2.4 Hazardous Waste Management

Material Topic

In the production process, PharmaEssentia uses chemicals classified as toxic and hazardous by the Environmental Protection Administration (EPA). Therefore, the company places great emphasis on the source control of toxic substances and their proper classification, storage, and use. PharmaEssentia also uses written records to monitor the use of chemicals, trace the flow of chemicals, and prevent environmental pollution and harm to human health. Over the past three years, the company has achieved zero incidents of chemical or waste leaks.

GRI 3-3

Management Policy

Internal Policies
- Environmental Safety and Health Policy
- Hazardous Waste Management Procedures

External Guidelines
- Central regulations for environmental protection
- Local environmental agencies' announcements

Management Commitment

Compliance with environmental regulations; and implementation of the management of chemicals and toxic chemicals, and precursor chemicals to avoid major disasters that can cause environmental pollution and harm to human health.

Accountable Units
- ECCS - Environmental Friendliness Taskforce
- Management of the use, maintenance, and operation of chemicals, toxic chemicals, and precursor chemicals are assigned to personnel responsible for operation by the user unit, with assistance from the environmental and safety unit, to jointly assume management responsibilities.

Input Resource
- Two personnel from the toxic substance operation unit participated in the emergency response personnel training for toxic chemicals held by the Environmental Protection Administration, and successfully passed the test to obtain a professional emergency response personnel certificate.
- The QC unit holds annual training sessions for emergency response equipment as well as annual disaster rescue and response exercises to enhance disaster response skills for the personnel of operating units.
- Continuously follow up on the operating specifications for toxic chemicals, and report the operating volume every month as required to reduce the risk of violating regulations.

Targets

Short-term Targets for 2023
- Implementation of the ISO 14001: 2015 Environmental Management System and the ISO 45001: 2018 Occupational Safety Management System
- To have units continuously assign personnel to participate in emergency response personnel training courses for toxic chemicals, so as to enhance the skills of the operating unit in responding to disasters.

Medium-term Targets for 2024-2026
- Continuously implement the ISO 14001: 2015 Environmental Management System and the ISO 45001: 2018 Occupational Safety Management System, and follow up on the environmental assessment results and recommended measures for improvement.
- Strengthening awareness of hazards from toxic substances, risk assessments and disaster emergency response management within the factory to reduce the impact of toxic substance operations on the environment.

Long-term Targets (2026 and beyond)
- Maintaining the ISO 14001: 2015 Environmental Management System, using environmental impact assessment methods to reduce environmental impact risks, and seeking relevant opportunities to achieve sustainable environmental goals.

Evaluation of Management Policy

Management Evaluation Mechanism
- Internal audit: Regular monthly reporting of monthly operating volume
- External audit: Conduct legal compliance audits on routine items as required by the competent authority

2022 Evaluation Results
- Comply with legal regulations and regularly report operating volume and storage requirements for hazardous materials
- In 2022, environmental agencies (Environmental Protection Bureaus of Taipei City Government and Taichung City Government) conducted compliance audits, and no deficiencies were found.

Classification and Control of Toxic Substances

Per the Toxic and Concerned Chemical Substances Control Act, which is regulated by the Environmental Protection Administration (EPA), PharmaEssentia classifies toxic substances and stores them in explosion-proof fume hoods in the laboratory based on their category. Since we use a wide range of chemicals, we have developed the Chemical Hazard Management Procedures to clearly define responsibilities and control measures for the purchase, use, storage, and disposal of toxic substances. We also maintain accurate records of the quantities and inventory of our chemicals. Our classification and control measures are as follows:

Classification

Class 1 Chemicals

Persistent pollutants refer to substances that are difficult to break down in the environment, and can cause environmental pollution or harm to human health due to bioaccumulation, biomagnification, biotransformation, or other effects.

Class 2 Chemicals

Slow-acting toxic substances refer to substances that have long-term health effects, such as causing tumors, impaired fertility, teratogenesis, genetic mutations, or other chronic diseases.

Class 3 Chemicals

Acute toxic substances refer to chemicals that can cause immediate harm to human health or biological life upon exposure.

Class 4 Chemicals

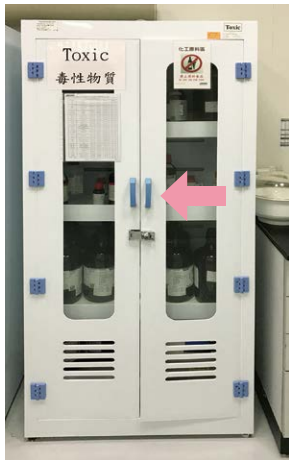
Chemicals with endocrine disrupting properties or those that can pollute the environment and harm human health.

Management Measures

Access Control

Restricting personnel access to the laboratory

Drug Cabinet Control



Locking the drug cabinet and assigning a specific person to manage the key

Usage Control

Users are required to fill out a usage record form, and the monthly usage amount is compiled by the environmental and safety department and reported accordingly

Panco Healthcare is a logistics center rather than a manufacturing plant, so no chemicals are used there, and there is no Hazardous Waste Management Procedures, either. However, the logistics center does engage in processing and labeling operations. During the labeling process, there is a possibility of drug breakage or spillage, and thus an on-site cleanup is necessary. Therefore, the company has developed a “Cleaning Operation Procedure for Processing and Labeling Lines” to ensure proper handling of drug spillages.

Emergency Response Measures for Hazardous Substances

To ensure the safety of employees, PharmaEssentia has established the “Standard Operating Procedures for an Emergency Response to Chemical Spills” to respond to emergencies quickly and effectively. The laboratory is equipped with a comprehensive set of emergency response equipment for employees to use in case of emergencies. The equipment is checked every month to ensure that it is in good condition and there is a sufficient supply of safety equipment. Additionally, the company conducts an annual drill for toxic chemical spills to ensure that employees can respond quickly in case of emergencies and minimize the impact of disasters. In the future, the company plans to establish professional response personnel for toxic substances in accordance with the “Professional Management Measures for Responders of Toxic Chemical Leakages”. In case of accidents, the disaster response unit will be responsible for taking the necessary action to respond to the emergency and the subsequent cleanup, and the emergency response personnel of other unites will be responsible for supporting the main disaster response unit to implement the company's toxic disaster response procedures and train the toxic substance handlers.

2022 Chemical Hazardous Material Spill Emergency Response Drill

Emergency response personnel dressing training

Leakage and Hazardous Material Spill Rescue Exercise (QC Lab Acetonitrile Spill Emergency Response)