## Chapter 1

# **Emergency Response**

#### **Section 1 Introduction**

In the event of an emergency, the most important thing is to first secure one's personal safety. Activities to rescue and secure the safety of those around you and to prevent the spread of damage must be undertaken only after you have secured your personal safety and confirmed that you are not in danger. Protecting your personal safety is important to minimize damage.

This chapter summarizes the general measures to be taken in the event of an emergency. In addition to the individual topics discussed in Chapter 4 and below, those of particular importance and should be implemented immediately are provided. We urge you to review this information when an emergency occurs, and to read it in advance to be prepared to respond promptly and to the best of your ability in the event of an emergency.

### **Section 2 Specific Measures**

#### 1 Safety basics

As a basic safety precaution, the following precautions should be taken regularly:

- (1) Always keep the laboratory space tidy, neat, and clean.
- (2) Wear appropriate clothing and footwear for the work.
- (3) Use protective equipment (helmets, safety glasses, gloves, masks, etc.) appropriate for the work.
- (4) Work in a stable posture appropriate for the work.
- (5) Be aware that arbitrary or hasty decisions can result in injury.
- (6) When working in the same posture for a long time, it is also important to eliminate static fatigue.

#### 2 If an electrical accident occurs

[In case of electrocution]

- (1) Turn off the power to the main unit using the "emergency stop switch". Alternatively, turn off the breaker of the experiment panel.
- (2) If it is not possible to turn off the breaker, use a dry stick, cloth, insulated rubber gloves, etc. to pull the person requiring rescue away from the site of electric shock to prevent the rescuer from receiving an electric shock.
- (3) In case of cardiopulmonary arrest or shallow breathing, call an ambulance while performing a cardiac massage and artificial respiration (for cardiac massage and artificial respiration, refer to pp. 10–11).
- (4) Keep the target warm and at rest.

#### 3 If you notice a gas leak

- (1) Open doors and windows.
- (2) Close gas cocks and main valves.
- (3) Do not turn on ventilation fans or lights in a panic. (Sparks from the switch could ignite the gas and cause an explosion.)
- (4) Inform the surrounding community about the gas leak, evacuate the area, and report the leak to the emergency contact.

#### 4 In case of a fire

(1) Discovery and reporting

If you start or discover a fire, notify people around you in a loud voice, ask for their cooperation, press the transmitter button, and activate the emergency bell.

(2) First response firefighting

Depending on the situation, use fire extinguishers or indoor fire hydrants to extinguish fires in the initial stages.

(3) Evacuation

The limit of first response firefighting is until the fire reaches the ceiling. If the fire is out of control, evacuate to a safe place. Close the doors and windows before leaving. Do not be concerned about your belongings. Do not use elevators.

#### 5 In case of an earthquake

- (1) When there is an earthquake early warning or a tremor, first secure your safety by hiding under a table or other object. After the tremors subside, extinguish fires, etc.
- (2) Open doors and secure exits. Do not rush outside.
- (3) If a fire breaks out, attempt to extinguish it at the initial stage according to the situation.
- (4) Stay away from gates and walls. When indoors, watch out for shards of glass.
- (5) Cooperate with others to administer first aid.
- (6) Act based on accurate information provided by radio, TV, Internet, etc.