ABSTRACT

PHOTOSYNTHETIC REACTOR FOR CULTIVATING MICROORGANISMS, AND METHOD FOR CULTIVATING MICROORGANISMS

A photosynthetic reactor (1) suitable for cultivating photosynthetic microorganisms, notably algae, comprising at least one photosynthetic reaction pipe (2) at least one return pipe (3), at least one means (4) for circulating the liquid culture medium, at least one gas injection means (5) and at least one exhaust means (6) positioned in the high portion of the reactor (1), wherein the placement of the gas injection means (5) and/or the conformation of the reaction pipe (2) or of the return pipe (3) are designed so that the gas injected by the injection means (5) rises again to the exhaust means (6) by circulating in the reaction pipe (2), in a low-to-high flow direction, so that the injected gas and the liquid culture medium establish a gas/liquid two-phase flow in a substantially horizontal reaction section (23) of the reaction channel (2).

The present invention finds application in the field of cultivating photosynthetic microorganisms and notably algae.

Fig. 1