

The invention relates to the equipment for liquid fuel obtaining from vegetal oils and low-molecular alcohols and may be applied in the chemical, food and processing industries.

The installation for obtaining biodiesel fuel from vegetal oils consists of an etherification reactor (1), a washing reactor, a mixing reactor (13), heat exchangers, separators (3) and a cooler. The etherification reactor includes a multichamber mixing column (8), two receiving-distributing capacities, a receiving-discharging capacity and a mixing section (12). The multichamber mixing column consists of a cylindrical body, inside which there is placed a vertical shaft. Onto the vertical shaft, perpendicular to its axis, and onto the inner surface of the body, there are fixed immobile disks with slots, dividing the inner space of the mixing column into  $n$  mixing chambers. The mixing reactor, placed onto the external surface of the etherification reactor's body, is made of spiral-shape type, inside which by means of fixing bars, convoluted into a cylindrical spiral, there are fixed disks with slots, forming mixing chambers. The washing reactor is made in the form of a cylinder, in the centre of which there is installed a buffer-mixing column and is divided by the heat exchanger into washing and stripping capacities coupled between them, at the same time the buffer-mixing column is joined with the washing capacity by an injector.

Claims: 1

Fig.: 5

