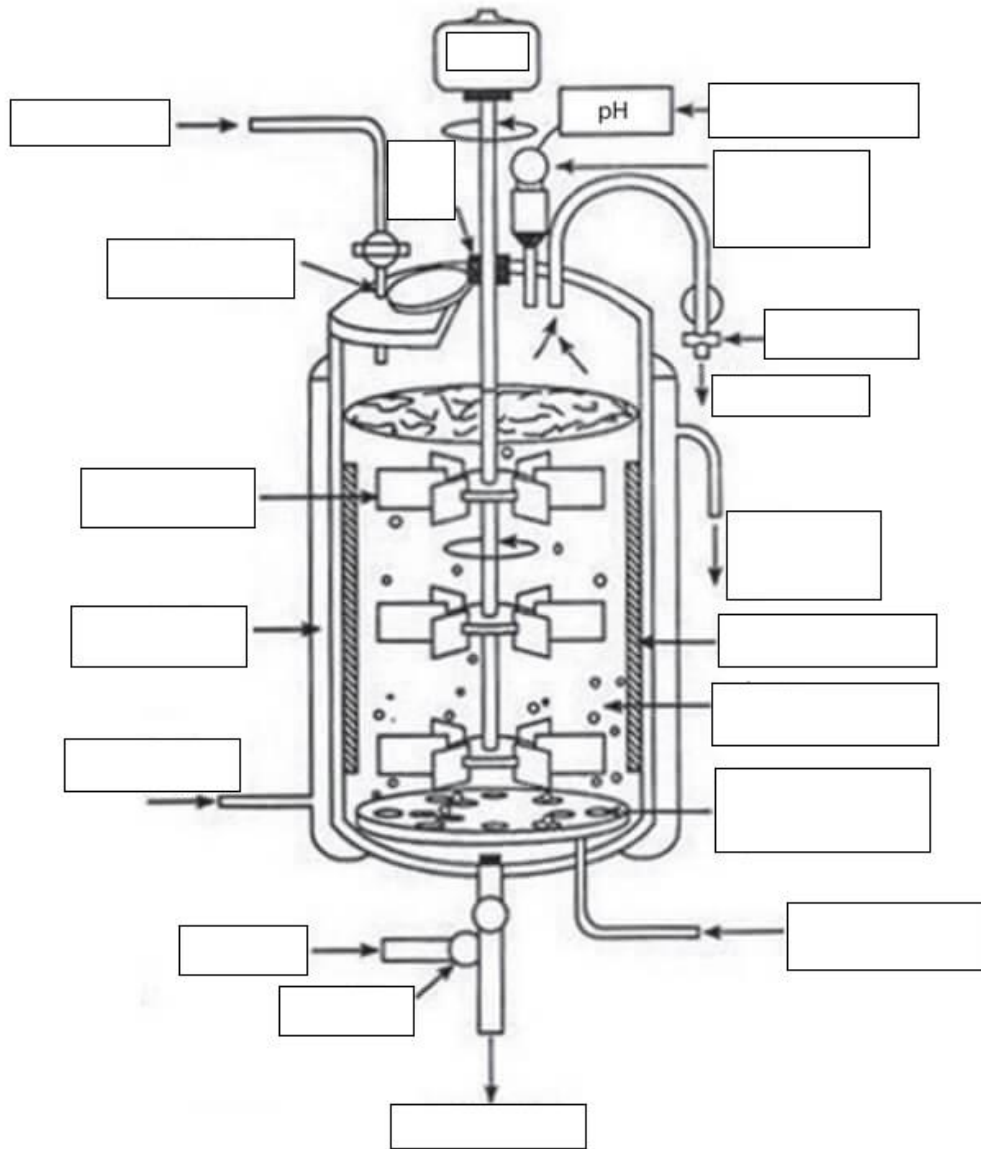


Parts of the bioreactor



1. Acid-base reservoir and pump
2. Baffle
3. Cooling jacket
4. Cooling water in
5. Cooling water out
6. Culture broth
7. Exhaust
8. Filter
9. Harvest
10. Impeller
11. Motor
12. pH controller
13. Sparger
14. Steam
15. Sterile air
16. Sterile seal
17. Viewing port
18. Valve