

Myths and Tales about Biological Safety Cabinets (BSCs)

Biological Safety Cabinets (BSCs) are considered primary containment either in public health laboratories, or animal laboratories, but there exist several factors related to having BSC in a laboratory, such as suitable positioning of the BSC in the laboratory, periodic (according to work load) certification, and safe volume decontamination.

The First issue is the suitable positioning of the BSC, where I found some laboratories position the BSC in front of the airflow of Air conditioning split units, and others locate the BSC beside the inlet door of the laboratory.



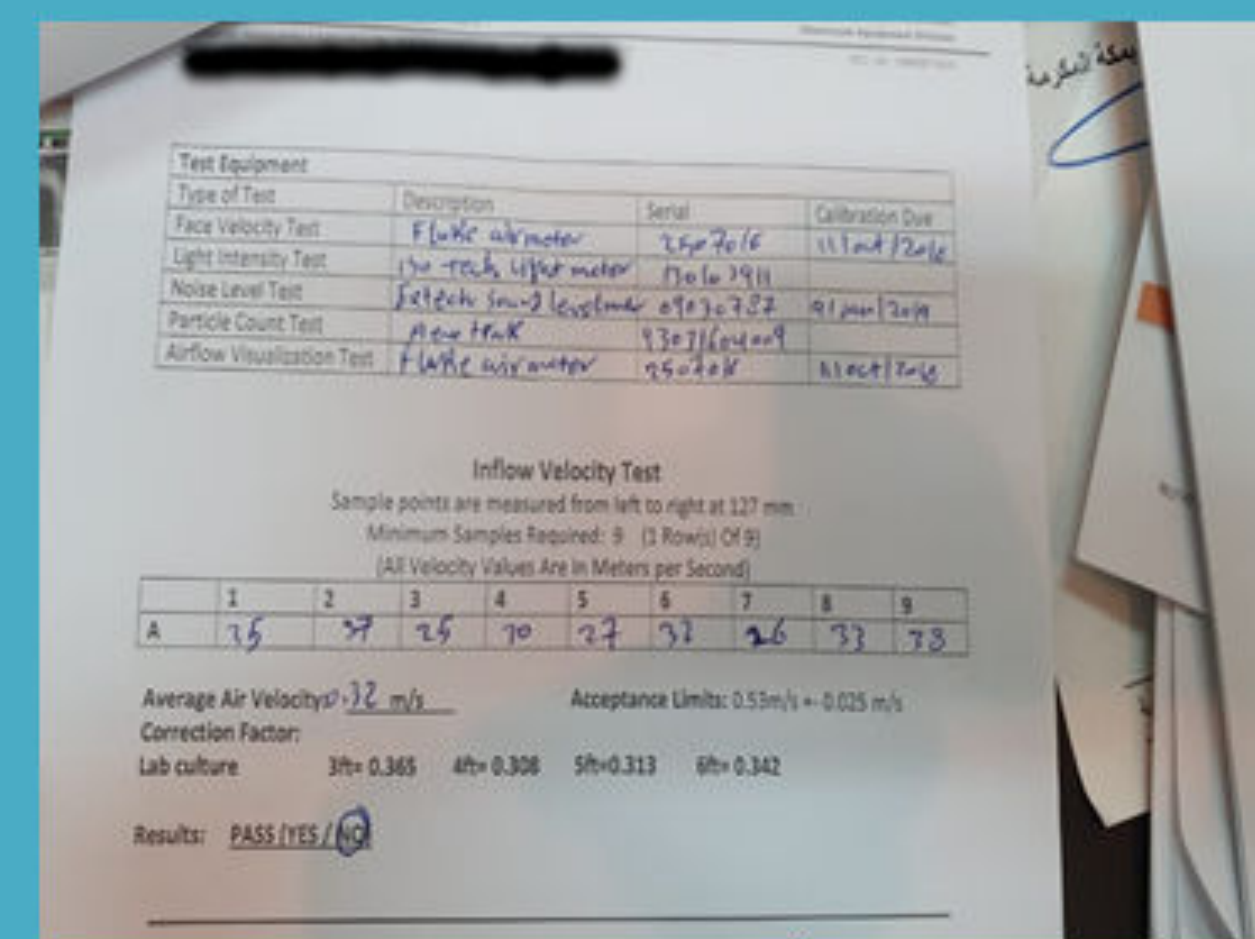
Img1: BSC positioned beside AC split unit

Proper periodic Certification of (BSC) is critical factor The certifier role is to check if the BSC is operating properly as it was initially passed testing by manufacturer to ensure fulfillment of 3 types of protection.

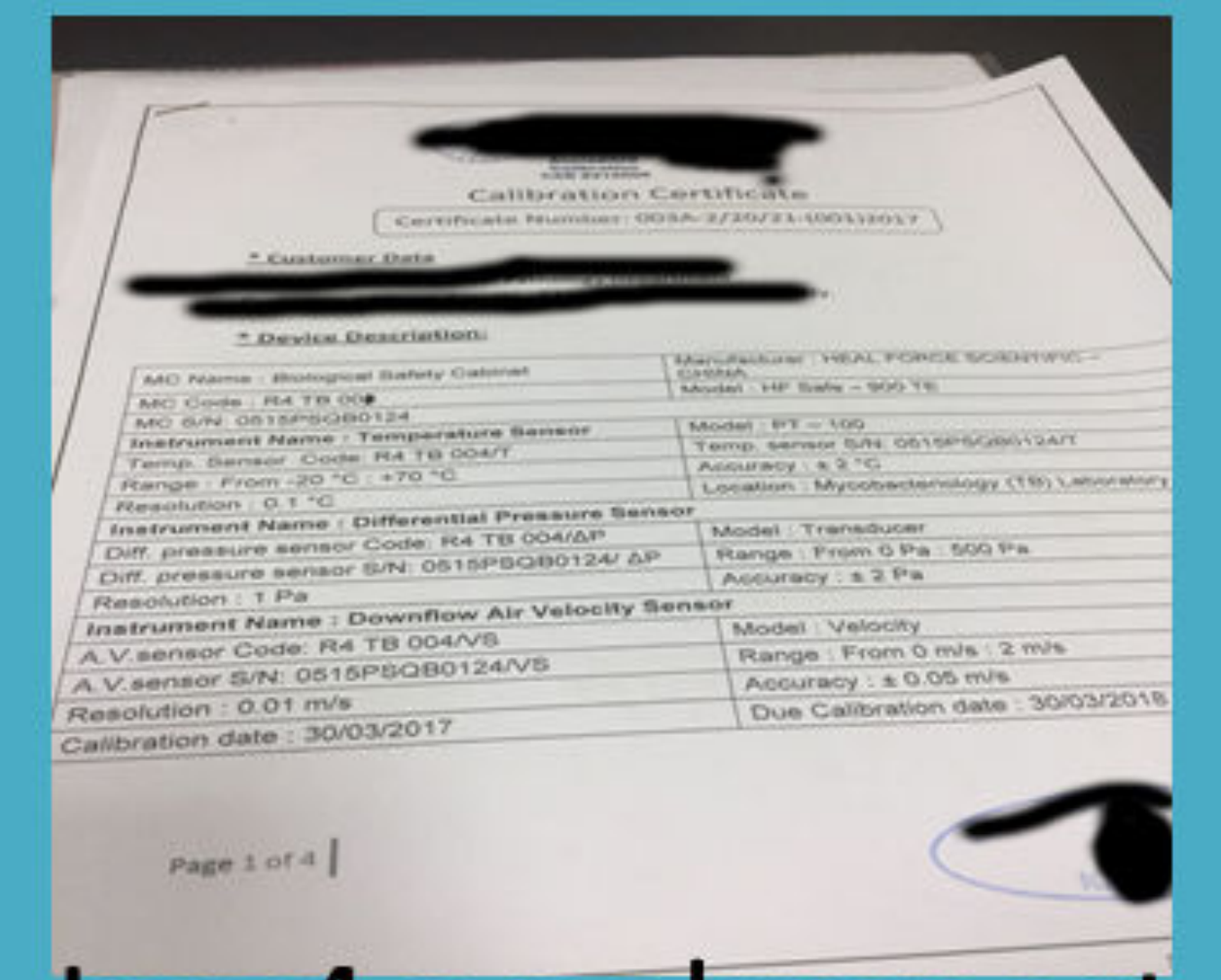
Another critical factor is testing report, that should give detailed data about tests performed, readings, Pass/Fail criteria with reasoning, and certifier's contact information



Img2: BSC balancing



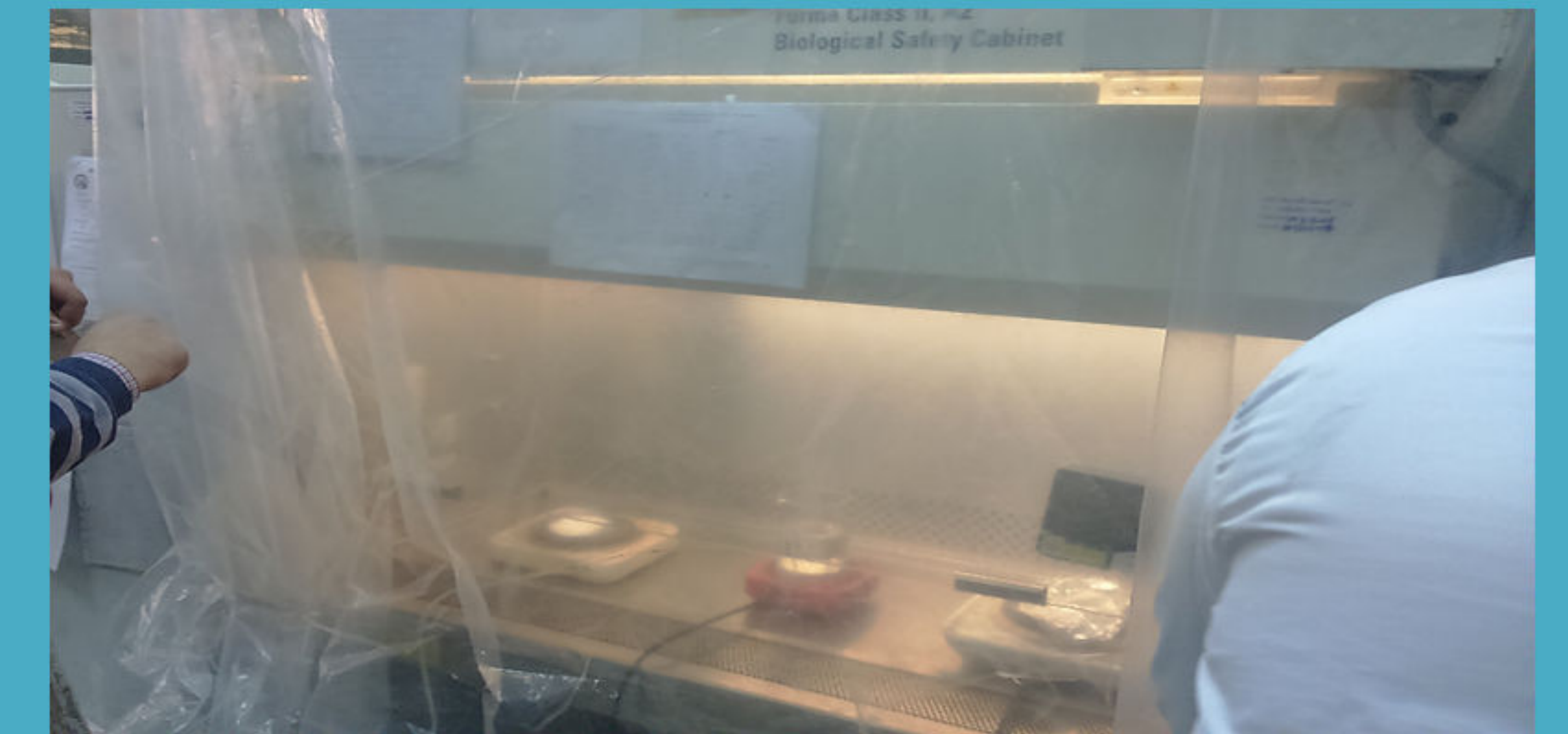
Img3: sample report



Img4: weak report

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Space Decontamination is the process needed when BSC relocated, used for another research program, or needed servicing which will access the space between HEPA filters. ANSI/NSF49 has mentioned 3 methods; Formaldehyde, chlorine dioxide, and hydrogen peroxide



Img5: BSC decontamination by Formaldehyde

Recommendations:

- 1-Position your BSC away from door opening ways, windows, the flow from Air conditions, and heavy traffic aisles.
- 2-Ask your BSC certifier about the standard he/she will follow in certifying your BSC and request a sample report before being chosen with one day hands on training on their activities.
- 3-Follow ANSI/NSF49 decontamination procedures for ensuring your safety and test the effectiveness of the method.