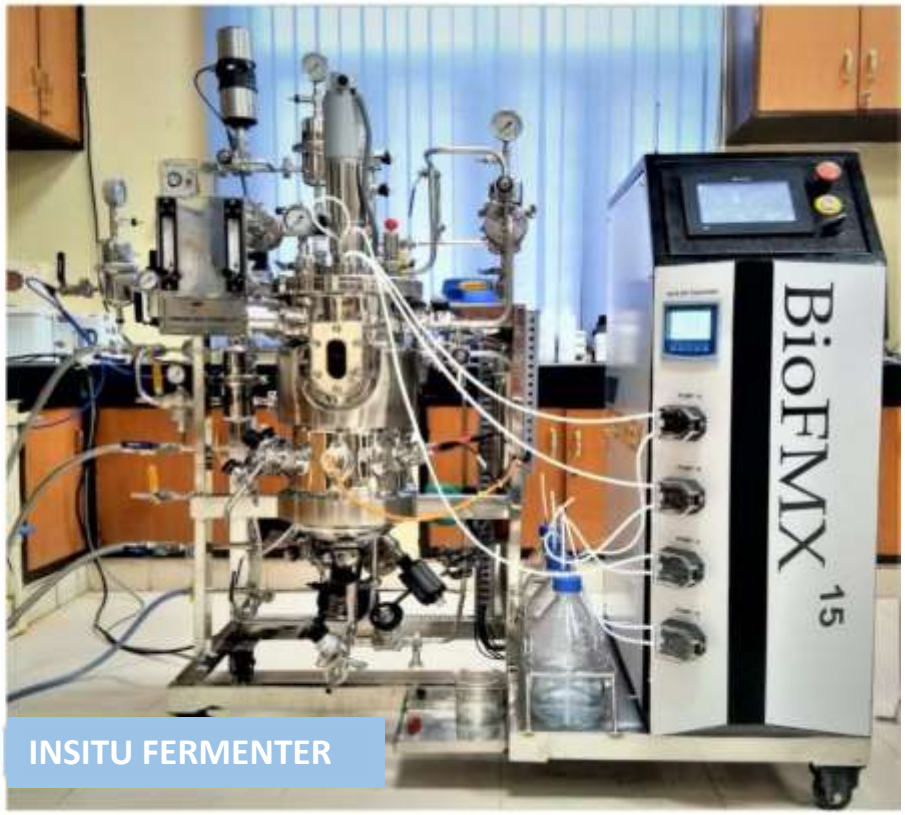
Differences between Autoclavable and insitu Fermenter



Sr. No.	Features	Autoclavable Fermenter	Insitu Fermenter
1	Handling	A bit difficult due to movement, weight of fermenter during autoclaving	Easy as no movement is required

2	Fragility	Fragile due to glass construction. Mishandling may result in breakage of vessel.	Sturdy due to SS Vessel
3	Inoculation	Inoculation is generally done in Laminar air flow	Inoculation is done at the Fermenter location
4	Cost	Economical than Insitu Fermenter	Costlier than autoclavable Fermenter
5	Operation Easiness	Need to connect and disconnect all tubings, heaters, sensors before and after every batch respectively.	No need to connect and disconnect all tubings, heaters, sensors before and after every batch respectively.
6	Life	Less Life than insitu fermenter due to more movement and less sturdy MOC-Glass	More Life than autoclavable fermenter due to less movement and More sturdy MOC-SS
7	Relocation/Portability	Relocation is easy due to easy movement of Vessel and Panel and no fixed utility lines	Relocation is a bit difficult due to fixed utility lines
8	Performance	No difference as such	No difference as such
9	Cleaning	Need to open the vessel top plate and clean as harvest port is on the top plate	Can be cleaned through top ports water spray, as drain valve is available at the bottom
10	Drainability	Not completely drainable	Completely drainable due to bottom drain valve

11	Ports	All ports are on the top plate	Ports are distributed on the top plate, side shell, and bottom
12	Level view	Easy to view level due to glass vessel	Only viewable upto view glass provided
13	Light Glass	Not required	Required to view inside the vessel through view glass
14	Pipelines	All pipelines are flexible silicone tubings	Most of the pipelines are rigid and dosing pipelines are flexible
15	Sterilization	Complete vessel with sensors and feeding bottles are kept in autoclave for one autoclave cycle.	Sterilization take place at the location of the Fermenter, through steam purging into jacket and aeration line till 121 deg C temp and 15 psi pressure reaches everywhere for 20 mins
16	Consumables	Less Consumables due to less components	more consumables due to more components
17	Maintenance	Maintenance cost is low	Maintenance cost is comparatively a bit higher
18	Expected Life	Risk of mishandling of glass vessel during autoclaving or fermentation operation makes the system fragile and hence comparatively has less life than insitu Fermenter	Long life due to sturdy design

	Conclusion	Autoclavable Fermenter is easy to handle due to less connections, portability. Also it is less complex than insitu Fermenter. There is always a chance of breakage of glass if mishandled.	Insitu Fermenter is a little complex than autoclavable Fermenter due to various connections of utilities and components. It is more sturdy and has long life.

Contact us today to know more about Fermenters

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