

PURCHASE SPECIFICATIONS FOR NUAIRE LABGARD NU-407 BIOLOGICAL SAFETY CABINET

The intent herein is to provide a concise statement of requirements for a quality Class II, Type A2 (Formerly Type A/B3) Laminar Airflow Biological Safety Cabinet, which may be used to augment your purchase request/order.

The LABGARD NU-407 meets the performance requirements of NSF/ANSI 49:2002. Your confidence is well placed in a Biological Safety Cabinet that meets NSF Standard.

NuAire sales representatives will be pleased to explain the importance of the performance and control affected by each of the following requirements. The NuAire LABGARD NU-407 meets all of the requirements in the following SPECIFICATION.

1. Dimensions Inches (mm)

Overall Dimensions - Inches (mm)	NU-407-400	NU-407-500	NU-407-600
Width :	50 1/2" (1283)	62 1/2" (1588)	74 1/2" (1892)
Depth (window removed)	31" (787)	31" (787)	31" (787)
Depth (normal use)	33 1/2" (851)	33 1/2" (851)	33 1/2" (851)
Height (leg levelers removed)	77 5/8" (1972)	77 5/8" (1972)	77 5/8" (1972)
Height (w/leg levelers)	82 5/8" (2099)	82 5/8" (2099)	82 5/8" (2099)
Height (normal use)	85 5/8" (2175)	85 5/8" (2175)	85 5/8" (2175)
 Work Area Dimensions			
Width:	46 1/2" (1181)	58 1/2" (1486)	70 1/2" (1791)
Depth:	24 1/2 (622)	24 1/2 (622)	24 1/2 (622)
Height:	28 (711)	28 (711)	28 (711)

2. Cabinet shall provide airflows & biological safety performance as specified.

- **a. Cabinet shall provide biological containment protection for both operator and product proven by an actual test, (e.g. test conducted by NSF) and routinely validated by NuAire.
- *b. Cabinet shall be constructed from 16GA, Type 304 stainless and painted cold rolled steel to form a sealed structure.
- c. Cabinet shall be easily fumigated employing an established procedure such as that recommended by NSF.
- d. Supply HEPA filter shall be of full cabinet work zone width and depth; work zone below supply HEPA shall be of fixed cross-sectional area (sloping back wall or viewing window is unacceptable).
- *e. Supply HEPA filter shall be protected by a perforated metal diffuser covering the entire top of the work zone.
- *f. Air Velocity from the supply filter shall average 70 to 80 FPM (.35 to .41 m/s) with no single point outside the 20% of average range measured in a horizontal plane within the workzone.
- *g. Work access opening shall be 8 inches (203mm) high. Average inflow velocity shall nominally be 105 LFPM (.53 m/s).

- *3. The cabinet shall have all positive pressure plenums surrounded by a vacuum relative to the room (the LABGARD™ employs the HEPEX™ Zero Leak Airflow System).
4. Electrical power shall be supplied with a 12-foot (2.5m), 3-wire cord with molded plug. Electrical supply should be 115 VAC, 60 Hz (current rating varies per cabinet size, reference Electrical Requirements page 4) protected with thermal circuit breaker from distribution panel.
5. The cabinet shall have two internal electrical circuits; one for blower/lights and one for the duplex outlets. Each circuit shall be protected with a circuit breaker located in the Control Center.
6. The cabinet shall be listed by Underwriters Laboratories to meet the requirements of both the U.S. and Canada for electrical/mechanical integrity.
7. Total cabinet airflow shall be controlled via a solid state motor voltage regulator with adjustment available on the Control Center.
8. Balancing of cabinet workzone downflow (recycling flow) to exhaust flow shall be accomplished with an internal exhaust flow damper, externally adjustable.
9. The cabinet shall be easily transportable through a standard 36-inch (914mm) wide door without disassembly.
10. Sound level shall be no more than 67 dbA measured 15 inches (381mm) above the work tray and 12 inches (305mm) in front of viewing window.
11. Fluorescent lighting shall be externally mounted and provide 90 (968) to 120 (1291) foot-candles (LUX) on work surface. The ballast to be electronic containing thermal protection with automatic reset.
- *12. Cabinet shall have a minihelic gauge to display pressure drop over the supply HEPA filter.
- *13. Cabinet shall come standard with one outlet with a drip proof cover on right side wall; one gas valve/service coupling on right side wall; one service coupling on right side wall.
14. Leg levelers shall provide for $\pm 3/4$ " vertical movement.
- *15. Cabinet work zone shall be all 16 GA. stainless steel and reinforced with stainless steel U channels to minimize vibration.
16. A 3/8 (10 mm) inch ball valve shall be provided in the drain trough beneath the work tray.
- *17. Cabinet shall have a permanent positive pressure plenum with quick release supply filter removal.
- *18. Motor/blower shall be positioned so as to create an even filter loading, thereby prolonging the life of the supply HEPA filter, and shall deliver over 80% the initial HEPA filter static pressure with no more than a 10% decrease of CFM.
- *19. Cabinet shall be capable of front filter removal.

20. The following optional equipment shall be available to support installation and user requirements:

- Ultraviolet Light
- Ground Fault Interrupter for Electrical System
- Additional Service Valves for Gas, Air, Vacuum
- Additional Outlet
- IV Bar with 6 Stainless Steel Hooks
- Alarm Systems
- Exhaust Interlocks
- Storage Pull-Out Trays
- Lay in Sorbent Exhaust Filter
- Metal Framed HEPA Filters
- HEPA Filters 99.999% @ 0.3 Micron
- Stainless Steel Armrest
- Exhaust Transitions

*Having all of these features is unique ONLY to NuAire cabinets.

**NU-407-500 containment test performed by NuAire, Inc.

**Labgard Class II, Type A2
Laminar Flow Biological Safety Cabinet
Models NU-407-400, 500, 600**

Catalog Number	Catalog Number		
	NU-407-400 Nominal 4 foot	NU-407-500 Nominal 5 foot	NU-407-600 Nominal 6 foot
Performance Specifications 1. Personal Protection 2. Product Protection	NSF/ANSI 49:2002 NSF/ANSI 49:2002	NSF/ANSI 49:2002 NSF/ANSI 49:2002	NSF/ANSI 49:2002 NSF/ANSI 49:2002
NSF Std. No. 49 Class	Class II, Type A2	Class II, Type A2	Class II, Type A2
Style of Cabinet	Console	Console	Console
Cabinet Construction Pressure Tight Design	All welded stainless steel 16GA, Type 304 interior 16GA CRS Base	All welded stainless steel 16GA, Type 304 16GA CRS Base	All welded stainless steel 16GA, Type 304 16GA CRS Base
Diffuser for Air Supply (Metal)	Non-flammable	Non-flammable	Non-flammable
HEPA Seal Type: Supply Filter-99.99% Eff. on 0.3 microns Exhaust Filter-99.99% Eff. on 0.3 microns	HEPEX Seal* Neoprene, Springloaded	HEPEX Seal* Neoprene, Springloaded	HEPEX Seal* Neoprene, Springloaded
Fumigation per NIH/NSF Procedure	Yes	Yes	Yes
Standard Services: Gas Cocks 3/8" NPT Duplex Outlet	One, Right Sidewall One, Right Sidewall	One, Right Sidewall One, Right Sidewall	One, Right Sidewall One, Right Sidewall
Optional Services: Gas Cocks 3/8" NPT Duplex Outlets Ultraviolet Light	Up to 3 ea. Sidewall 1 ea. Sidewall One, Backwall	Up to 3 ea. Sidewall 1 ea. Sidewall One, Backwall	Up to 3 ea. Sidewall 1 ea. Sidewall One, Backwall
Cabinet Size: Height (Fully Assembled) Height (Minimum for Transport) Width Depth (with Light) Depth (Light removed)	85 7/8 inches 77 5/8 inches 50 1/2 inches 33 inches 30 1/4 inches	85 7/8 inches 77 5/8 inches 50 1/2 inches 33 inches 30 1/4 inches	85 7/8 inches 77 5/8 inches 50 1/2 inches 33 inches 30 1/4 inches
Work Access Opening: Standard Opening Height Standard Inflow Velocity (DIM)	8 inches 105 FPM	8 inches 105 FPM	8 inches 105 FPM
Work Zone: Height Width Depth	28 inches 46 1/2 inches 24 1/2 inches	28 inches 58 1/2 inches 24 1/2 inches	28 inches 70 1/2 inches 24 1/2 inches
Viewing Window: Hinged Tempered Glass	8 inch opening	8 inch opening	8 inch opening
Minimum Exhaust Flow Standard	256 CFM	325 CFM	389 CFM
Plant Duct Static Pressure	0.05-0.1" H ₂ O	0.05-0.1" H ₂ O	0.05-0.1" H ₂ O
Heat Rejected, BTU, Per Minute	24	35	43
Electrical: Volts, AC 60 Hz Amps: Blower/Lights Amps: Duplex 12 ft. Power Cord (one)	UL/UL-C Listed 115 10 3 14 GA - 3 Wire, 15A	UL/UL-C Listed 115 10 3 14 GA - 3 Wire, 15A	UL/UL-C Listed 115 12 3 14 GA - 3 Wire, 15A
Crated Shipping Weight: Net Weight	690 lbs. 655 lbs.	790 lbs. 755 lbs.	890 lbs. 855 lbs.

Crated shipping weight does not include weight for accessories or options.