cryopAL

VOYAGEUR

cryogenic containers

User manual

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1. Identity of manufacturer

The manufacturer of the *Voyageur* medical device is Cryopal:

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2. Safety information

Before using the *Voyageur* device, read this manual and the following safety instructions carefully.

2.1. General instructions

You are only authorised to operate and use the equipment mentioned in this document if you have read through this entire manual and all safety instructions and have been trained in the risks associated with handling cryogenic fluids.

It is recommended that a back-up liquid nitrogen tank is available at all times so that samples may be transferred in the event of a malfunction.

The device described in this manual is designed exclusively for use by qualified personnel. Maintenance operations should only be carried out by qualified personnel authorised by the manufacturer. To ensure the safe and correct use of the device during service and maintenance, it is essential that all personnel observe standard safety procedures.

In the event the cryogenic equipment does not seem to function correctly under normal usage conditions, only someone who has been fully trained by the manufacturer is allowed to work on the cryogenic device and its peripheral components. Users must not take action themselves due to the health and/or safety risks. In order to avoid the loss of too much cold, the time until the maintenance technician performs servicing must be as short as possible.

The installation of remote monitoring options or devices will improve the safety of the cryogenic system. Regular inspections must also take place.

Important / User information ** When storing biological samples classified as sensitive by the user, Cryopal recommends using the *Voyageur* product range equipped with the temperature monitoring system called T° Tracker.

For *Voyageur* devices not equipped with the T° Tracker temperature monitoring system, Cryopal recommends the nitrogen level in the device be checked continuously. The test described in section 8.2 is used to confirm that the equipment's thermal performance is still within the manufacturer's recommended parameters.

2.2. General precautions for use

Wear personal protective equipment (PPE) when handling the device:

	Protective cryogenic gloves are compulsory
	Fire-resistant protective overalls (long sleeves) are recommended
	Protective goggles are compulsory
	Foot protection is recommended
/	Oxygen meter

Protection

The general precautions for use are the same for all cryogenic tanks:

	Liquid nitrogen is extremely cold (-196°C). The parts of the tanks that have been in contact with liquid nitrogen, especially while filling the tanks, may cause cold burns if they come into contact with the skin. ***Cold burns and/or frostbite*** ▪ On the neck and cap, after opening or while filling. ▪ On the lock, during or immediately after filling ▪ On the neck and the lid after opening To avoid burns, it is recommended to never touch the cold parts of the equipment (neck, cap, tube, etc.) and to always wear the personal protective equipment listed in the safety instructions.
	***Trapping*** ▪ By the cap when closing the device. ***Crushed feet*** ▪ By the casters, and the cryogenic device when handling.
	Regular checks of the evaporation rate provide assurances that the product has retained its original characteristics (see section 8.2)

	Check there is no frost on the neck or outer casing of the device on a daily basis. If there is, stop using the cryogenic device and immediately contact your distributor responsible for maintenance.
	Check the condition of the cap (deterioration of the polystyrene, uncoupling of the cover). If there is substantial wear and tear, replace the cap to help maintain the device's performance.
	If liquid nitrogen drips onto the pump check valve, it may no longer be leaktight. If this occurs, check that all traces of frost have disappeared from the neck after 24 hours. Contact your maintenance team in the event of spillage on the valve.
	The liquid nitrogen used in the storage containers evaporates in the air: 1 litre of liquid nitrogen releases around 700 litres of gaseous nitrogen. Nitrogen is an inert, non-toxic gas, but displaces oxygen when released into the atmosphere. Once the atmospheric oxygen content falls below 19% the human body is at risk. All rooms and areas that house storage tanks containing liquid nitrogen should be well ventilated at all times and equipped with at least one oxygen gauge. All personnel should be informed of the risks associated with the use of nitrogen. Refer to current guidelines and contact your distributor.
	The device must be filled with cryogenic liquid nitrogen in a well-ventilated area (outside) or in a room equipped with a constant ventilation system adapted to the size of the room. The room must also be equipped with an oxygen monitoring system with a display located outside the room, and the user must be equipped with a portable oxygen monitoring system. The necessary safety conditions and the provision of safety systems for operating a cryogenic room are the responsibility of the operator.

2.3. Precautions in the event of faults

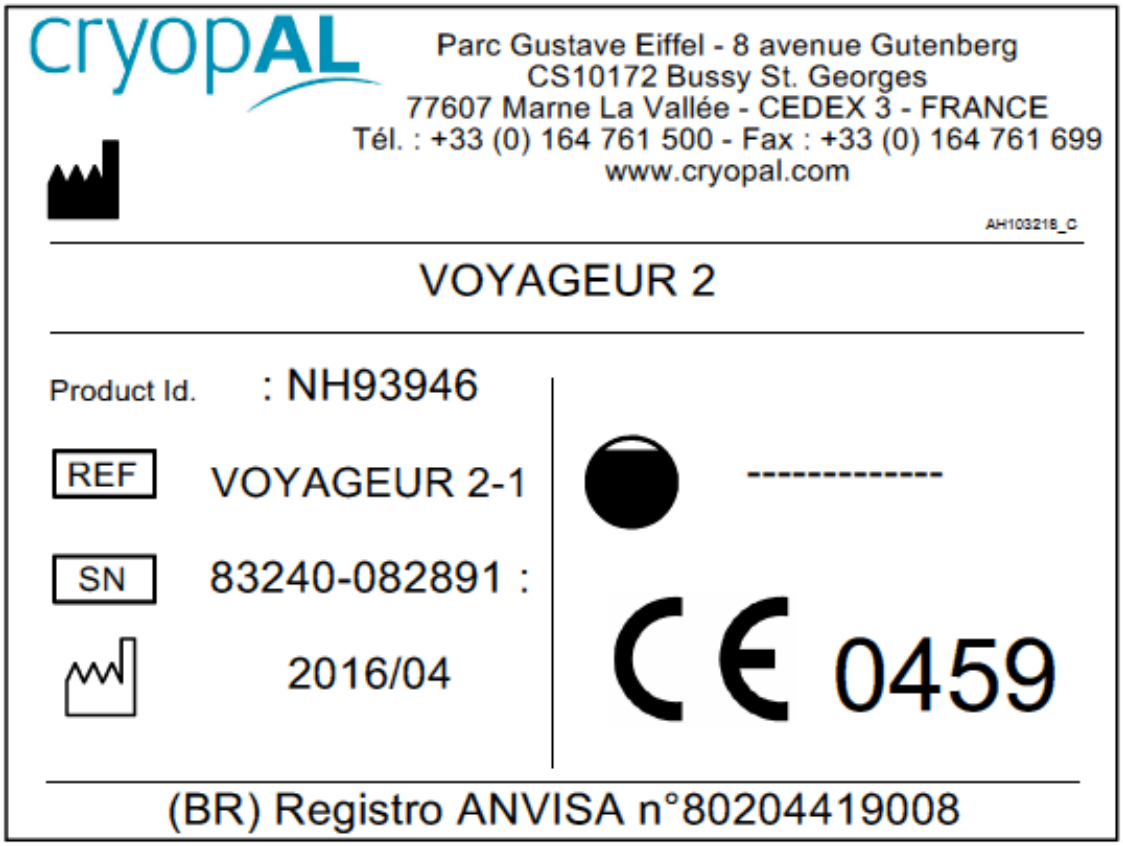
Full safety cannot be guaranteed in the following cases:

- The container is visibly damaged.
- After prolonged storage in unsuitable conditions.
- After severe damage sustained during transit.

- The container loses its thermal performance (see section 8.2)

If you suspect that the container is no longer safe (for example as a result of damage sustained during transit or during use), it should be withdrawn from service. Make sure that the withdrawn equipment cannot be accidentally used by others. The apparatus should be handed over to authorised technicians for inspection.

2.4. Description of labels



Labels found on the Voyageur device

2.5. Key to symbols

	Manufacturer		Important: Low temperature
	Refer to the instruction manual		Gloves must be worn
	Goggles must be worn		Ventilate the room
	Do not touch frosted parts		Product reference code
	CE marking, complies with Directive 93/42/EC		Serial number
	Date of manufacture		Capacity in litres

3. Voyageur device

3.1. Device overview

The devices in the *Voyageur* product range are unpressurised cryogenic tanks used to store and transport biological specimens that have been previously frozen in gaseous phase nitrogen at -196°C (gaseous nitrogen is a cryogenic fluid).

Figure 3-1: Voyageur tanks

The main features of the *Voyageur* range of devices are:

- *Voyageur* tanks can be transported in total safety, thanks in part to the use of absorbent material (the calcium silicate used inside the container stops the liquid nitrogen from spilling and splashing if the tank is tipped over), and also thanks to the application of national and international regulatory requirements, such as the ADR (P203) and the IATA (P202/A152).
- All devices in the *Voyageur* range are designed for gaseous phase storage only.
- *Voyageur* devices are available with user accessories as described in section 11.
- The device cannot be filled automatically and it is not designed to accommodate a solenoid valve, filling system, and/or level indicator.
- *Voyageur* devices can be equipped with a T° TRACKER temperature recorder. Caps are designed with a concentric hole, intended for use with a temperature probe. If no probe is

used, the hole is plugged using the push rivet supplied with the cap, in order to maintain the device's performance.

- Option to close with a standard padlock, except the *Voyageur 2*.
- Light alloy construction, for reduced weight and longer holding time.
- Availability of varied storage systems adapted to vials, tubes, straws, bags, etc.

The devices must only be used for storing products, and not for freezing. Storage must be in nitrogen only.

The use of gaseous nitrogen as opposed to liquid nitrogen:

- Minimises the risks of cross-contamination
- Increases user safety by preventing splashes when handling
- Reduces the weight of the racks when handling

Cryopal recommends you always use the T° Tracker temperature monitoring and recording device with each cryogenic container in the *Voyageur* range.

3.2. Technical specifications

Tanks	Voyageur			
Name	**Voyageur 2**	**Voyageur 5**	**Voyageur 12**	**Voyageur Plus**
Purpose	Used for the transportation and long-term preservation, at a very low temperature in a gaseous state, of previously frozen biological samples.			
Contraindications	Do not use outside of the temperature/humidity ranges stated in the notice. Do not fill the tank with anything other than liquid nitrogen.			
Performance	Maintains a cryogenic temperature to preserve biological samples, and makes it easier to transport and access biological samples.			
Operational lifetime	10 years			
Material held	Liquid nitrogen			
Tank material	Stainless steel, aluminium alloy, Calsil, epoxy fibreglass composite (neck)			
Total capacity (L)	1.75	6.5	15	20.6
Diameter of neck (mm)	30	50	80	215
Diameter (mm)	174	248	308	356
Weight when empty (kg)	2.4	7.5	11.6	14.2
Full weight (kg)	3.5	11.3	20	20
Total height (mm)	395	550	570	575
Evaporation (in L/day of liquid)	0.1	0.13	0.24	0.8
Holding time (days)	8	23	28	6
Materials in direct or indirect contact with the user	Stainless steel, aluminium alloy, polycarbonate, Klegecell, Calsil, epoxy fibreglass composite (neck)			

3.3. Overview of the product range

References	Product description

VOYAGEUR2-1	*Voyageur 2* with 2 canisters
VOYAGEUR5-2	*Voyageur 5* with 2 canisters
VOYAGEUR12-2	*Voyageur 12* with 2 canisters
VOYAGEUR20-2	*Voyageur Plus*

4. Usage instructions

4.1. Intended use

Tanks in the *Voyageur* range are designed for use in laboratories or hospital settings for the preservation and transportation of biological samples.

Samples could be cord blood, blood bags, cells...

4.2. Expected performance

The expected performance of this device is therefore to:

- Maintain a cryogenic temperature to preserve biological samples
- Make it easier to transport and access biological samples

The -150°C temperature is guaranteed if the lid is closed, with normal filling conditions.

4.3. Device service life

The vacuum of the *Voyageur* devices is guaranteed for 6 years. The expected service life of the *Voyageur* device is 10 years under normal usage conditions.

The device's service life can only be maintained if all of the recommendations made in this manual are followed.

4.4. Contraindications

Voyageur tanks must only be used within the temperature and humidity ranges specified in the user manual, and only with liquid phase nitrogen (see section 6).

4.5. Potential adverse effects

4.5.1. User

There are two major adverse effects linked to the use of liquid nitrogen:

1. Cold burns or cryogenic burns
2. Anoxia

In order to avoid these adverse effects, follow the safety instructions provided in this manual.

4.5.2. Device

There are two major risks associated with using the device:

1. Deterioration of the cap: Wear and tear to the foam of the cap, linked to friction during repeated opening and closing of the cap, or loosening of the cap foam.

It is recommended you have a back-up cap to use as a replacement upon the first signs of wear and tear.

2. Leakage from the pump check valve: If liquid nitrogen drips onto the pump check valve, it may no longer be leaktight.

If liquid nitrogen spills over onto the valve, check that all traces of frost have disappeared from the neck within 24 hours, and conduct a thermal performance inspection of the device by following the nitrogen level inspection protocol (see section 8.2).

Figure 4-1: Example location of the pump check valve on Voyageur 2

5. Materials used

Materials in direct or indirect contact with the user	Stainless steel, aluminium alloy, polycarbonate, Klegecell, Calsil, epoxy fibreglass composite (neck)

6. Storage and handling conditions

There are several conditions and safeguards to follow so that *Voyageur* devices can be used in complete safety.

6.1. Storage

- The premises in which the equipment is stored must be equipped with personal protective equipment (PPE).
- There must be minimum safety distance of 0.5 m around the device.
- Do not store the equipment near heat sources.
- Temperature and humidity ranges during storage (in the device's original packaging):
  - Ambient temperature: -30°C to 60°C
  - Relative humidity: 0% to 85% without condensation
  - Atmospheric pressure: 500 hPa to 1150 hPa
- Ensure that there is sufficient ventilation in areas where liquid nitrogen is stored or used, because liquid nitrogen evaporates and produces large quantities of nitrogen gas, which can reduce the amount of oxygen in the surrounding air in confined spaces and lead to a risk of anoxia. A reduction in atmospheric oxygen levels is unnoticeable when breathing in, so anoxia results in a loss of consciousness then death without any warning signs.
- An oxygen meter, linked to a powerful audio and visual indicator, must be installed near anywhere that liquid nitrogen is stored or handled.
- The device must not be stored in a small, enclosed space (such as a cabinet or closet).
- The devices must be kept in an upright position at all times, so as not to damage the accessories and stored samples.

This list is not exhaustive.

6.2. Handling

- Temperature and humidity ranges during operation:
  - Ambient temperature: -10°C to 30°C ±5°C, away from direct sunlight.
  - Relative humidity: 30% to 65% without condensation
- Avoid impact and sudden movements.

- Prior to their insertion in the device, samples (tubes, bags, cases, etc.) must be protected because dust from the porous material forming the inside of the device may be toxic.

This list is not exhaustive.

7. Moving the device

The device may be handled by forklift, in accordance with trade practices, only when it is within its packaging.

Never use a forklift truck to handle the device when it is not in its packaging, always move it by:

- Carrying it with the strap
- Carrying it with the handles
- Rolling it on its roller base. This movement is only possible and safe over very short distances (tens of centimetres) in order to access the rear of the device during maintenance.

A porous material absorbs liquid nitrogen and preserves samples in the gaseous phase. Transportation is completely safe because there is no risk of liquid splashes if the device tips over.

The specifications imposed by current national and international regulations (particularly ADR instruction P203) and the recommendations given below must always be observed when transporting "dry containers":

- Never stack devices.
- Before transportation, the medical devices must be inspected (lid shut, properly filled, no sign of impact on the inner and outer walls) in order to detect any faults and to ensure that the device is functioning properly.
- Due to the potential risk of the oxygen content changing, persons and devices must be transported separately whenever an elevator or goods lift stops for a certain time between two floors, unless appropriate safety precautions have been taken, including during transportation.
- During transportation and regardless of the type of transportation, always keep devices stationary and in their upright position, and do not let them get knocked or dropped. This could damage the outer casing or the suspension system inside the device, degrading the insulation properties and causing permanent damage to the device.
- Transportation using non-specialised vehicles is forbidden:
  - A non-specialised vehicle is defined as a vehicle that meets at least one of the following criteria:

- A vehicle without a sealed partition between the driver's cab and the gas transport compartment(s).
- A vehicle in which the gas transport compartment is not continuously ventilated.
- A vehicle in which the design and compatibility of the materials and equipment used do not specifically meet the needs of the transported gases.
- A vehicle that does not include a stowage and strapping system appropriate for each type of gas tank being transported.
- A vehicle without a fire extinguisher.

Cryogenic devices are not approved for storage in outdoor environments.

Special care must be given to the valve when moving the device to avoid any mechanical shocks.

8. Using the Voyageur device

8.1. Filling the device

When filling the device for the first time, refer to the Maintenance Manual NH78450. The first filling must be carried out by a trained and approved member of staff.

It is recommended to tare the medical device by weighing it empty (i.e. with no samples and before starting filling) so that the filling level can be checked precisely.

In order to guarantee the device's holding time, it is recommended to fill the device when empty (hot) and to check static losses over the first few hours.

The equipment cannot be filled in one go, due to the presence of absorbent material. The procedure to follow is:

- Fill the medical device halfway up the neck by directly pouring liquid nitrogen through the neck using the flexible transfer hose (suitable for cryogenic applications and compliant with the EN12434 standard) connected to either a storage tank or a transfer line.
- Wait for around 15 minutes for the liquid nitrogen to be absorbed - the nitrogen level will drop.
- Repeat the two previous operations 3 or 4 times.
- Just before use, empty the liquid nitrogen overflow in the pit used for canisters.

If the medical device is hot at first, the insulation will not be fully efficient until after 48 hours.

Liquid nitrogen losses will be high in the first hours and will generally be above the specifications for the first two days. If you are looking for maximum holding time, it is a good idea to top up the liquid nitrogen two or three days after filling.

During filling and transfer operations, make sure to use appropriate equipment and follow procedures which guarantee safety (hoses, vacuum valve).

We recommend that at least one person should be present at all times to monitor filling until completion.

This device cannot be filled automatically and it is not designed to accommodate a solenoid valve, filling system, and/or level indicator.

In order to avoid the risk of splashes when filling the device, Cryopal recommends the use of a transfer pipe with jet diffuser nozzle, except for the *Voyageur 2*.

Special care must be given to the valve when filling the device to preserve the cold.

8.2. Nitrogen level check

Weigh the device to check the filling level. The mass of absorbed liquid nitrogen when the device is full is given in the following table:

	Voyageur			
Characteristic	***2***	***5***	***12***	***Plus***
Total theoretical empty device weight (kg)	2.4	7.5	11.5	14.0
Absorbed volume in litres (1)	1.35	4.8	10.5	7.3
Liquid weight in kg	1.1	4	8.5	6.0
Total theoretical full weight (kg)	3.5	11.5	20	20

(1) Volume of liquid nitrogen absorbed after draining the surplus.

To guarantee monitoring and maintenance of the device's performance, regular inspections of the evaporation rate are recommended depending on their respective holding times (see section 3.1).

The results of these measurements can be recorded in a control chart to track the device's parameters (number of fills, daily consumption, evaporation rate per weighing, etc.)

The device naturally empties by evaporation, and must therefore be topped up regularly to ensure samples are preserved effectively.

If the evaporation rate is abnormally high in normal usage conditions, this means

there is a problem with the vacuum. This also manifests as transpiration and the formation of frost on the outer casing. All necessary measures must be taken to protect the contents of the refrigerator. If these problems persist, contact the manufacturer.

8.3. Using the device

Validate the following step before starting a device:

Action	*OK*	*NOK*
Regularly check the liquid nitrogen level contained in the porous material using a balance (see section 8.2).	☐	☐

Comments relating to use:

- Due to the cryogenic temperatures, ice or water may form. These accumulations will be collected in a controlled way.
- The device must be inspected on a regular basis (external appearance, preserved products, condition of the tank, actual liquid nitrogen level).
- The installation of options or devices to monitor the container will improve the safety of the cryogenic system.
- Check there is no frost on the device's neck on a daily basis. If there is, immediately contact your distributor responsible for maintenance.
- The operator must implement daily monitoring procedures for their installations (alarms, etc.)
- At the end of the usage period, the device must be left to warm up naturally. Thoroughly dry the inside of the cryogenic tank by blowing with dry, de-oiled air to prevent the risk of corrosion.

8.3.1. Opening the cap

The person accessing the cryogenic device contents must be trained and authorised to use it.

For optimal functionality, the cap must only be opened when handling equipment.

The cap is fitted with an insulation cover. Always handle the cap using personal protective equipment.

The cap will remain closed as long as possible to avoid loss of cold and ice formation.

The cap is equipped with a safety system, except for the *Voyageur 2*. We recommend that you lock your apparatus (with an additional padlock) and never leave the key in the safety system.

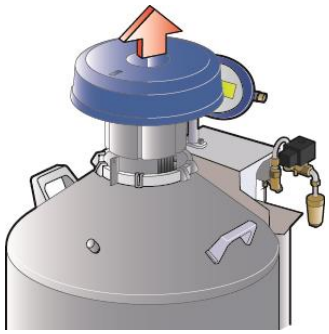


Figure 8-1: Opening or closing the cap

The caps for *Voyageur 2*, *5* and *12* are only accessible after opening the hood. The *Voyageur Plus*, equipped with a handle, has direct access to the cap. The cap must only ever be operated using this handle.

To open the cap, lift the handle. To close again, reverse the movement. You must ensure the cap is positioned correctly. Close the devices using the appropriate caps.

8.4. Inserting or removing samples

It is essential to use the approved individual protective equipment such as gloves, protective clothing, goggles, etc.

Beware of the temperature of frozen products as well as the cold parts of the devices.

Be careful not to damage the neck when inserting or removing the device's racks or canisters.

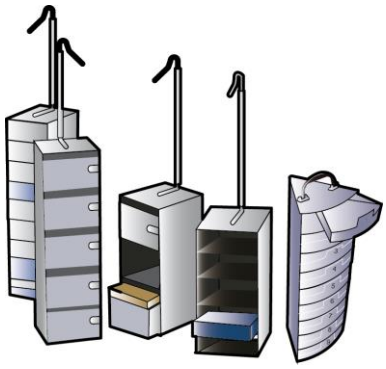


Figure 8-2: Example of racks or canisters.

Samples will only be inserted once the device is loaded with liquid nitrogen.

The samples are generally placed in racks or canisters with goblets. These are then put inside the cryogenic device.

The storage conditions of the samples are the responsibility of the operator.

When handling racks, liquid nitrogen could spill out from the container. Personal protective equipment, such as cryogenic gloves and visors, must be worn.

Lift accessories out slowly so as not to damage them.

It is indispensable to place all of the storage units inside the container, even if they are empty. A storage unit that has not been conditioned to the temperature of the container before insertion will cause a significant temperature increase and a safety risk for the user.

It is recommended to use aluminium racks as opposed to stainless steel racks to ensure the temperature is as uniform as possible.

Nothing other than samples may be inserted into the device.

If infectious materials are being transported, refer to the current standards.

8.5. Preserving samples

Samples contained in canisters are in a cold gaseous environment. Temperatures at the ends of the canisters are given in the following table for each device. Use only canisters and accessories recommended by Cryopal.

	Voyageur			
Temperature	***2***	***5***	***12***	***Plus***
At the bottom of canister	-195°C	-195°C	-195°C	-195°C
At the top of canister	< -175°C	< -175°C	< -175°C	< -175°C

These values are given for devices tested with internal equipment. They are given for guidance and correspond to generally observed usage conditions. They are subject to change depending to the manufacturing tolerances and local atmospheric conditions.

9. Cleaning and maintenance

9.1. Emptying the device

Emptying the device is a maintenance operation that must be carried out by trained and authorised personnel.

Remove the frozen samples first and transfer them to another cryogenic device.

9.2. Servicing the device

Servicing is required to ensure the equipment remains in good working order. This is the operator's responsibility.
Cleaning is required to ensure the equipment remains in good working order. This is the operator's responsibility.

The tools used for maintenance operations must be non-abrasive and should have no sharp edges or points that could damage the surfaces.

- **Defrosting the cap and neck** (twice a month):
  Lift and remove the cap from the neck, and use a protective cover on the neck to prevent hot air and moisture entering the cryogenic tank. Let the cap ice melt in free air. Wipe carefully before replacing the cap on the neck.

All ice and/or water must be recovered so that it does not fall into the device.

- ***Check cap integrity*** (with each use): If there is substantial wear and tear or the polystyrene foam is coming away, replace the cap.
- **Cleaning the outside of the device** (once a month): Clean the outside of the device only. The use of acetone, solvents or any other highly flammable or liquid chlorine-based product is prohibited.
  Wipe the plastic parts with a dry rag and, if necessary, with a damp non-abrasive sponge (do not use abrasive powder) or with impregnated wipes.
  Ordinary domestic cleaning products (slightly abrasive creams containing ammonia) applied with a sponge will be acceptable for the container and aluminium parts. Afterwards, rinse with a damp cloth, then wipe and leave to dry.

Keep the container clean and in good working order.

The inside of the apparatus may not be cleaned or decontaminated. Only the packaging of the samples is fit to ensure that the *Voyageur*'s tank is not contaminated. The manufacturing process prohibits decontamination using high-temperature methods.

9.3. Preventive maintenance

Maintenance is required to guarantee that the equipment remains within safety conditions. This is the responsibility of the device operator. The device is not covered by warranty if maintenance has not been carried out in line with the manufacturer's recommendations.

Preventive maintenance operations must be carried out by technicians who have received appropriate training and certification from the manufacturer.

Like every other device, your equipment may be subject to a mechanical failure. The manufacturer cannot be held responsible for any type of stored products lost as a result of this failure, even during the warranty period.

Only spare parts made by Cryopal may be used for maintenance. The use of non-Cryopal spare parts may affect the safety of this medical device, and releases Cryopal from all liability in the event of an incident. The device will no longer be covered by warranty if non-Cryopal spare parts are used.

Preventive maintenance of devices should be carried out according to the manufacturer's instructions as given in the maintenance manual and updates (if any).

10. Help

10.1. What to do if you are splashed by refrigerated liquid nitrogen

When handling nitrogen to fill the device, there is a possibility it may splash into your eyes and/or on your skin:

In the eyes

- Wash the eyes with plenty of water for at least 15 minutes;
- Follow the first aid procedures in place in your workplace;
- See a doctor.

On the skin

- Do not rub;
- Remove (if possible) or loosen your clothing;
- Defrost the affected areas by gently and gradually warming them up;
- Do not apply anything to the burnt area;
- Follow the first aid procedures in place in your workplace;
- See a doctor.

This list is not exhaustive.

10.2. What to do in the event of an accident

- Cordon off the perimeter to prevent any further accidents;
- Act quickly: the first aider must be equipped with personal protective equipment (stand-alone respiratory protection equipment);
- Carry out an emergency evacuation of the victim(s);
- Follow the first aid procedures in place in your workplace;
- Ventilate the area;
- Resolve the cause of the accident.

This list is not exhaustive.

10.3. Stuck cap

Cause	Solution
Cap frozen onto the neck of the device	If thoroughly stuck, attempt to defrost the cap using a hot air device no warmer than 60°C. The cover can be removed for easier access to the frozen areas. Then continue to defrost the container completely. Be careful with the plastic parts (cap, outer panels, etc.).

All ice and/or water must be recovered so that it does not fall into the device.

11. Accessories

Only Cryopal accessories are approved for use with our devices. The use of different accessories may affect the safety of this medical device, and releases Cryopal from all liability in the event of an incident. The device will no longer be covered by warranty if different accessories are used.

Product ref.	Description	Function
ACC-VOY-100	VOYAGEUR 2 protective plastic overpack	Insulates the system from external stresses during transport.
ACC-VOY-101	VOYAGEUR *5* protective plastic overpack	
ACC-VOY-102	VOYAGEUR *12* protective plastic overpack	
ACC-VOY-103	VOYAGEUR *Plus* plastic protective overpack	
ACC-VOY-105	VOYAGEUR *2* transport cover	To safely transport the *Voyageur 2* in line with regulations.
TRACKER-1	T° TRACKER	Equipment for measuring the internal temperature of a cryogenic tank or any other container that needs to stay within a temperature range of -200°C to +50°C, using an electric probe.
ACC-TRACKER-1	Temperature probe kit TRACKER	
ACC-TRACKER-2	Accessory kit (scratch, hook, probe case, Rilsan) TRACKER	
ACC-TRACKER-3	Power kit (USB cable, mains adapter) TRACKER	
ACC-TRACKER-4	Support kit TRACKER	
CALIB-TRACKER-1	Calibration - Battery change - calibration certificate	
ACC-VOY-2	Roller base for VOYAGEUR 12 and VOYAGEUR Plus	Transporting tanks over short distances (maintenance operations)
ACC-ALU-32	Tightening kit for roller base	
ACC-FLTC-1	Transfer pipe without anti-splash nozzle	Preventing splashes during filling.
ACC-FLTC-2	Transfer pipe with anti-splash nozzle	

Voyageur devices are sold “bare” with no internal fittings, with the option to add the following accessories:

- Rack and canister storage systems.
- Availability of varied storage systems adapted to vials, tubes, straws, bags, etc.

Product ref.	Description	Function
ACC-BOXTUBE-411	Metal tube-holder canes for six 2 ml tubes or three 5 ml tubes	Removing/handling tubes
ACC-BOXTUBE-302	“Daisy” goblet 65 mm diameter with cap	Storing straws
ACC-BOXTUBE-300	Goblet with 35 mm diameter	
ACC-BOXTUBE-301	Goblet with 65mm diameter	
ACC-BOXTUBE-415	Pierced goblet 65 mm diameter with cap	
ACC-BOXTUBE-405	Lifter for canister with 2 levels, diameter 35-65 mm	Removing canisters from the tank
ACC-BOXTUBE-3	Sight vial diameter 10	Storing straws
ACC-BOXTUBE-4	Sight vial diameter 12	
ACC-BOXTUBE-104	Set of 10 cryo-plastic boxes 133x133x51 (100 2ml tubes)	Storing tubes
ACC-BOXTUBE-105	Set of 8 cryo-plastic boxes 76x76x51 (25 2ml tubes)	
ACC-BOXTUBE-106	Set of 4 cryo-plastic boxes 133x133x51 (81 2ml tubes)	
ACC-BOXTUBE-107	Set of 4 cryo-plastic boxes 133x133x95 (81 5ml tubes)	
ACC-RACK-11	Rack with 1 level for DF700 bags	Storing bags
ACC-RACK-316	Rack with 3 levels for 25ml bags	
ACC-RACK-2	Rack for 133x133x95 boxes for 5ml tubes	Storing tubes
ACC-RACK-4	Rack with 5 levels for 133x133x51 boxes	
ACC-RACK-7	Rack with 5 levels for 75x75x51 boxes	
ACC-RACK-15	Rack with 5 levels for 145x145x51 boxes	
ACC-PLASCAN-1	Plastic canister with 2 levels for ARP55	Storing straws

Product ref.	Description	Function
ACC-BOXTUBE-253	Cardboard case (set of 300)	Protecting bags
ACC-BOXTUBE-254	Cardboard case (set of 700)	
ACC-BOXTUBE-250	Cardboard case (set of 600)	
ACC-BOXTUBE-251	Cardboard case (set of 380)	
ACC-BOXTUBE-252	Cardboard case (set of 300)	
ACC-BOXTUBE-255	Cardboard case (set of 330)	
ACC-BOXTUBE-207	Half aluminium half-cardboard case for DF700 horizontal bags	

12. Disposal

12.1. Device

If you wish to dispose of your device, contact the relevant maintenance team who are responsible for its disposal.

12.1. Accessories

All waste caused by using the device (tubes, etc.) must be disposed of through the appropriate waste treatment channels.

If you have any questions, contact the maintenance team for your device.

Note

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