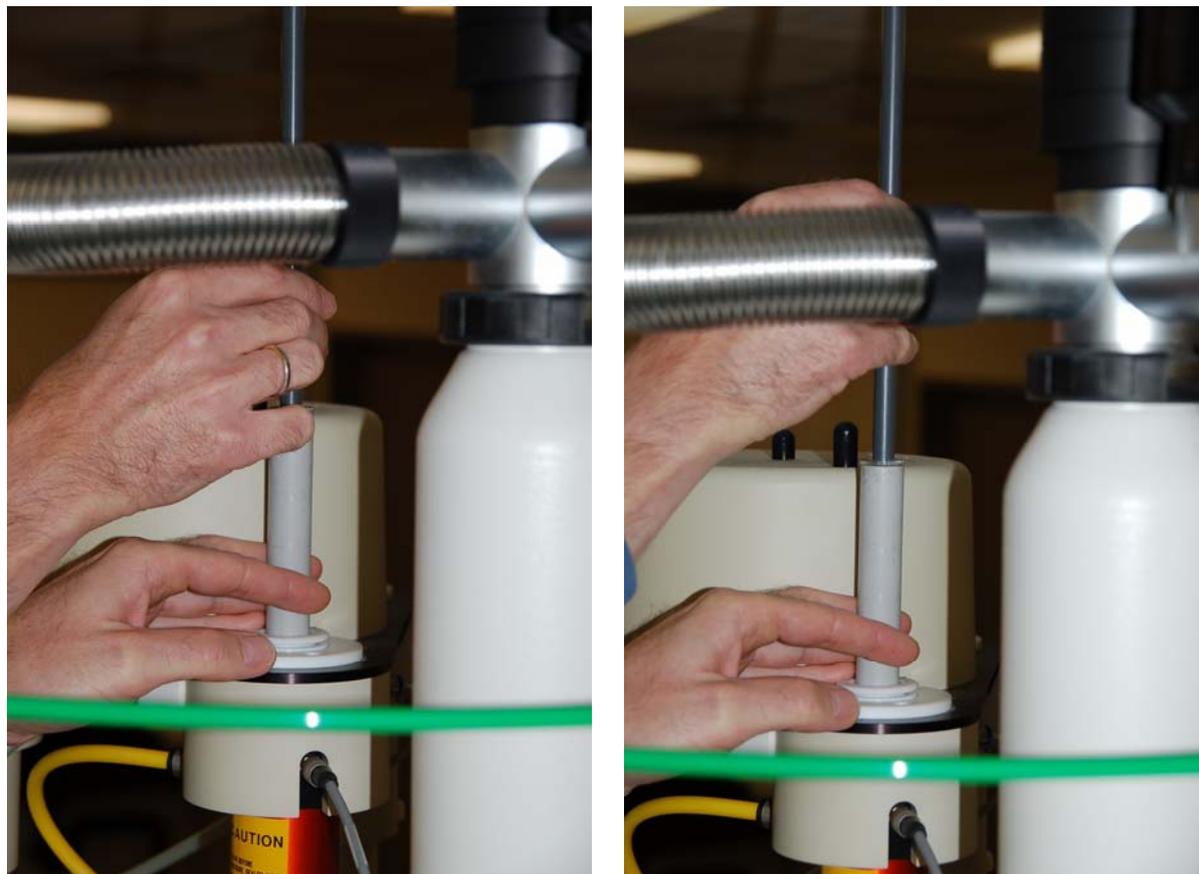


Mounted kit ready for insertion into the magnet.



Insertion of the apparatus into the magnet.

Combining the reactants



Opening procedure. left: The holder rod is kept with one hand while the inner rod is turned clockwise until the insert is completely unscrewed; **right:** the insert is lifted to its upper position marked by the two small pins in the opening rod.