

Summary

“Reactors of Biotechnology Production” for students of all forms of education

Credit module «Reactors of Biotechnology Production» is part of a cycle independent choice of educational institution in the direction of preparation Mechanical Engineering speciality Equipment of Pharmaceutical and Biotechnological Productions for students 4 course (7 semester).

The discipline of the department realized Department of Bioengineering and Biotechnies Faculty of Biotechnology and Biotechnies *NTYY «KPI»*.

Weight machines are used, for example, microbial biotechnology is different, and the requirements are determined primarily by economic considerations. With regard to the fermenter they distinguish the following types: laboratory capacity 0,5-100 l pilot-100L capacity 10 m³, industrial capacity 10-100 m³ and more.

Zastosovuyeme in biotechnology equipment should contribute a share of aesthetics in the interior of the shop or department ("pet eye"). In the course of its operation and beyond it, the equipment must be easily accessible and functioning within a framework of requirements of hygiene and sanitation. When replacing any parts or parts in the machine, lubrication and cleaning units in the repair, and so on. D. Pollution should not fall into bioreactor in communications material flow in final products.

Technical equipment of biotechnological processes conventionally advisable to restrict production hardware design based on cultivation: 1) bacteria and fungi, 2) cells and plant tissues, 2) the cells and tissues of living organisms and humans. This unit is because bacteria and fungi are mostly grown in bioreactors of the same type that are almost the same type of harness, comprising: fermenter, Multiple sterile valve (for supplying the culture medium of seed, feed, etc.), Regulation system pH, 1 °, filing defoamers, Airflow Control System, sampler, electric motor. Plant cells have a cell wall (as well as bacteria and fungi) grow, multiply and develop for much longer than most bacteria and fungi, and it makes some adjustments to the hardware design of appropriate biotechnological processes. Culture cells of animals and humans that do not have cell walls are more vulnerable and demanding conditions of existence than the cells of other eukaryotes and prokaryotes. Because of equipment for them can be classified as "low-speed" that ensures gentle handling of biological objects.

Developer summary *Mel'nyck Viktorija Mykolaivn, Professor, head of the Department of Bioengineering and Biotechnies*