Biotechnology Laboratory Noise Reduction at Amgen Using VibraCore® Cleanroom Wall Panels

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OVERVIEW

Amgen operates large biotechnology research and biologics manufacturing facilities where highly controlled laboratory environments support advanced medical research and pharmaceutical development. These biotechnology cleanrooms contain specialized laboratory equipment, sterile processing systems, and high-efficiency ventilation infrastructure that operate continuously throughout research and production cycles.

To improve acoustic conditions while maintaining sterile laboratory standards, Amgen partnered with All Noise Control to implement VibraCore® Acoustic Cleanroom Wall Panel Systems engineered to enhance sound absorption within biotechnology cleanroom facilities.

CHALLENGES

Biotechnology research laboratories rely on cleanroom environments with hard, hygienic surfaces designed to prevent contamination and support strict cleaning protocols. While these surfaces are essential for sterile laboratory operations, they can reflect sound energy, creating reverberation that spreads throughout the workspace. Continuous noise generated by laboratory instruments, ventilation systems, and processing equipment can interfere with communication among researchers and technicians. The facility required an acoustic treatment solution that would reduce reverberation while maintaining strict hygiene and cleanroom compliance standards.

SOLUTION:

All Noise Control implemented VibraCore® Acoustic Cleanroom Wall Panel Systems throughout laboratory spaces to control sound reflections and improve acoustic comfort. The installation incorporated 2' x 4' x 2" fiberglass acoustic panels featuring a 6–7 PCF rigid fiberglass core designed for effective sound absorption.

Each panel is fully encapsulated with a solid PVF cleanroom finish, providing a hygienic and washable surface suitable for biotechnology laboratories. With an NRC rating of 0.85, the panels absorb airborne sound energy generated by laboratory equipment and air handling systems, improving overall acoustic performance within the cleanroom.

RESULTS:

- Reduced laboratory reverberation in biotechnology cleanrooms
- Improved communication between researchers and technicians
- Maintained sterile laboratory cleanroom compliance
- Enhanced acoustic comfort within biologics research facilities
- Installed durable cleanroom acoustic wall panels