Operating the Biological Safety Cabinet (BSC)

PURPOSE

- This procedure provides instructions for how to operate the biological safety cabinet, to contain aerosols and protect work from outside contamination

EQUIPMENT REQUIRED

Equipment	Disinfectant	Supplies
Vortex	Sani-Cloth Bleach Wipes (10%)	PPE: gloves, lab coat
Pipets	water	Paper towels/Kimwipe towels
BioSafety Cabinet	70% alcohol	Sharps container

PROCEDURE A: Follow the activity below for start-up of the BSC

BSC Start-up

Step	Action	Related Doc
1	Blowers run continuously; check airflow for proper exhaust ▪ South hood magnehelic gauge: approximately 2.0 – 2.5 in. water ▪ North hood indicator light should be green; if yellow or red, check exhaust	Baker Operator's Manual
2	Raise the window to operating height (8 in)	
3	Turn on cabinet lights and electrical outlets	

PROCEDURE B: Follow the activity below for operation of the BSC

Operating the BSC

Step	Action	Related Doc
1	Wear long-sleeved, cuffed lab coats and gloves during specimen processing	MB 2.01 Safe Work Practices
2	Place all items that will be used in the hood prior to starting work ▪ Segregate clean from contaminated materials ▪ Limit supplies and equipment to only that which is required for work ▪ *Do not* block the front and back grill ▪ *Do not* centrifuge in the BSC ▪ *Do not* place labels, paper notes or procedures on window or grill	
3	If carryover contamination is anticipated, work on absorbent toweling to reduce splatter and aerosol formation ▪ Hold open tubes at a slight angle ▪ Recap as soon as possible ▪ Do not put down caps and lids on the floor of the hood	
4	Plan work flow to minimize movement ▪ Work at least 6 inches inside the front grill ▪ Avoid rapid movement in and out of the BSC while a procedure is in process to avoid creating turbulence ▪ Keep room activity around the BSC to a minimum	
5	Clean up spills with disinfectant promptly; refer to MB 2.03	MB 2.03 Biohazardous Spills

PROCEDURE C: Follow the activity below for BSC shutdown

Shutting down the BSC

Step	Action	Related Doc
1	Allow 15 – 20 min after work is completed before removing materials	
2	Place contaminated materials in covered containers before removal from the BSC	
3	Disinfect the outside of all containers before removal from the BSC if not discarding in biohazard waste	
4	Clean and disinfect the BSC work surfaces, containers and pipets with Sani-Cloth Bleach Wipes (10%) ▪ 10% bleach; 4 – 5 min ▪ Wipe down with water, followed by 70% alcohol to remove residue	MB 3.03 Cleaning and Decontamination
5	Leave the BSC blower running continuously. *Do not shut off.*	
6	Turn off the light and lower sash to approximately 3 – 4 inches ▪ Caution: *Never close the window sash completely with the blower running. This may cause the motor to burn out*	
7	Turn on the UV light for 15 min	

MAINTENANCE

Step	Maintenance	Frequency
1	Check airflow exhaust ▪ South hood magnehelic gauge: approximately 2.0 – 2.5 in water ▪ North hood indicator light should be green; if yellow or red check exhaust	Daily
2	Clean and disinfect BSC work surfaces with 10% bleach followed by water and 70% alcohol	Between procedures and when spills occur
3	Clean UV lights with 70% alcohol	Weekly
4	Clean the gutter area with 10% bleach followed by water and 70% alcohol	Monthly and when spills occur
5	Replace UV light (scheduled – Maintenance Dept)	Every 4 months
6	Recertify BSC by certified personnel (contracted through BioMed)	Annually
7	Record maintenance task on daily maintenance worksheet	After completed

NSF CLASSIFICATION

- Room B422, North Hood: SG403 Class II / B2 – BioSafety Level 1, 2, or 3
- Room B422, South Hood: SG403 Class II Type A/B3 – BioSafety Level 1, 2, or 3

REFERENCE

1. Ryan F. Relich, Section editor, Biohazards and Safety, *Risk Assessment* 15.3.3. In Amy L. Leber (ed) *Clinical Microbiology Procedures Handbook,* fourth edition 2016, American Society for Microbiology, Washington, D.C.
2. The Baker Company Operator's Manual Dec 2003, Rev C, Model SG403
3. The Baker Company Operator's Manual May 2003, Rev B, Model SG403TX

Historical Record

Version	Written/Revised by:	Effective Date:	Summary of Revisions
1	P. Ackerman	9/13/11	Initial Version
2	P. Ackerman	07.15.2016	Reformatted for CMS upload; changed logo