



Breakout Group D: **Biosafety Cabinet Certification**

All of us in Group D2

Questions

1. In order of importance, what do you believe are the limiting factors to establishing a sustainable BSC certification program in low- to middle-income countries?
2. Given the importance of properly functioning BSCs to the overall safety of the public health laboratory environment, what innovative solutions have you seen employed in low- to middle-income countries to ensure that this capacity is maintained?
3. The annual certification of BSCs is an internationally recognized best practice. Is this the only option for the safe maintenance and operations of BSCs?
4. Is safe operation and use of BSCs well understood by laboratorians or is this a training gap? How is this gap (if it exists) being addressed?



Okie Dokie ! ! !

Question 1. In order of importance, what do you believe are the limiting factors to establishing a sustainable BSC certification program in low- to middle-income countries?

- Terminology:
 - Equipment Certification (manufacturer)
 - Field Certification (user)
- Country needs a strategic plan regarding safety.
- Staff and workforce to sustain this function
- Risk assessment based on work to be performed meeting BSC capability.
- Understanding certification standards (US/EN/Japan/Australia/China/South Africa)

Question 1.

- Understanding certification standards (US/EN/Japan/Australia/China/South Africa)
- Cost to sustain personnel and training requirements .
- Access to supplies, spare parts, filters needed to repair BSCs. Various BSC types may exist which increases number parts.
- Calibration of testing equipment requirements & costs.
- Equipment designed for US/Europe may not survive well in low resource areas.
- Power supply to support BSC use.

Question 2. Given the importance of properly functioning BSCs to the overall safety of the public health laboratory environment, what innovative solutions have you seen employed in low- to middle-income countries to ensure that this capacity is maintained?

- Note: Realize there is are certification assets always available:
- Prioritize BSCs to be serviced. Identify critical labs working with higher risk pathogens receive field certification priority.
- Operator/Performance checks performed prior to each use.
 - Smoke &/or Vaneometer &/or tell-tale indicator
- Operator/Performance checks performed periodically (alternative methods of compliance).
 - Smoke, Vaneometer, Petri Plates

Question 2.

- All BSCs placed on same certification cycle (analogy to replacing light bulbs).
- Risk Assessment of process(es) being performed in relation to:
 - Class 1 vs. Class 2.
 - Worker vs. Specimen
- Avoid hard ducting at all costs!
- Avoid Class II B2 at all costs!
- If must duct Class II A2, use thimble/canopy connection (now you have supplemental exhaust!)

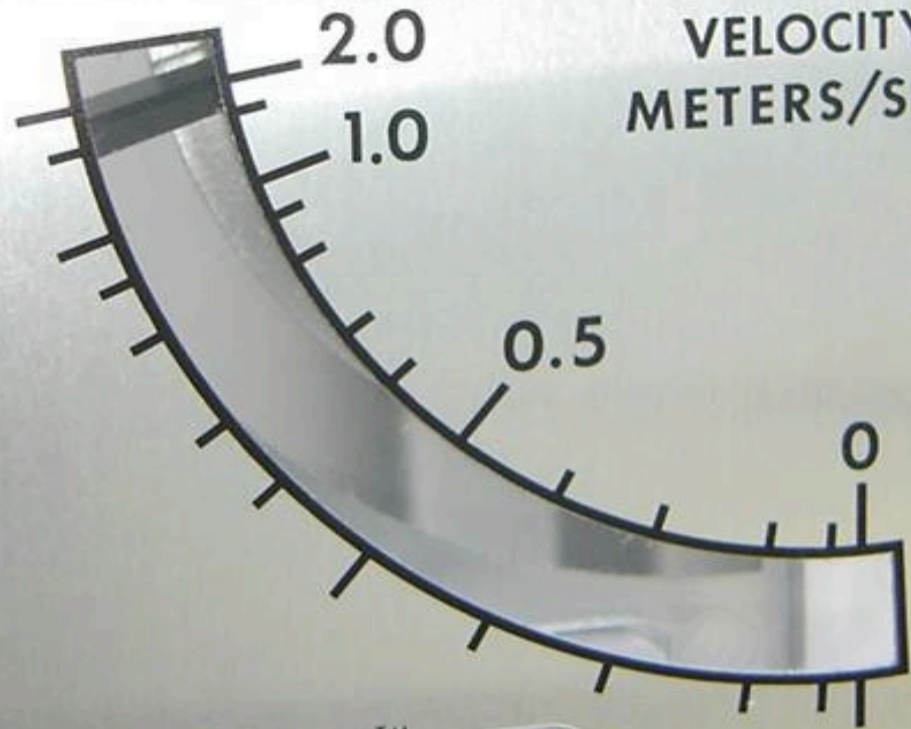
Question 2.

- Frequency of field certification:
 - Annual inspection BSC certification based on historical data?
 - What should the frequency be?
 - What affects performance?
 - Ducting
 - Environment
 - Use
 - The HUMAN outside the BSC



JANLIN

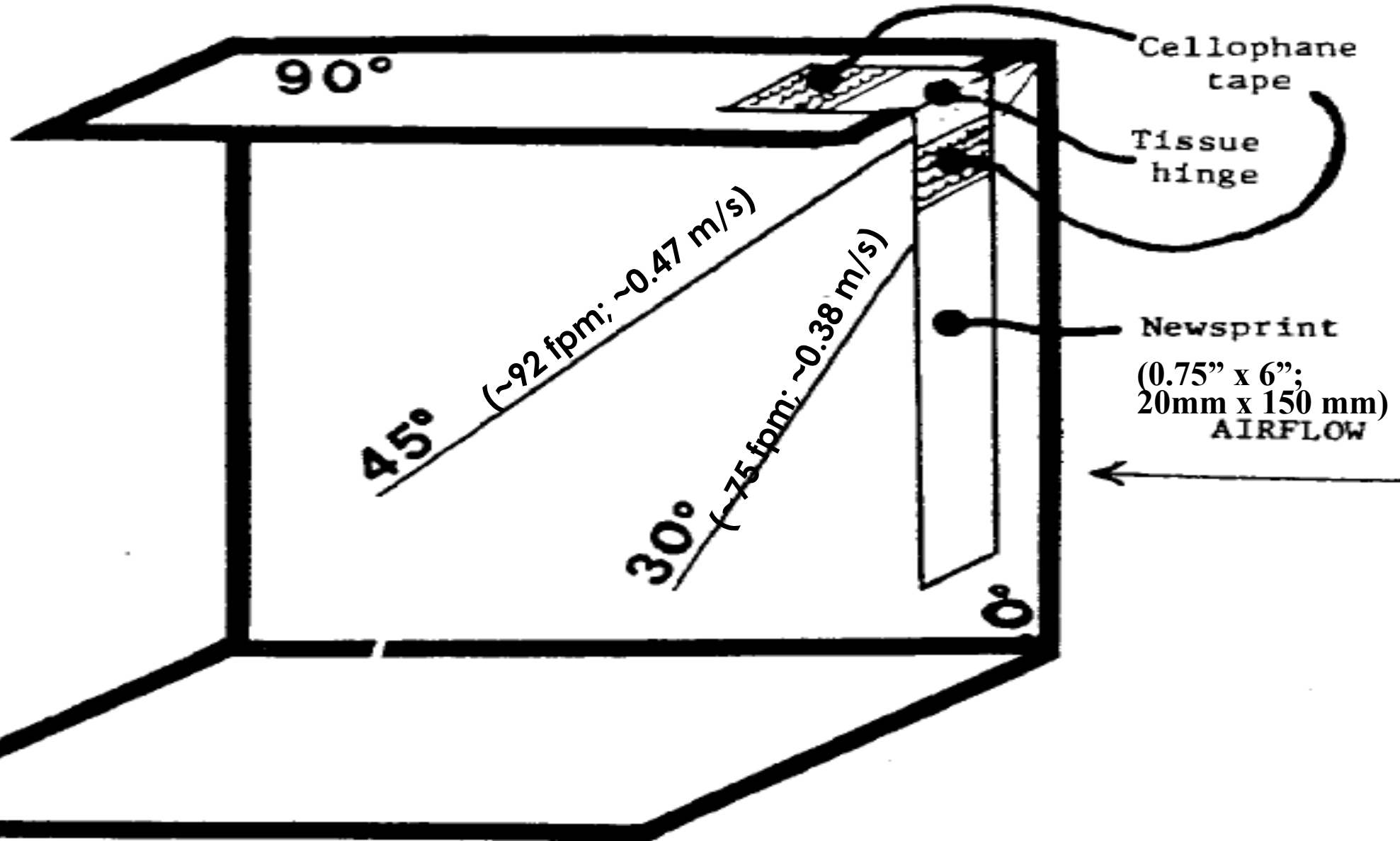
VELOCITY
METERS/SEC.



VANEOMETER™
DWYER INSTRUMENTS, INC.
MICH. CITY, IND. 46360 U.S.A.

Make your own Vaneometer™

A.



Question 3. The annual certification of BSCs is an internationally recognized best practice. Is this the only option for the safe maintenance and operations of BSCs?

- **No!!!**
- Base on environment, it may be required to be serviced on a longer cycle or shorter cycle.
- Life cycle costs of BSC–vs- cost of periodic replacement of the BSC.
- Perform baseline performance test that can be performed by staff.

Question 4. Is safe operation and use of BSCs well understood by laboratorians or is this a training gap? How is this gap (if it exists) being addressed?

- Understanding Classes and Types of cabinetry
 - MSC Class 1
 - MSC Class 2
 - BSC Class 2, Type A2
 - BSC Class 2, Type B2
- Know how HEPA filters work and airflows within the cabinet.
- Spill management training

Question 4.

- Proper work practices and effects of poor work practices (hands-on)
- Proper cleaning & disinfecting SOPs.
- Training gaps for both users and management.
- Review of basic concepts and engineering requirements of BSC.
- Use of UVGI lights
 - When/if needed
 - Effectiveness
 - Usefulness





Thank you!!!

