

Bio-clean Facilities

Food environmental facilities

In the food production industry, the analysis of hazards in production processes and the introduction of in-house sanitary management systems and environmental control technologies in order to prevent contamination by hazardous microbes has become increasingly important with the introduction of HACCP (Hazard Analysis and Critical Control Point). One of the key technologies is the introduction of a bio-clean room which is indispensable for complete sanitation planning. Yamato Scientific optimal designing and construction taking into consideration specific building construction, zoning laws, cleanliness standards or classifications.



Pharmaceutical environmental facilities



Implementation of Good Manufacturing Practices (GMP) in the pharmaceutical industry made it necessary for bio-clean rooms. Bio-clean rooms can be classified into two types: those requiring higher levels of cleanroom conditions; and those that prevent cross contamination. YAMATO SCIENTIFIC constructs bio-cleanrooms to effectively meet the various conditions of GMP by considering well the characteristics of specific pharmaceuticals.

Animal experiment systems

Breeding facilities for laboratory animals or livestock are controlled at a higher level of cleanliness. Specific-pathogen-free (SPF) animals, germ-free animals as well as conventional animal stockyards have been adopted for bio-clean rooms in order to provide a barrier system. The animal breeding rooms are airtight with facilities for controlling noise, sterilization and disinfection. For air-conditioning facilities, we have developed our own air-conditioning monitoring system using a personal computer for improving operational efficiency and management control and to reduce energy consumption.



Protection Facilities against Biohazards (P3 level)



The main purpose for P3 rooms is to perform experiments and research. Such rooms are optimally designed to contain hazardous pathogens and genetic recombinants within a specified area, to protect researchers or to establish alarms and safety measures. In particular, with such containment facilities such as air conditioning facilities and safety cabinets, we offer safe facilities through our system engineering.

Medical Facilities

Neonatal intensive care units, burn treatment rooms and convalescent rooms can be turned into bio-clean rooms to assure perfect prevention of infections. Operating rooms can also be made into bio-clean rooms to prevent infections during operations. In addition, we can design the medically ideal bio-clean room (including clean hospital units) with optimal construction taking into consideration the comfort of patients and the traffic of doctors and nurses.



Plant Facilities

The "plant factory" system is expected to be one of the important next-generation production systems. For agricultural produce, a new value will be found in the marketplace for vegetables that are cheaper and "cleaner" than conventional ones, vegetables that have been grown under a highly-controlled environment. YAMATO SCIENTIFIC offers a pilot plant for trial research based on the environmental control technology for plant cultivation.

