|  |  |  |  |
| --- | --- | --- | --- |
| **Type of Material used for Incubator Shell/Insulation material** | **Pros** | **Cons** | **Optimisation** |
| Acrylic | * Attractive visibly
* Does not require any manual work/designing as all parts are sculpted and cut using the 3D printer and laser cutter
 | Expensive3D printer and laser cutter required to assemble parts | N/A |
| Wood/plywood | * Cheap and available locally
* Light and can easily be incorporated in field models
 | Liable to rot due microorganisms and moisturePlywood breaks if not carefully handled | Impregnating |
| Glass | * Attractive visibly
 | Fragile to work with as it breaks easily | N/A |
| Stainless Steel sheet metal | * Rust and corrosion- resistant
* Easy to clean
 | * Expensive
* Prone to overheating
* Heavy
 | N/A |
| Polystyrene foam (Styrofoam) box | * Cheap and available locally
* Light and can easily be incorporated in field models
* Recommended to achieve lower ambient temperatures (< 25 °C),
 | Favours bacterial and fungal growthCan be damaged in the process of cleaning/sterilisationMelts easily in case of over heating | N/A |
| Hard Plastic cooler box | * Cheap and available locally
* Easy to clean and sterilize
* Can achieve a set temperature of 37 °C to 44.5 °C
* Takes less time approximately 45 - 96 minutes to reach set temperature
* Energy consumption stands at 0.78 - 1.05 kWh/24h in cold environments (3.5 to 7.5 °C)
 |  | N/A |
| Cardboard box | * Cheap and readily available
* Light and can easily be incorporated in field models

  | * Not waterproof so easily gets destroyed by moisture
* Not heat-resistant so gets burned in case of over heating
* Incubator shell has to be shut tight to avoid heat dissipation and this is very difficult to achieve with cardboard boxes without the survival blanket
* Not recommended for use at lower ambient temperatures since this set up with similar to slightly
* Greater power consumption observed
 | Insulating with polystyrene foam |