

Short Instruction for building DIY photobioreactor

Part 1: Setting up the bioreactor

1. Clean glass containers
2. Construct ports and making them air tight
3. Add aluminum foil to protect ports after autoclaving
4. Add tubing for bubbling
5. Test the set-up regarding
 1. Bubbling
 2. Mixing
 3. Various
6. Fill with distilled water
7. Autoclave

Part 2: Preparing the nutrients and media (under sterile bench after autoclaving)

1. Remove the aluminium foil of the gas inlet and carefully and cleanly add a syringe filter on the inlet
2. Add BG11 50x, add pH-buffer to the water
3. Add the inoculation culture
4. Prepare a monitoring program to control pH and growth

Part 3: Growing and Maintaining Culture

1. Create a protocol and check regularly
2. If contaminated or slow growth check parameters and reset culture if necessary