

Method for aerobic fermentation of biological material involves introducing bacteria intended for the fermentation process into nutrient medium of working container of limited volume, wherein outlet pipe connected to pump is installed in the lower part of working container, wherein pump outlet is connected to flow mixer assembly, to which oxygen-containing gas supply pipe is additionally connected, wherein in flow mixer, feed medium is pre-mixed with oxygen-containing gas to form gas-liquid mixture, which is then fed into turbulator designed as tubular pipe, inside which, along its entire length, static mixer is placed in the form of sequentially connected plates, planes of which have different spatial orientations. Static mixer generates stable turbulent flows, which disperse oxygen-containing gas bubbles and ensure their dissolution within feed medium, as well as uniformly distribute oxygen throughout the entire volume of feed medium, wherein oxygen-saturated feed medium is recirculated from turbulator back into working container and constant oxygen saturation level of feed medium is maintained.