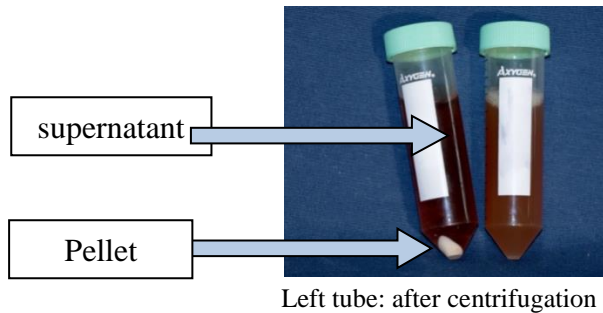


Procedure of Polymerization

2. Separation of bacteria by centrifugation

- 2.1 Fill two times 40 ml of fermentation medium in two 50 ml Falcon-tubes.
- 2.2 Centrifuge both Falcon-tubes at 5000 rpm for 10 minutes.



3. Lactic acid concentration by distillation

- 3.1 75 ml of supernatant will be distilled (Lactic acid: 122 °C).
- 3.2 Distillate ca. 50 ml H₂O.
- 3.3 Cool down the lactic acid solution.

4. Polymerization of lactic acid

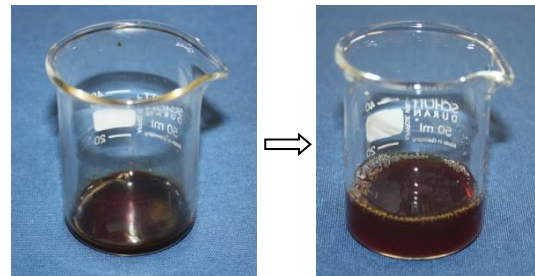
- 4.1 Materials for polymerization:

- 4.2 Pipette 5 ml of lactic solution in a test glass.
- 4.3 Add in a test glass a little of the catalysator Sn-(II)-chloride.
- 4.4 Heat the solution for 5 to 10 minutes under the fume cupboard by steady shaking to avoid boiling retardation.
- 4.5 When the mass is boiling under an intensive gray smoke production pour the polymerizing mass in a 40 ml beaker.

→ By cooling down in the beaker PLA gets hard.

5. PLA-Degradation by Hydrolyses

- 5.1 Add 10 ml distilled water into the beaker and stir.



→ PLA slowly gets deluted.

