Go Green with Labconco

Labconco's Environmental Mission Statement provides the framework that guides our actions toward being good stewards of the Earth. We are committed to working to improve the social, economic and environmental well-being of our community. We further this commitment by:

- Instilling environmental responsibility as a corporate value
- Fostering a participatory process in developing our environmental policy and stewardship activities
- Designing products that use less energy, while maintaining the highest standards in product performance
- Striving to buy, sell and use environmentally friendly products
- Continuously looking for ways to reduce and recycle our process and office waste
- Providing resources and volunteering our time to local schools and community charities

U.S. GREEN BUILDING COUNCIL MEMBER

Evidence of our stewardship is present throughout our organization.

Labconco is a member of the U.S. Green Building Council. • Mixed stream recycling containers are located at every desk, common area and printer. • Labconco associates may bring their personal-use recyclable glass, metal and plastics to office collection bins. • Our lunchrooms are stocked with only biodegradable cutlery and 100% pre-consumer recycled plates. No polystyrene foam cups or plates are used. • Equipment skids are made of reclaimed lumber. • Unlike some painting processes, our dry powder coating does not emit volatile organic compounds. We reclaim overspray from our painting process to reduce waste. • Our laser cutting technology yields approximately 85% raw material use, reducing metal waste. • Acetone, which is a significant groundwater contaminant and contributor to oxygen depletion in aquatic systems, is not used in our manufacturing plants. • Energy-efficient T5 lighting is present in all production areas and high performance T8 lighting is used throughout our offices. Office motion sensors turn off lights during periods of nonuse. • A reduction in frequency of shipments between our manufacturing facilities has yielded a savings of approximately 1,782 gallons of diesel fuel per year, reducing carbon dioxide emissions of 39,560 pounds. • Only non-ozone depleting HFC refrigerants are used in our freeze dryers and cold traps. • Our Green Committee reviews current practices, implements new measures and communicates the Mission throughout the organization.

Protecting your laboratory environment

LABCONCO®

Labconco + LEED® = Sustainability

Labconco is committed to furthering the efforts of the United States Green Building Council (USGBC). The USGBC is a non-profit organization entrusted with expanding sustainable building practices. It is composed of more than 13,500 organizations from across the building industry, including Labconco. The goal of the USGBC is to transform the way buildings and communities are designed, built and operated, enabling a quality of life that is socially and environmentally responsible, healthy and prosperous. In an effort to distinguish truly sustainable (green) buildings from those merely claiming to be green, the USGBC developed the LEED® 2009 rating system. LEED stands for Leadership in Energy and Environmental Design. It promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

Buildings of new construction or with major renovations may earn LEED points for sustainability. As a member of the USGBC, Labconco is committed to designing products that are environmenttally responsible. Below are the specific areas that Labconco products can contribute to a building's LEED points.

Labconco Products & LEED Contribution

Optimize Energy Performance (EA Credit 1)

The average fume hood uses three times the energy of the average American home. This massive energy usage comes from pulling huge volumes of tempered air from the laboratory and exhausting it to the outside. The high performance Protector® XStream® Laboratory Fume Hood, because it can be operated as low as 60 fpm, saves between 40% and 80% of the air, and therefore energy use, required by traditional fume hood designs. Less air means smaller air handling equipment and less energy wasted tempering once-through air.

Our Purifier® Logic® and Cell Logic® Biosafety Cabinets, which have ECM motors, use up to 60% less energy than others on the market using conventional motors. Our unique design also lowers the heat load on the building compared to other biological safety cabinets. New construction buildings can earn from one point for a 12% energy use reduction, up to a possible 19 points for a 48% energy use reduction.

Recycled Content (MR Credit 4)

Buildings that incorporate recycled materials reduce the environmental impact of extracting and processing virgin materials. Up to two points may be awarded if a building shows that the recycled content of its permanently-installed materials is at least 10% (1 point) or 20% (2 points). Labconco fume hoods, Purifier Logic and Cell Logic Biosafety Cabinets, and SteamScrubber® and FlaskScrubber® Laboratory Glassware Washers comply with these requirements. Our fume hoods contain about 42% recycled materials (Table 1), our biosafety cabinets about 57% (Table 2) and our glassware washers about 51% (Table 3).

At right: High performance Protector XStream Laboratory Fume Hoods require 40% less air than typical fume hoods.

Regional Materials (MR Credit 5)

Since Labconco's manufacturing facilities are located in and near Kansas City, our products used in projects within 500 miles of our locations contribute toward their earning up to two LEED points under this credit.

Innovation in Design (ID Credit 1)

Projects can earn one additional point for each of the above credits for exemplary performance.

In addition, our FlaskScrubber and SteamScrubber Laboratory Glassware Washers (Table 3) contribute toward a project's Innovation and Design credit for non-regulated water use.

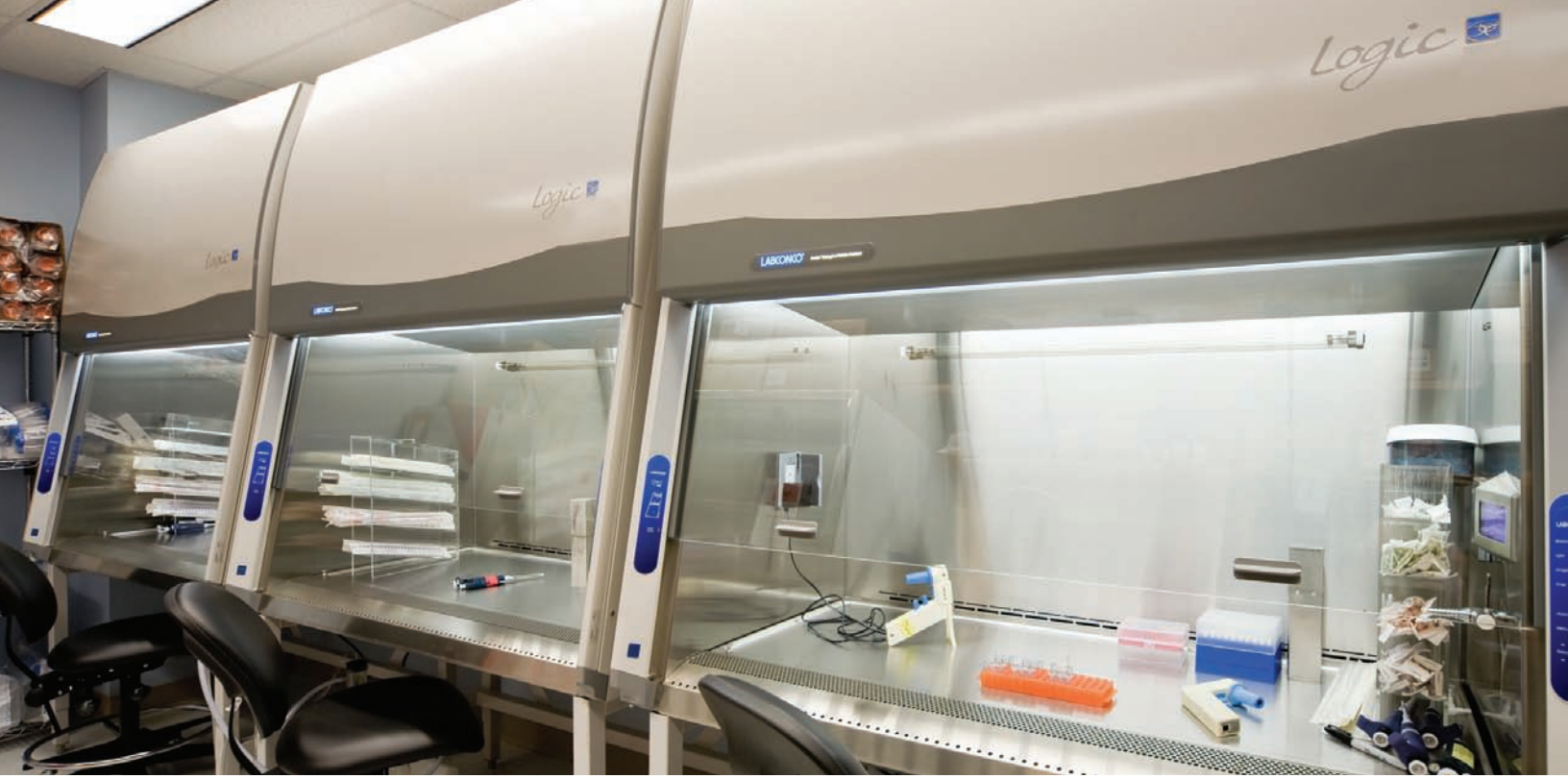
Are you working on a LEED project? Labconco LEED Green Associates are available to provide you with recycled materials details and other specifications on Labconco products included in your project. Call **800-821-5525 or 816-333-8811.**

Table 1. Protector® XStream® High Performance Laboratory Hood Recycled and Recyclable Content, Energy Usage and Operating Costs & Comparison

Recycled Content (4', 5' and 6' averages)	
Pre-Consumer	7%
Post-Consumer	38.1%
Total	41.6%
(Total = Post-Consumer + Pre-Consumer/2)	
Recyclable Content	**70.1%**

100 fpm with sash fully open, constant volume*	
Typical 6' Hood (1250 CFM)	$8,750 per year
	$131,250 Lifetime
6' XStream Hood (1180 CFM)	$8,250 per year
	$123,900 Lifetime
60 fpm with sash at 18" open, constant volume*	
6' XStream Hood (450 CFM)	$3,150 per year
	$47,250 Lifetime
60 fpm with Variable Air Volume (VAV)†**	
6' XStream Hood	$1,935 per year
	$29,019 Lifetime

* Based on average annual dollars per CFM of $7.00; fume hood operating 24 hours a day and 5 days per weeks (6240 hours per year). Average annual dollars per CFM range from $5.00 to $12.00 depending on geographic location. Lifetime calculations are based on 15 years.
**Closed sash air volume is based on ANSI Z9.5 recommended minimum of 150 Air Changes per hour (ACH), and $0.0000187/ft^3 air.
†Based on 8 hours per day with 18" sash opening and 60 fpm face velocity, and remaining time with sash closed.



The Purifier Logic Biosafety Cabinet uses 60% less energy and emits far less heat than comparable cabinets.

Table 2. 4' Purifier® Logic® Biosafety Cabinet Recycled and Recyclable Content, Energy Usage and Operating Costs & Comparison

	Logic	Brand A Cabinet	Brand B Cabinet	Brand C Cabinet
Recycled Content				
Pre-Consumer	8.5%			
Post-Consumer	53.1%			
Total *(Post-Consumer + Pre-Consumer/2)*	57.3%			
Recyclable Content	**94.9%**			
Motor Type/Technology	DC ECM	AC PSC	AC-3Ø	DC
8 hrs/day (2,080 hrs/year)*				
Energy Used (kWh/yr)	603	1206	861	339
Annual Cost - Commercial	$60	$121	$86	$34
Annual Cost - Industrial	$41	$81	$58	$23
24 hrs/day (8,736 hrs/year)*				
Energy Used (kWh / yr)	2533 (803**)	5067	3617	1424
Annual Cost - Commercial	$253 ($80**)	$507	$362	$142
Annual Cost - Industrial	$170 ($54**)	$341	$243	$96
15-Year Life Cycle Costs†				
Operational Costs				
Annual Certification	$2,250	$2,250	$2,250	$2,250
Energy Cost - 8 hrs/day (industrial)	$609	$1,217	$869	$342
Energy Cost - 24 hrs/day (industrial)	$2,557 ($811**)	$5,115	$3,651	$1,438
Total Operational Cost (8 hr/day)	$2,859	$3,467	$3,119	$2,592
Total Operational Cost (24 hr/day)	$4,807 ($3,061**)	$7,365	$5,901	$3,688
Maintenance Costs				
HEPA Filter Costs	$800	$1,600	$1,600	$2,400
Service Cost††	$3,000	$3,450	$3,450	$4,350
Replacement Parts	$700	$1,100	$1,100	$2,500
Total Maintenance Cost	$2,250	$3,900	$3,900	$7,000
Total Lifetime Cost (8 hr/day)	**$5,109**	$7,367	$7,019	$9,592
Total Lifetime Cost (24 hr/day)	**$7,057 ($5,311**)**	$11,265	$9,801	$10,688

* Using a Commercial Business Energy use cost of $0.0988/kWh and an Industrial Energy use cost of $0.0673/kWh. ** Continuous operation of cabinet utilizing Night-Smart™ reduced flow setback mode. Calculations based on using Night-Smart™ idle setback 16hr/day for 5 days/wk and 24 hr/day for 2 days/week, 52 week calendar year. † Costs of HEPA filters, service and replacement parts are approximations, not an estimate or guarantee of any kind.
†† Service cost includes annual certification ($150/yr), decontamination ($450/incident), and incidentals.

Table 3. FlaskScrubber® Laboratory Glassware Washer Energy Usage/Operating Cost & Comparison

	FlaskScrubber®	Hand Washing	Brand A Washer	Brand B Washer
Recycled Content*				
Pre-Consumer	6.6%			
Post-Consumer	48.2%			
Total *(Pre-Consumer + Post-Consumer/2)*	51.4%			
Recyclable Content	**77.6%**			
Water Usage & Cost**				
Gallons of water consumed	17	40	16.6	18.6
Cost of Tap Water	$0.13	$0.40	$0.11	$0.12
Cost of DI water *(based on washer's min. no. of rinses)*	$1.12	$1.98	$1.83	$2.05
Labor Cost †	$1.75	$28.00	$1.75	$1.75
Detergent Cost	$0.44	$0.88	$0.44	$0.44
Energy cost to heat water ♦	$0.20	$0.48	$0.10	$0.22
Total Operational Cost	$3.65	$31.74	$4.23	$4.58
10-Year Life Cycle Costs (260 days/year)				
Operational Costs**				
Gallons of water consumed	44,200	104,000	43,160	48,360
Cost of Tap Water	$348	$1,040	$286	$312
Cost of DI water *(based on washer's min. no. of rinses)*	$2,917	$5,148	$4,753	$5,320
Labor Cost	$4,550	$72,800	$4,550	$4,550
Detergent Cost	$1,144	$2,288	$1,144	$1,144
Energy cost to heat tap water at $0.012/gallon	$530	$1,248	$259	$572
Total Operational Cost	$9,490	$82,524	$10,993	$11,898
Maintenance Costs				
Installation	$150	*not applicable*	$150	$150
IQ/OQ Document Pack	*No charge*	*not applicable*	$4,000††	$4,000††
IQ/OQ/PQ Validation Service	$3,000††	*not applicable*	*Included with Doc. Pack*	*Included with Doc. Pack*
Service Cost	$750	*not applicable*	$750	$750
Replacement Parts	$200	*not applicable*	$200	$200
Total Maintenance Cost	$4,100	$0	$5,100	$5,100
Total Lifetime Cost *(Operational + Maintenance Costs)*	**$13,590**	$82,524	$16,093	$16,998

*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/gallon. Pure water (DI) rate at ($0.33/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.

The FlaskScrubber® and SteamScrubber® Laboratory Glassware Washers reduce potable water usage versus traditional hand washing.

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Labconco Corporation
8811 Prospect Avenue
Kansas City, MO 64132
800-821-5525 • 816-333-8811
FAX 816-363-0130
www.labconco.com

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