



Republic of the Philippines
NATIONAL POLICE COMMISSION
NATIONAL HEADQUARTERS PHILIPPINE NATIONAL POLICE
OFFICE OF THE CHIEF, PNP
Camp BGen Rafael T Crame, Quezon City

MEMORANDUM CIRCULAR
NO.: 2021-001

JAN 07 2021

**PRESCRIBING THE MINIMUM TECHNICAL SPECIFICATIONS
FOR LABORATORY OR MEDICAL FREEZER (ULT -50°C TO -86°C)**

1. REFERENCES:

- a. NAPOLCOM Resolution No. 2020-0929 entitled, "Prescribing the Minimum Standard for Laboratory or Medical Freezer" dated October 15, 2020;
- b. NAPOLCOM Memorandum Circular (MC) No. 2019-002 entitled, "Defining the Duty and Authority of the NAPOLCOM to Prescribe Minimum Standards for Uniforms, Arms, and Equipment to be Procured by the PNP" dated January 29, 2019;
- c. PNP Memorandum Circular (MC) No. 2019-016 entitled, "Implementing Guidelines of NAPOLCOM Resolution No. 2019-002 Defining the Commission's Function to Prescribe Minimum Standards for Uniforms, Arms and Equipment for the Philippine National Police and Delineation of Authority to the Chief, Philippine National Police and to Set Technical Specifications of PNP Uniforms, Arms and Equipment" dated April 4, 2019; and
- d. UESB Resolution No. 2020-038 entitled, "Approving the Proposed Minimum Technical Specifications for Laboratory or Medical Freezer (ULT -50°C to -86°C)" dated November 24, 2020.

2. RATIONALE:

This MC sets forth the minimum technical specifications for Laboratory or Medical Freezer (ULT -50°C to -86°C) that will serve as reference in the procurement.

3. SITUATION:

In the fight against COVID 19 pandemic, an indispensable equipment for storing and preserving delicate and high value samples/items is needed by the PNP Health Service. Freezers equipped with approved standard and technical specifications to accommodate multiple types of items and its containers maintain the temperature just below freezing. Ultra-low freezers capable of temperatures of -80 degrees Celsius or lower are often used for high-value material and samples.

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4. PURPOSE:

To provide and establish the minimum technical specifications for Laboratory and Medical Freezer (ULT -50°C to -86°C) that will serve as reference in the procurement of the said equipment.

5. DEFINITION OF TERMS:

For purposes of this MC, the following terms shall mean:

- a. **Ambient temperature** – refers to an atmospheric temperature of the immediate surroundings.
- b. **Biomedical** – refers to a set of sciences applying portions of natural science or formal science, or both, to knowledge, interventions, or technology that are of use in healthcare or public health. Such disciplines as medical microbiology, clinical virology, clinical epidemiology, genetic epidemiology, and biomedical engineering are medical sciences. In explaining physiological mechanisms operating in pathological processes, however, pathophysiology can be regarded as basic science.
- c. **Blood products** – refers to blood components obtained from plasma using pharmaceutical processes. These are generally referred to as plasma derivatives. Examples of blood products are albumin and immunoglobulins.
- d. **Compressor** – refer to a mechanical device that increases the pressure of a gas by reducing its volume. An air compressor is a specific type of gas compressor. Compressors are similar to pumps: both increase the pressure on a fluid and both can transport the fluid through a pipe.
- e. **Condenser** – refers to a device for reducing a gas or vapor to a liquid. Condensers are employed in power plants to condense exhaust steam from turbines and in refrigeration plants to condense refrigerant vapors, such as ammonia and fluorinated hydrocarbons.
- f. **Defrost** – refers to the release from a frozen state.
- g. **Electrical safety rating** – is used to assess the safety of the equipment according to internationally accepted standards, for example in the prevention of electric shock.
- h. **Evaporator** – refers to a device in a process used to turn the liquid form of a chemical substance such as water into its gaseous-form/vapor.
- i. **Insulation** – refers to the act of covering something to stop heat, sound, or electricity from escaping or entering, or the fact that something is covered in this way.

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- j. **Laboratory** – refers to a facility that provides controlled conditions in which scientific or technological research, experiments, and measurement may be performed. Laboratory services are provided in a variety of settings: physicians' offices, clinics, hospitals, and regional and national referral centers.
- k. **Pharmaceutical** – refers to a substance used in the diagnosis, treatment, or prevention of disease and for restoring, correcting, or modifying organic functions.
- l. **Plenum** - refers to an air-distribution box attached directly to the supply outlet of the HVAC equipment that heats or cools the air to make the house comfortable.
- m. **Polyurethane** – refers to a polymer composed of organic units joined by carbamate links.
- n. **Potentiometer**- refers to a three-terminal resistor with a sliding or rotating contact that forms an adjustable voltage divider. If only two terminals are used, one end and the wiper, it acts as a variable resistor or rheostat.
- o. **Refrigerant** – refers to a substance or mixture, usually a fluid, used in a heat pump and refrigeration cycle. In most cycles it undergoes phase transitions from a liquid to a gas and back again. Many working fluids have been used for such purposes.
- p. **Subfreezing** – refers to being or marked by temperature below the freezing point.
- q. **Temperature** – refers to the degree or intensity of heat present in a substance or object, especially as expressed according to a comparative scale and shown by a thermometer or perceived by touch.
- r. **Thermostat** – refers to a component which senses the temperature of a physical system and performs actions so that the system's temperature is maintained near a desired set point. Thermostats are used in any device or system that heats or cools to a set point temperature, examples include building heating, central heating, air conditioners, HVAC systems, water heaters, as well as kitchen equipment including ovens and refrigerators and medical and scientific incubators.

6. SPECIFICATIONS:

a. Description:

Freezer is a thermally insulated compartment, cabinet, or room in which a subfreezing temperature is maintained for the rapid freezing and storing of perishable items. Programmable thermostats and temperature monitor systems, as well as alarms that sound in cases of power failure are its common features.

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b. Technical Specifications:

- 1) Configuration type : Upright
- 2) Power Supply : Philippine Standard
- 3) Internal Dimensions (W x D x H) : 19.29" x 24.29" x 51.18
- 4) External Dimensions (L x D x H): 31.22" x 36" x 78.18"
- 5) Caster/legs : Flexible
- 6) Shelve/Drawer or basket : 3
- 7) Exterior/Interior Finished : Stainless or galvanized steel with bacteria-resistant powder or epoxy coated
- 8) Door Construction : Solid
- 9) Doors Locks/Security system : With security lock and key
- 10) Control : Digital or Microprocessor
- 11) Display : LCD Touchscreen or Graphical
- 12) Temperature control range : -50° to -86°C
- 13) Storage Capacity : 400 L
- 14) Temperature sensor : Resistance Temperature Detection
- 15) External Dimensions : Manufacture Standard Dimensions
- 16) Record : Data or Log Temperature
- 17) Alarm : Audible and visible for Temperature, probe, open door, and power failures
- 18) Back Up Battery : 20 hours
- 19) Defrost : Automatic


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7. EFFECTIVITY:

This MC shall take effect immediately after 15 days from filing a copy thereof at the UP Law Center in consonance with Section 3, Chapter 2, Book VII of Executive Order 292 otherwise known as the "Revised Administrative Code of 1987, as amended.




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