USE OF OPEN FLAMES IN BIOLOGICAL SAFETY CABINETS

“Sustained Open Flames To Be Prohibited In A BSC.”
As stipulated by the Canadian Biosafety Standard, 2nd Edition.

RISKS
1. Disrupts airflow - compromising the protection of you and your research.
   • Conflicting air flow patterns result in vortexing and turbulence.
2. Damages the HEPA filter - compromising the cabinet’s integrity.
   • Destruction of filter and seals, leading to loss of containment.
3. Causes excessive heat build-up within the cabinet.
   • Inactivates/degrades components in media.
   • Makes an uncomfortable working environment.
4. Presents a potential fire or explosion risk.
   • Leaking of flammable gas poses a serious fire risk to the entire lab.

OPTIONS
The use of an open flame in BSC is not allowed at the University of Ottawa. Alternatives for the need for disinfect instruments within a BSC exist:

<table>
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<tr>
<th>Use disposable sterile loops, needles and pipettes.</th>
<th>Disposable sterile loops, needles and pipettes. (Images from Fisher Scientific)</th>
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<tr>
<td>Autoclave instruments (loops, needles, pipettes, scissors etc.) before use.</td>
<td>Centralized autoclave facilities are available at the Faculty of Science and the Faculty of Medicine.</td>
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</table>
Replace the open flame with a micro-incinerator, or glass bead sterilizer.

*If flame is absolutely necessary, use a touch-plate micro burner for on-demand flame.

Note: The ORM is available for consultation regarding alternatives to the use of open flames in BSC. Email: bio.safety@uottawa.ca; telephone: (613) 562-5800 ext. 3153.

REFERENCES
