

A photobioreactor for CO₂ biosequestration according to the invention has a biomass of algae or cyanobacteria immobilised in capsules (3) which have an outer envelope (4). The capsules of the biomass of algae or cyanobacteria (3) are supplied with light from a light source (6) by a separate, single light tube (5). In the photobioreactor, the capsules (3) are surrounded by a gaseous atmosphere and are wetted with a culture medium and periodically flushed. The photobioreactor is polyhedral or circular in its cross section.