Lab Hoods and Cabinets



| | Fume Hood | Horizontal Laminar Flow Hood | Vertical Laminar Flow Hood | Biological Safety Cabinet | Compounding Aseptic Containment Isolator |
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| Airflow diagram HEPA-filtered air Room air Contaminated air | | 6 | | | |
| Airflow description | Room air pulled into the hood and exhausted out of the building | Room air pulled into the hood, passed through a HEPA filter and exhausted horizontally over the work surface towards the worker and into the room | Room air pulled into the hood, passed through a HEPA filter and exhausted vertically onto the work surface and then out of the cabinet towards the worker and into the room | Room air pulled into the cabinet, passed through a HEPA filter, down onto the work surface, back through the HEPA filter, then either exhausted out of the cabinet or recirculated back onto the work surface | Room air pulled through a HEPA filter onto the work surface, then exhausted through a separate HEPA filter |
| Product protection | No; the air passing over the work surface is room air and has not passed through a HEPA filter | Yes; the air passing over the work surface has passed through a HEPA filter | Yes; the air passing over the work surface has passed through a HEPA filter | Yes; the air passing over the work surface has passed through a HEPA filter | Yes; the air passing over the work surface has passed through a HEPA filter |
| Personal Protection | Yes; contaminated air from the fume hood is exhausted through ductwork | No; air becomes contaminated when blowing over the work surface, then exhausts into the face of the worker | No; air becomes contaminated when blowing over the work surface, then exhausts into the face of the worker | Yes; air from the cabinet passes through a HEPA filter before being exhausted into the room or through ductwork | Yes; air from the cabinet passes through a HEPA filter before being exhausted through ductwork |
| Environmental protection | No; contaminated air exhausted from the hood does not first pass through a HEPA filter | No; contaminated air exhausted from the hood does not first pass through a HEPA filter | No; contaminated air exhausted from the hood does not first pass through a HEPA filter | Yes; exhausted air has been HEPA-filtered | Yes; exhausted air has been HEPA-filtered |