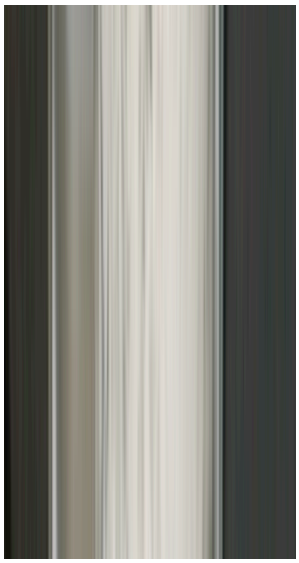
Enzymatic hydrolysis procedure

1.1 Preparation citrate-hydrolysis-buffer

Look at teachers schedule

1.2 Papershredding and homogenization

1. Shred 30 g paper



2. Put 1000 ml citrate-hydrolysis-buffer to the shredded paper
3. Puree the mixture with a hand blender for about 2 min.

1.3 Digestion of cellulose by cellulase and cellobiase

1. Take away the baffle before the filling of the fermenter.
2. Transfer the paper mush into the fermenter.
3. Start the hydrolysis by adding 7,5 ml cellulase and 750 µl cellobiase.
4. Carry out the hydrolysis at 50 °C and 800 rpm for 16 hours.
5. Extract 1 ml each sample at the beginning and for example after 4, 8,12 and 16 hours and determine the glucose concentration.
6. Turn off the stirrer to extract your sample.

7. To absorb the mush you have to take the measurement pipette inversely.

8. Centrifuge the removed samples at 14000 rpm for 1 min.
9. Transfer the remnants into new tubes.
10. Dip a glucose-test-strip in the sample for 1 sec. and stripe it off at the edge of the vessel.
11. Compare the two test areas after two minutes with the color scale at the label of the packing and determine the glucose concentration. (see picture below)