



**B. Sc. (MICROBIOLOGY) SEMESTER-III
Paper-II
(Industrial Microbiology)**

UNIT-I

Fermentor Design of Fermentor, Construction material, Agitator, Sparger

<https://microbenotes.com/design-of-a-fermenter>

Fermentor

<https://www.slideshare.net/NEETHUSASOKAN/fermentor-241562778>

UNIT-II

Microbial strain development

https://www.google.com/search?client=ms-android-oneplus-rvo3&sca_esv=539627831b1f95ed&q=Strain+development,&tbm=vid&source=lnms&prmd=invsmtz&sa=X&ved=2ahUKEwiLnpHB_JiEAXVh1zgGHT1jCcIQ0pQJegQIExAB&biw=360&bih=694&dpr=3#fpstate=ive&vld=cid:03866096,vid:HmL-f5aSm2s,st:0

Sterilisation of fermentation Media

https://www.youtube.com/watch?v=UuX_HmSr8b8

Batch and continuous sterilization processes

<https://www.youtube.com/watch?v=rgFhXOmKNmo>

Aeration and Agitation in Bioreactor

https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://m.youtube.com/watch%3Fv%3D-o4FFQKqoT0&ved=2ahUKEwia57Wn_ZiEAXUMgq8BHbkYDVAQo7QBegQIBxAG&usg=AOvVaw2P0WM0hmBwCCJNodQWvFlo

Fluid Rheology & Factor affecting bioreactor process

https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://m.youtube.com/watch%3Fv%3DEpWJWRwDWys&ved=2ahUKEwia57Wn_ZiEAXUMgq8BHbkYDVAQo7QBegQIBRAG&usg=AOvVaw14aWvTfNy28zrkRTOegFDp



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UNIT-III

Downstream Processing

<https://www.youtube.com/watch?v=JYDsPChnmJc>

fermentation product recovery and purification

<https://www.youtube.com/watch?v=cwWi7s0jSGY>

GMP - Good Manufacturing Practices

<https://www.youtube.com/watch?v=4wTIP-q2-sw>

Sterility testing of products according to IP and USP

<https://www.youtube.com/watch?v=V-xwUzYF3jA>

UNIT-IV

Industrial Production of Single Cell Protein

<https://www.youtube.com/watch?v=PGLTSRAjtPI>

Baker's Yeast Fermentation

<https://www.youtube.com/watch?v=C3J2jN-Gi9w>

Ethanol Production

<https://www.youtube.com/watch?v=TIRY77faclQ>