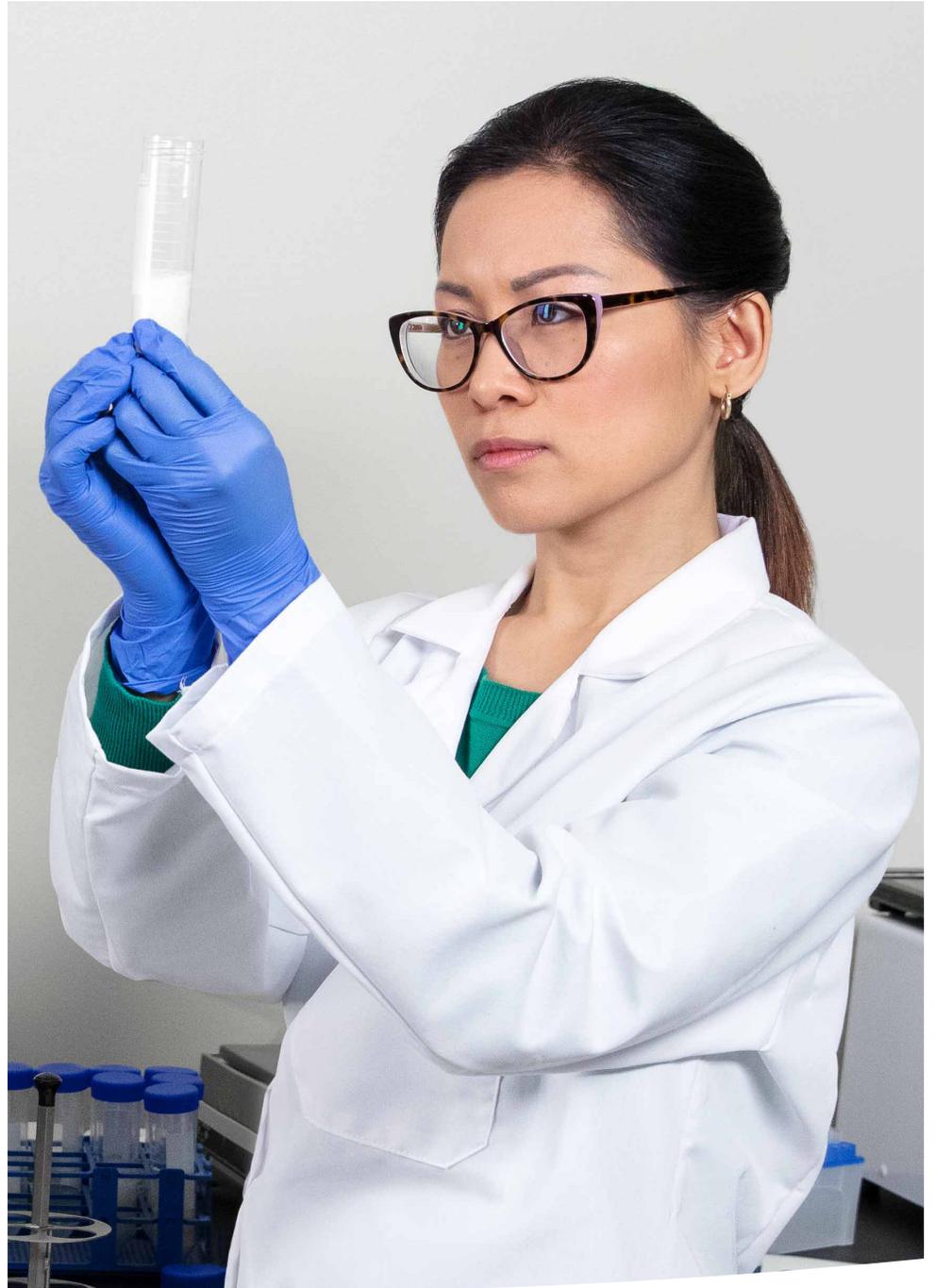


# Labconco Sustainability Initiatives



# Labconco Sustainability Committee

## Initiatives and Actions

- United States Green Building Council Member
- Arbor Day Partner
- Laser Printing & Additive Manufacturing
- Recycling & Waste Diversion Program
- Packaging Program
- ASHRAE 110 Alternative Gas
- Facilities Energy Efficient Water Usage
- Facilities Energy Efficient LED Lighting
- Reduced Paper Usage Program
- Lean Manufacturing
- Reclaimed Paint Program
- Freight Optimization

## Watch on demand



**Sustainability Today for the Lab of Tomorrow**



**Green Labs Digital Summit More information**

## Contact us.

If you have any questions or would like to learn more about our action plan, contact us. We are interested to learn more about your interests and how we can support you. [labconco@sustainability.com](mailto:labconco@sustainability.com)



# Labconco Sustainability Products

## LEED Credits and Projects



### Fume Hoods

Requires 45% less air than conventional fume hoods



### Biosafety Cabinets

Uses 60% less energy and emits far less heat than similar cabinets



### Glassware Washers

Reduces potable water usage over hand washing

LEED Category	LEED Credit	Fume Hoods	Biosafety Cabinets	Glassware Washers
<b>Energy &amp; Atmosphere (EA)</b>	Optimize Energy Performance	•	•	
<b>Materials &amp; Resources (MR)</b>	Recycled Content	•	•	•
	Regional Materials*	•	•	•
<b>Innovation (ID)</b>	Innovation in Design	•	•	•

### Average Recycled Content

	Fume Hoods	Biosafety Cabinets	Glassware Washers	Freeze Dryers
<b>Pre-Consumer</b>	7%	8.5%	6.6%	5.4%
<b>Post-Consumer</b>	38.1%	53.1%	48.2%	45.2%
<b>Total*</b>	41.6%	57.3%	51.4%	47.9%
<b>Recyclable Content</b>	<b>70.1%</b>	<b>94.9%</b>	<b>77.6%</b>	<b>85%</b>

### LEED green projects.

Working on a LEED green project? Our LEED green associates are here to help with sustainability practices, equipment, recycled materials details and more. [labconco@sustainability.com](mailto:labconco@sustainability.com)

\*Total = Post-Consumer + Pre-Consumer/2). The sum of post-consumer recycled content plus one-half of the post-industrial content

\*\*If project is located within 500 miles of Labconco. \*\*Recyclable content measured in accordance with USGBC guidelines. Labconco fume hoods, biosafety cabinets, freeze dryers and glassware washers are built from at least 40% recycled\* materials, with their recyclable content at least 70% of finished product weight (LEED Program by USGBC).

# Fume Hoods

## Energy Usage & Cost Comparison



### Ducted Fume Hoods

- Annual energy savings up to \$3,920
- Built with over 40% recycled materials
- Unique patented design drastically lowers energy cost

### Ductless Fume Hoods

- Annual energy savings up to \$8,457 per hood
- Recirculate 100% of tempered room air - no exhaust to the exterior
- Integral blower further reduces energy cost

	Typical 6'	Labconco 6'	Echo 6'
<b>Constant Air Volume (CAV) Mechanical System Sash at 28"</b>			
Face Velocity (fpm)	100	100	60
Airflow Volume in Cubic Feet per Minute (CFM)	1250	1150	690
Annual Energy Cost*	\$8,750	\$8,050	\$4,830
15-Year Lifetime Cost*	\$131,250	\$120,750	\$72,450
Annual Energy Cost Savings*	—	\$700	\$3,920
15-Year Lifetime Cost Savings*	—	\$10,500	\$58,800
<b>Constant Air Volume (CAV) Mechanical System Sash at 18"</b>			
Face Velocity (fpm)	100	100	60
Airflow Volume in Cubic Feet per Minute (CFM)	785	735	430
Annual Energy Cost*	\$5,495	\$5,145	\$3,010
15-Year Lifetime Cost*	\$82,425	\$77,175	\$45,150
Annual Energy Cost Savings*	—	\$350	\$2,485
15-Year Lifetime Cost Savings*	—	\$5,250	\$37,275
<b>Variable Air Volume (VAV) Mechanical System</b>			
Face Velocity (fpm)	100	100	60
Airflow Volume at 18" in Cubic Feet per Minute (CFM)	785	735	430
Annual Energy Cost**	\$4,037	\$3,803	\$2,380
15-Year Lifetime Cost**	\$60,550	\$57,050	\$35,700
Annual Energy Cost Savings**	—	\$234	\$1,657
15-Year Lifetime Cost Savings**	—	\$3,500	\$24,850

\*Based on average annual dollars per CFM of \$7.00, fume hood operating 24 hours a day and 5 days per week (6240 hours per year). Average annual dollars per CFM range from \$5.00 to \$12.00 depending on geographic location.

\*\*Based on 8 hours per day at 18" sash opening and remaining time with sash closed. Closed sash air volume is based on 200 air changes per hour (ACH) and \$0.0000187/ft<sup>3</sup> air.



# Biosafety Cabinets

## Energy Usage & Cost Comparison



- ✔ Uses only 50-70% of the energy required by other leading biosafety cabinet manufacturers
- ✔ Extended motor life (15+ years) and filter life (10+ years<sup>\*\*\*</sup>) reduces waste and service needs
- ✔ Built with more than 55% recycled materials
- ✔ 95% of materials can be recycled after the product's useful life

### Operating Cost Comparison

BSC Energy Usage*	Labconco A2	Other Cabinet A	Other Cabinet B	Other Cabinet C
<b>Motor Type</b>	ECM	AC 3-Phase	ECM	ECM
<b>Energy Consumption (watts)</b>	210	414	299	180
<b>Annual Energy Cost**</b>	\$57.79	\$113.93	\$82.28	\$49.53
<b>Annual Certification</b>	\$250	\$250	\$250	\$250
<b>Filter Change(s)</b>	\$1,500	\$1,500	\$1,500	\$3,000
<b>15-year Operational Cost</b>	<b>\$6,117</b>	<b>\$6,959</b>	<b>\$6,484</b>	<b>\$7,493</b>

\*Based on 4-ft, 8" sash opening BSC, recirculating

\*\*Based on 8-hr day, 2080 hours per year at \$0.1323/kWh

\*\*\*With typical life science applications, e.g. cell culture



### Recycled Origins, Recycled Future

Logic+ and Axiom biosafety cabinets use a significant portion of reclaimed steel throughout. Responsible and sustainable material selection provide a low environmental-impact, high hazard-containment solution that makes a world of difference.



# Glassware Washers

## Energy Usage & Cost Comparison



- Built with about 51% recycled materials
- 78% of materials can be recycled after the product's useful life

	Hand Washing	A	B	Labconco
<b>Water Use Costs</b>				
Gallons of Water Consumed	40	16.6	18.6	17
Tap/DI Water Cost	\$0.40	\$0.11	\$0.12	\$0.13
DI Water Cost	\$1.98	\$1.83	\$2.05	\$1.12
Labor Cost†	\$28	\$1.75	\$1.75	\$1.75
Detergent Cost	\$0.88	\$0.44	\$0.44	\$0.44
Energy to Heat Water Cost	\$0.48	\$0.10	\$0.22	\$0.20
Total Operational Cost**	\$31.74	\$4.23	\$4.58	\$3.65
<b>10-Year Lifetime Costs†</b>				
Gallons of Water Consumed	104,000	43,160	48,360	44,200
Tap Water Cost	\$1,040	\$286	\$312	\$348
DI Water Cost	\$5,148	\$4,753	\$5,320	\$2,917
Labor Cost	\$72,800	\$4,550	\$4,550	\$4,550
Detergent Cost	\$2,288	\$1,144	\$1,144	\$1,144
Energy to Heat Water Cost	\$1,248	\$259	\$572	\$530
Total Operational Cost**	\$82,524	\$10,993	\$11,898	\$9,490
<b>Maintenance Costs</b>				
Qualification Document	n/a	\$4,000††	\$4,000††	No Charge
Qualification Validation	n/a	Included	Included	\$3,000††
Service Cost	n/a	\$750	\$750	\$750
Replacement Parts	n/a	\$200	\$200	\$200
Total Maintenance Costs	\$0	\$5,100	\$5,100	\$4,100
<b>Cost Savings</b>				
Total Lifetime Cost (Operational + Maintenance)	\$82,524	\$16,093	\$16,998	\$13,590

\*All percentages are based on weight of components vs total weight of a single undercounter FlaskScrubber.

\*\*Water consumption based washing 60 pieces of labware using the "Glass" Factory setting on a Labconco FlaskScrubber or using related cycles from other brands. Cold tap water rate at \$0.01 per gallon. Pure water (DI) rate at (\$0.33 per gallon).

†Technician pay of \$14/hour (roughly \$30,000 annually)

††Optional services for Installation, Operation, and Performance Qualification Document Pack and/or Validation Service based on several quotes from third party agencies.



# Freeze Dryers

## Energy Efficiencies & Responsible Refrigerants



- Built with over 47% recycled materials
- Uses CFC and HCFC free refrigerants
- Preserves samples for storage at room temperature. Saving up to \$1,000 per year vs running an ULT freezer

- Shelf-stable freeze dried samples eliminate the need for ultra low temperature freezers, saving \$750 to \$1,000 in energy consumption per year.
- End point detection prevents excessive run times per batch providing an energy savings along with more efficient use of equipment.
- A cold trap captures environmental contaminants instead of exhausting them into the environment.
- High-quality materials result in extended service life.



Scroll pumps consume ~50% of the power and generate ~50% of the heat when compared to other popular vacuum pump types. It eliminates potential hydrocarbons from contaminating samples in the room, and does not require the consumable oils that other pumps use.

**Visit [labconco.com](http://labconco.com) to request information  
for all Labconco products.**

**LABCONCO CORPORATION**

[labconco.com](http://labconco.com)

©2022 LABCONCO CORPORATION

Product design subject to change without notice.

2-87-12/08/23

