

ABSTRACT OF THE INVENTION

An air-lift bioreactor includes a vessel allowing a culture medium to flow therein, a flow amplifier and a sparger, wherein both the flow
5 amplifier and the sparger are disposed inside the vessel. The flow amplifier accelerates a portion of the culture medium, which flow through the flow amplifier. Then, the portion of the culture medium go back to the vessel. The flow direction of the accelerated culture medium is different from the flow direction of the gas bubbles generated by the
10 sparger. Thereby, the culture medium may have good recirculation inside the vessel.

Fig 9