Ordre national des pharmaciens

Conseil Central B

Transport of health care products under controlled temperatures (5°C+/-3°C)

Recommendations concerning the transport of health care products under controlled temperatures (5°C +/- 3°C)

October 2012 Edition

Conseil central B

Preamble

Within the framework of their public health responsibilities (articles R. 5124-36, R. 5124-48, R. 5121-23 and L. 5124-2 paragraph 2 of the Public Health Code, Good Manufacturing and Distribution Practices, etc.), pharmaceutical establishments must provide a high level of quality in the manufacturing of health care products for dispensing to patients.

In particular, certain health care products must be kept at 5°C +/- 3°C under the terms of their Marketing Authorisations (MA). This obligation applies from the manufacture of the product until its dispensing to the patient, which thus covers transport and defines the cold chain.

However, the transport of these products (referred to as transport under controlled temperature) is generally sub-contracted to logistical carriers who are not necessarily pharmaceutical establishments, but must allow the Pharmacist in charge of the shipping establishment to exercise his committed responsibility.
Moreover, the volume of products to be kept at 5°C +/- 3°C (vaccines, products in investigation, biotechnology products, etc.) is rising substantially.

The National Order of Pharmacists therefore considered it necessary to formalize for carriers a precise and homogeneous vision of the technical and regulatory constraints of pharmaceutical establishments in this field in order to improve the quality of these transport operations and the level of observance of these requirements.

Authors of these recommendations:

Monique Almudever / Novo Nordisk

Daniel Beaufils / Lilly
Didier Bourlet / Biogen Idec
Anne Marie Chretienne-Godeau / Bristol Myers Squibb
Shirley Ann Field / Sanofi Aventis
Sébastien Gay / Sanofi Pasteur MSD
Regis Godnair / LFB
Yannick Jegou / Lilly
Philippe Labouret / Amgen
Evelyne Paccioni / Novartis Pharma
Jean Pierre Paccioni / GSK – President of Section B Order of Pharmacists
Isabelle Petat-Thiolas / Roche
Emmanuel Rossignol-Harel / Amgen
Corinne Schoeffter / LFB
Philippe Steimes / Baxter
Pascal Teinturier / Novartis Pharma - Chair of the Working Party
Vincent Terlez / GSK
Veronik Truffin-Vetois / GSK
Thierry Youhanna / Sanofi Pasteur MSD

And with the participation of Vincent Boudy / Ageps APHP

Conseil central B

Contents

Appendix

1. General presentation

1.1 Objectives

These recommendations aim to contribute to the control of the chain of distribution of health care products to be kept at 5℃ +/- 3℃ by defining the minimum requirements to secure their transport under controlled temperatures.

In addition they are intended to specify to the potential partners of the pharmaceutical industry the specificities of the pharmaceutical products under controlled temperature (strict specific rules), in order to develop the practices and to improve the level of performance in the observance of the cold chain.

Lastly, these recommendations are intended to become an integral part of the specifications which must be appended to the transport contract between the logistics service providers and the shipping pharmaceutical establishment.

1.2 Field

The recommendations cover:

a) Transport under controlled temperature (including the transit phases):
   - Between the pharmaceutical establishment which manufactures and the one which distributes the product
   - And between the pharmaceutical establishment which distributes the product and the one that receives it (wholesaler-dispatcher, dispensary, authority, hospital/clinic, doctors, authorised organisations, etc.)

b) Health care products and products under investigation (in the meaning of article L. 5111-1 of the Public Health Code) that must be kept at 5℃ +/- 3° C,

c) Distribution in France (Metropolitan France and DROM-COM), regardless of the modes of transport used (road, air, river, maritime, rail).

These recommendations do not address the issue of refrigerating isothermal packaging inasmuch as its transport requires particular temperature conditions which may differ from the range of +2℃ and +8℃.

1.3 Reference documents

- Public Health Code
- Good Distribution Practices
- ATP Regulation
- Standard NF X 15-140
- Directive 93/43/CEE
- Recommendations of good practices applied to the transport of health care products from the Central Council of Sections B and C of the National Order of Pharmacists.

1.4 Definitions

Good Distribution Practices
The preparation, importing and distribution of medicinal products must be done in accordance with the Good practices of which the principles are defined by the ruling of the Minister of Health (art. L 5121-5 of the Public Health Code).

Package
Package means an object or a material set composed of several objects, regardless of their weight, dimensions and volume, constituting a unit load at the time of the submission to the Carrier (example: box, case, container, pallet encircled or film-wrapped by the prime contractor,), even if the content is detailed in the shipping document. This package is closed and labeled under the pharmaceutical responsibility of the prime contractor and must be delivered “as is” to the final recipient.

Recipient (or “Client”)
Recipient means an individual or a legal entity who receives the package in pharmaceutical premises placed under his responsibility and authorised by the supervising authorities to receive pharmaceutical products.

Prime contractor
The prime contractor is most often the shipping pharmaceutical establishment which must guarantee the quality up to the point of delivery of the medications subject to conditions of conservation as defined in the Marketing Authorisation (MA). It gives the carrier all the data that could have an impact on the proper execution of the shipping contract.

Thermostatic enclosure
Refrigerated enclosure (vehicle, container, transit premises) meeting the provisions of the regulatory texts, which can maintain a temperature of 5℃ +/-3 ℃ throughout the duration of the service.

Pick-up
The pick-up is the physical submission of the pharmaceutical products to the carrier who accepts them.

Shipment
The shipment is the quantity of merchandise, including the packaging and load supports, which is made available to a carrier at the same time and for which the transport is requested by one prime contractor for one recipient, from one single point of loading to one single point of unloading and covered by the same transport contract.

Delivery
Delivery means the physical submission of the merchandise at the time of reception at the dock to the recipient or to his representative who accepts it. It is legally defined by the provisions of article 105 of the Code of commerce.

Medication (also called "health care products" in these specifications) According to article L. 5111-1 of the Public Health Code, medication means any substance or composition presented as possessing curative or preventive properties with respect to human or animal illnesses, as well as any product that can be administered to humans or animals in order to establish a medical diagnosis or to restore, correct or modify their physiological functions.

Procedure
Description of the operations to be carried out, precautions to be taken or measurements to be made in a field in relation to the distribution of the products.

Recall or withdrawal of the batch
Decision made to withdraw from the market one or several batches of pharmaceutical product and procedure implemented to apply this decision.

Return
Return, for whatever reason, of a product to the manufacturer or if applicable the operator or dealer, covered by a distinct service.

Sub-contractor
Independent contractor carrying out a secondary service on behalf of a carrier.

Pharmaceutical specialty (also called "health care products" in these specifications)
Pharmaceutical specialty means any medication prepared in advance, presented in a particular packaging and characterised by a special name [Art. L.51 11-2 of the Public Health Code].

Traceability
Aptitude to find the history, the use or the location of an entity by means of recorded identification.

Carrier
The carrier is a service company which transports health care products to the specified recipient.

2. Services required for the transport of health care products under controlled temperatures

2.1 Observance of the temperatures

2.1.1 Specification of required temperatures

The carrier must constantly observe the official specification for the temperature of the health care products belonging to the prime contractor (5℃ +/- 3℃).

2.1.2 Specification of temperature measurements

The monitoring of the temperatures must be done through reliable temperature measurement chains (including the probe, the display and the recorder) for which there is metrological monitoring (calibration).

The carrier must guarantee the quality of this chain of measurement and its functioning. The strict observance of the temperature of 5℃ +/- 3℃ implie s the carrier taking into account the accuracy of the measurement.

The temperatures are monitored constantly. The frequency of measurement must be aligned with the minimum needs specified by the prime contractors as a function of the tolerance standards for their health care products. The recommended minimum frequency for temperature recordings is thus 15 minutes. Nevertheless, for products sensitive to low temperatures, this minimum frequency could be lowered to 2 minutes.
The methodology for the calibration of the probes appears in **appendix 1.**

2.1.3 Verification of temperatures and their measurement

The refrigerating set within enclosures (trucks, transit premises) is an essential element in guaranteeing maintenance of the health care products of the prime contractor in the cold chain.

As such, the refrigeration units of refrigerated trucks, isothermal refrigerating containers (active) and transit premises used for deliveries of health care products and the recording equipment must be verified regularly, with an annual frequency being the minimum. They must have an automatic cutout in the event of overactivity in order to prevent all risks of freezing.

The representativeness of the measurement within the refrigerated enclosures (trailers, containers, premises, etc.) must be demonstrated.

Trucks under controlled temperature called “refrigerated trucks” must be at least in compliance with the regulations in effect and more specifically the ruling of July 20, 1998 transposing into French law the ATP agreement concerning the international transport of perishable commodities and the special devices to be used for this transport.

A qualification of the trucks (by type of truck and on representative number of trucks of the fleet), containers, transit premises and recording equipment must be conducted by the carrier according to the methodology described in **appendix 2.**

2.1.4 Obligation of traceability of temperatures

The carrier must ensure the traceability of the temperature through periods of handling of health care products belonging to the prime contractor. The traceability of the data must be based on a relevant measurement (position and accuracy of the measurement chains) and a reliable mode of management.

The control of transport services and temperatures must also include traceability to ensure constant monitoring of the units handled (pallets, packages). The goal is to know at all times the location of these units in the transport phase and their temperature at each stage in the transport.

In the case of transport functioning in a network, the temperature data must be rapidly available on all of the links (trucks, platforms) of the logistical chain. The rapidity of collection of the temperature data throughout the shipping chain is a major point because it contributes to the final decision of the prime contractor regarding the fate of the units in the case of an incident.

2.1.5 Alarm system

The carrier must implement an alarm system that allows him to detect any temperature problems. The goal is to allow him to take immediate corrective actions and to rapidly inform the prime contractor. The alarm system (based on the definition of alarms) must be operational in real time. Its particular features are described in **appendix 3.**

2.1.6 Duration and conditions of archiving documents

The documents on personnel training will be archived by the carrier for a minimum period of one year and the documents on calibration, the qualification of the enclosures and trucks, the recording of temperatures and the verification of the alarm systems for a minimum period of three years after the delivery date.

In the event of an incident, the copy of the recordings of the temperatures at the time of the anomaly will be sent to the prime contractor who will archive it for a period equivalent to the expiration of the health care product plus one year.

2.2 Maintenance and hygiene

2.2.1 Obligation and maintenance of equipment resources

The equipment resources targeted here cover means of transport and transit premises.
The maintenance of the equipment resources is an obligation for the carrier, as is the making available of information about it, defined according to a defined framework.

A maintenance programme or contracts for the refrigeration units of the trucks and transit premises must be established. The programme must specify the nature of the intervention and the defined frequency as described in **appendix 4.**

The maintenance reports must be made available during an audit conducted by the prime contractor or the appropriate authorities.

2.2.2 Reminder of the hygiene obligation for transport

The hygiene of the transport required for health care products involves both the means of transport themselves and the limits of the mixing of contents in transport.

Trucks transporting health care products must be kept clean in compliance with the recommendations established for the transport of food products (directive 93/43/CEE) and health care products. The prime contractor has the right to refuse to load if he considers that the state of the truck is not compatible with these recommendations.

The carrier must have procedures or directives for cleaning of the trucks. He is strictly forbidden to transport health care products with incompatible products such as seafood, unwrapped food products and unprocessed meat. Particularly smelly products must also be forbidden. There should be no risk of soiling and contamination in any part of the distribution network.

2.3 Incident management protocol

A protocol must be planned and implemented to cover incidents in transit premises or during transport which could threaten the maintainance in the cold chain of the health care products of the prime contractor.

In the event of an incident, and while maintaining temperature monitoring to the extent possible, this protocol is implemented.

It must provide for measures to be taken to limit the out of range (between + 2℃ and + 8℃) exposure to a minimum, and also to maintain traceability of the events and the health care products (duration and amplitude of cold chain ruptures, protection measures, false alarms, etc.).

The carrier has an obligation of diligence to ensure the return to a normal situation. He must inform the prime contractor of the incident as quickly as possible and provide the complete traceability of the event and products. The prime contractor and carrier define the corrective action together before any delivery of the health care products.
An example of an incident management protocol is included in **appendix 5.**

2.4 Obligations for the management of returns of cold products

All health care products transported under controlled temperatures and which are to be returned must be shipped under the pharmaceutical responsibility of the prime contractor. They must be identified, differentiating them from all other shipments and accompanied by a specific transport document to allow for their traceability. They cannot be returned to stock without the formal agreement of the sender-operator pharmaceutical establishment, whether or not there was a transfer of ownership of the product in the distribution circuit.

2.5 Pick-up and delivery

2.5.1 Reminder of pick-up conditions

In general, the equipment and vehicles used for the entire service assigned to the carrier must ensure transport of health care products in full safety.

The health care products given by the prime contractor to the carrier are fragile (glass flasks, syringes, ampoules, etc.). For this reason, the packages must be handled with care while observing the indications on the container, if any (e.g.: positioning of the box up / down). They must not be opened in any circumstances unless requested by the prime contractor.

The refrigerated trucks used must have a rigid structure. They must be in perfect condition, particularly in terms of the floors and walls in order to protect the products from foul weather and to fulfill their function of maintaining the cold chain. They must, to the extent possible, be sealed, lead-sealed or locked in order to ensure security of the deliveries.

Throughout all steps assigned to the carrier, the handling units must be placed in clean areas sheltered from foul weather and pests.

2.5.2 Reminder of storage and delivery conditions

As a reminder, health care products can only be delivered to pharmaceutical establishments or organisations authorised to receive these products and equipped with storage conditions at 5°C +/- 3°C.

Consequently, the packages must never be left – even if sheltered – in front of a door or in a vehicle without surveillance. Likewise, giving the package(s) to a person who is not the designated recipient (neighbour, etc.) is strictly forbidden.

At the time of reception at the dock, the delivery must allow for verification that the packages delivered:

- are indeed for the recipient,
- correspond in terms of consignee and number with those described in the delivery receipt,
- are free of all visually detectable damage,
- were maintained in temperature conditions at 5°C +/- 3°C.

In the event of a temperature anomaly observed upon delivery, the recipient issues reservations and physically isolates the health care product, placing it in 5℃ +/- 3℃ temperature conditions while awaiting the result of investigations. The carrier agrees to make available to the client all useful information concerning the cold chain and to immediately notify the prime contractor to trigger the opening of a complaint process **(appendix 5 –**incident management).

Lastly, in the event of transit on the sorting platforms of the carrier, the maximum period during which a product can remain on this platform is 24 hours.

2.6 Training

All personnel of the carrier handling health care products must be made aware of their inherent particular features (medications, products to be maintained at 5℃ +/- 3℃, fragile, sensitive product s, etc.).

The personnel of the carrier must receive training which is sufficient for the correct performance of the various operations requested. The drivers must be made particularly aware of the actions to take in the event of an alarm.

In the event that temporary personnel are used, they must receive the same training regarding the specific features of the products submitted by the prime contractor.

The personnel training must be documented and archived.

2.7 Sub-contracting

Given the diversity and the distance of the recipients and the possible fluctuations of the activity, the carrier can sub-contract all or part of his services.

The carrier is then responsible for his sub-contractor. He must provide proof of a policy of verification of his sub-contractors, particularly through the drafting of specific contracts and specifications mentioning this document and must ensure its proper application through the implementation of audits.

The list of the sub-contractors approved by the carrier will be sent to the prime contractor prior to any intervention.

The audit reports drafted by the carrier must be made available upon request at the time of the audits by the prime contractor.

3 Indicators

The following indicators (non exhaustive list) can be used as a measurement standard for the conduct of audits.

Indicator title	Definition of indicator	Recommended Target/Objective	Monitoring Frequency
Carrier Dispute for break in of the cold chain	% of annual realisation of the preventive maintenance programme	100%	Annual
Traceability of the temperatures	% of annual realisation of the programme of calibration for the measurement instruments	100%	Annual
Traceability of the temperatures	% of enclosures (vehicle, container, transit premises) equipped with recorder with a minimum frequency of every fifteen minutes	100%	Annual
Traceability of the temperatures	Availability of information (observance of deadlines): - Immediate during reception At each stage of transport. - 48 working hours in the event of an occasional request	100%	Monthly
Training of personnel	Consciousness-raising for handling of health care products under cold chain (within one week of arrival for new hires)	100% of personnel	Every three years

4 Responsibilities

4.1 Regulatory reminder

The pharmaceutical responsibilities mentioned in this document are described in the Public Health Code, the Good Distribution practices and the jurisprudence.

They are also covered by Recommendations concerning Good practices for management of products subject to the cold chain between +2 and +8℃, and the Good practices applied to the transport of health care products from the Central Council of Sections B and C of the National Order of Pharmacists.

In the event of a clear break in the cold chain during transport described in this document, the Pharmacist in Charge of the establishment in charge of the shipment is liable. It then corresponds to the responsibilities under ordinal, civil and criminal law.

4.2 Transfer of pharmaceutical responsibility

The transfer of pharmaceutical responsibility linked to the proper conservation of the health care products under controlled temperature at 5℃ +/- 3° C occurs at the time of the receiving of the products assigned.

The acceptance of the delivery (i.e. the signing of the delivery slip accompanying the merchandise) with or without reservations, implies that the health care product is under the responsibility of the pharmaceutical establishment that received the delivery.

The acceptance is carried out with a pharmaceutical establishment, which has either a Pharmacist in Charge, a Head Pharmacist or official Pharmacist (according to the cases: a consignee, a wholesaler dispatcher, a dispensary, a hospital/clinic with a PUI). If necessary, it can be done with a health care professional (example: doctor, etc.).

4.3 Responsibility of the carrier, the sender and the recipient

4.3.1 Responsibility of the carrier

The carrier is responsible for the implementation of all of the measures necessary to meet the specifications of this document.

Furthermore, the carrier is responsible for making sure that the transport document is correctly completed and especially the departure and arrival dates and times for the purpose of traceability.

Lastly, the carrier also agrees to advise and to inform, if necessary, the clients of the prime contractor in order to mention specific and justified reservations on the same transport document in the clearest and most complete way possible and to put the products in premises at 5℃ +/- 3℃ as of their receipt.

4.3.2 Pharmaceutical responsibility of the sender

The Pharmacist In Charge must make sure that:

- The specific details for the conservation of the products shipped are clearly indicated on the packaging by an appropriate label,
- A recording of the temperature is, to the extent possible, made available to the site taking delivery so that, during the controls done immediately upon receipt, the site can verify the respect of the cold chain,
- The carrier knows the delivery point of the pharmaceutical establishment and the receiving conditions.

The pharmaceutical responsibility of the pharmacist of the establishment in charge of the shipping is also engaged throughout the logistical operations until the product is delivered to the recipient pharmaceutical establishment, even if the establishment in charge of the shipping calls on an intermediary acting on his instructions and his behalf.

In the case of the Drom Com, the responsibility of the pharmacist of the sender site for the maintaining of the cold chain thus covers the following operations:

- upstream transport (up to the forwarding agent),
- storage at the airport or port of departure (premises of the forwarding agent),
- air / maritime transport,
- storage at the airport or port of arrival (premises of the forwarding agent),
- local transport to the receiving pharmaceutical establishment.

Consequently, the pharmacist of the establishment in charge of the shipping must mobilize means of control and risk analysis and evaluate the capacity of the transport sub-contractors to carry out the tasks and missions assigned to them.

If the sender pharmaceutical establishment is not the prime contractor on all or part of the transport and if, in consequence, the recipient pharmaceutical establishment takes the place of the sender pharmaceutical establishment by imposing his own transport sub-contractor, this recipient pharmaceutical establishment takes on the responsibility for the transport, including the observance of the cold chain, as of the picking up of the products by this sub-contractor, up until the delivery to his premises.

4.3.3 Pharmaceutical responsibility of the recipient

- The pharmacist or health care professional in charge of the reception is responsible in his own right in terms of the maintaining of the cold chain of the products that are assigned to him. He must therefore be informed of the particular conservation conditions to be applied, and ensure their proper application and in particular make sure that the products, as of reception at his site, are collected and immediately stored at 5℃ +/- 3℃.
- The delivery conditions defined in section 2.5.2 of this document are respected.
- In the event of doubt during the controls carried out upon receipt, the products are isolated and identified as being in quarantine, while awaiting the instructions of the sender pharmaceutical Laboratory, which is solely authorized to indicate the further steps to be taken in the dispute.

5. Audit

The prime contractor has the right to carry out audits. The carrier must accept the audits of the prime contractor and the inspections of the competent authorities. A plan of corrective actions must be proposed to address any deviations.
A standard Audit questionnaire is included in **appendix 6.**

Appendix

Conseil central B

Appendix 1

METHODOLOGY OF VERIFICATION OF A TEMPERATURE MEASUREMENT CHAIN

In order to guarantee the accuracy of the temperatures at all times, each measurement chain must have an individual identification number and must be verified in the conditions described below.

The individual identification number makes it possible to keep a traceability of the results of the control and the past (e.g.: adjustment/calibration) and future interventions (e.g.: date of the next control).

The control (composed of the calibration and the verification) of a measurement chain aims to verify the conformity of its accuracy with respect to the specified limits according to an appropriate interval of measurements.

In the case of a temperature interval of 5℃ +/- 3° C, the recommended specified limit (or Maximum Permissible Error) is +/- 1℃.

Definition of the calibration: all of the operations establishing, in specified conditions, the relationship between the values indicated by a measurement device or measurement system or the values represented by a materialized measurement and the corresponding known values of a measured quantity (AFNOR).

Definition of the verification: action allowing for the observation that the deviations between the values indicated by a measurement system and the known reference values are all less that the maximum tolerated deviation (AFNOR). This indicates whether the measuring system is compliant or not.

The recommended interval between 2 calibrations must not be greater than 12 months. However, this interval is determined by various criteria:

- The notion of risk and the potential consequences linked to the declaration of a non-conformity of a measurement chain. In the case of such a declaration, it is imperative that all of the measurements made with this chain be re-examined up until the date of the last calibration that was considered compliant,
- The age of the equipment and the results of earlier calibrations. The initial frequency for new equipment is in general arbitrarily set at once per year (or more frequently if this is justified by a risk analysis). Then, if the results of the calibrations are good (no adjustment necessary, no major problem), they can be less frequent. If, on the contrary, the results reveal problems, they must be more frequent. The equipment monitoring must also be more frequent for old equipment.

As the temperature measurement chains are critical, the calibration methodology must be described in specific procedures, specifying:

- The method used,
- The references used,
- The use ranges and the maximum error tolerated,
- The analysis of the results with the understanding that the maximum error tolerated (also called minimum accuracy including the measurement deviation and the uncertainty of measurement of this deviation) cannot exceed 1°C,
- The taking into account of possible earlier adjustments/calibrations.

The verifications must be done by employees or carriers trained and approved by authorized persons. The recordings must include:

- The name of the person who did this verification,
- The verification date,
- The results of the verification before and after the adjustments/calibrations,
- The date of the next verification,
- The certificate of calibration before and after adjustment,

All of the data concerning the control of the measurement chains will be available during an audit done by the prime contractor.

Note: The calibration operations must be reliable and objective. For this reason, it is logical and recommended that the supplier of the measurement instrument not do the calibration. This risk of a conflict of interest can be eliminated by calling on an accredited calibration laboratory.

Appendix 2

QUALIFICATION OF THE REFRIGERATED ENCLOSURES

The objective of the qualification is two-fold:

-Guaranteeing that the equipment used complies with the expected characteristics,
-Ensuring that the data from the temperature measurement systems is reliable and representative of the temperature really experienced by the products.

1. Qualification of transport units.

1.1 Isothermy of the refrigerated unit and efficacy of the thermal system

The isothermy of the refrigerated units and the efficacy of the thermal system of each of the vehicles must be certified in accordance with the ATP regulations concerning refrigeration units. The report will be available upon simple request.

1.2 Cartography of the temperatures

A cartography will be made by putting temperature sensors of a number and of locations which will be determined so as to cover the entire volume reserved for the storage of products within the unit.

This cartography will be done for each of the types of refrigerated systems used (identical enclosure/thermal unit pair), on a number of units representative of the fleet and according to the conditions described in standard NF X 15-140.

This cartography is intended to reveal temperature discrepancies and any critical points that could appear during the adaptation to real conditions of use.

In this sense, cartographic tests could be done with the vehicle in operation and in summer and winter climatic conditions. The cartography report will be available upon simple request.

1.3 Frequency of the qualification

The verification of the isothermy of the device and the efficacy of the thermal system will be done on new devices and then after 3 years, 6 years, 9 years and 12 years of use.

1.4 Frequency of the cartography

The cartography of the device will be done on new devices and then repeated every three years and after each intervention after an event that could have an impact on the performances of the enclosure (e.g.: refrigeration unit out of order, refrigerant leak, rearrangement, etc.).

1.5 Use of the qualification data

The report of the cartography will allow for the justification of the placement of the probes for the monitoring of the temperature and the alarms for the type of refrigeration unit involved. A minimum of two probes per device is required.

They will be placed near the air intake of the thermal unit and the opening of the refrigerated unit. Their precise location and the possible addition of additional probes will be correlated with the results of the cartography and the risk management

All of the data concerning the qualification of the transport units will be available during an audit done by the prime contractor.

2. Qualification of the refrigerated chambers used in transit platforms

2.1 Qualification of the design

This qualification will include at least:
- A facility plan,
- The detailed specifications of the thermal system and the temperature monitoring systems as well as their back-up electrical power systems,
- The maximum load and its distribution in the volume reserved for the storage of the products

2.2 Operational qualification

This qualification will include the tests described in standard NF X 15-140 and more particularly a cartography of the temperatures in the enclosure with its usual load.

This cartography will be done by placing sensors of which the number and locations will be determined in order to cover the entire volume reserved for storage within the enclosure, over a period of 24 hours and according to the conditions described in standard NF X 15-140.

An open door test (see standard NF X 15-140) must be done with a duration as close as possible to that habitually encountered in practice.

2.3 Frequency of the qualification

The qualification of the enclosure will be done during its installation and repeated every three years and after each intervention after an event that could have an impact on the performances of the enclosure (e.g.: refrigerating unit out of order, refrigerant leak, rearrangement, etc.)

2.4 Use of the qualification data

The qualification report will be used to justify the placement of the probes within the enclosure.

At least two probes per enclosure will be required. They will be placed near one or several of the heating devices and the opening of the refrigerated enclosure. Their precise placement and the addition of any additional probes will be correlated with the results of the qualification.

All of the data concerning the qualification of the refrigerated chambers will be available during an audit carried out by the prime contractor.

Appendix 3

SPECIFIC FEATURES OF THE ALARM SYSTEMS

Definition of an alarm: visual and/or auditory warning system that signals an unusual event or the undermining of the integrity of a system.

1. Alarm system for refrigerated enclosures

The refrigerated enclosures used for the storage of health care products must include an alarm system that can give an alert in the event of the exceeding of the refrigeration temperature limits. The criteria of this system are:

1.1 Signal

The alarm of a refrigerated chamber must include at least a visual signal and a sound signal.

- The visual signal is generally a rotating light placed outside of the enclosure in a location that is very visible for the environment
- The sound signal must be sufficiently intense to ensure that it is heard by the personnel present in the environment. It must be possible to detect it at any time, 24 hours a day. It must therefore at least be relayed to a security station.

The alarm signal must function until it is stopped by an intervention demonstrating that it was taken into account.

When the probes are connected to a computer system that can monitor temperatures, the validated system can be programmed to send E-mails, SMS or telephone calls to preprogrammed recipients.

1.2 Connection

The alarm will be connected to the probe positioned at the most critical and representative point for the products transported.

It must be connected to an electrical system independent of the one that supplies the refrigerated unit as should the temperature recorder.

1.3 Programming

The alarm must be triggered when the temperature of the probe reaches the temperature limits, i.e. +2℃ and +8℃. It must take into account the trigge ring time lag (response time of the measuring devices).

The limits must be adjusted taking into account the accuracy **(appendix 1)** of the probe connected to the alarm.

In order to avoid excessively frequent untimely triggering (e.g.: frequent opening of doors), there can be programming of a time lag for the alarm in the event of an exceeding of the upper limit in order to differentiate these triggerings from those due to a breakdown or poor closing of the doors. The time lag will be determined as a function of the use of the enclosure. A time lag of the alarm in the event of the exceeding of the lower limit (<+2℃) is not aut horized.

1.4 Verification

The functioning of the alarm system must be tested at start-up and then on a regular basis, at least once a year. The carrying out of this test must be documented **(appendix 4)** and all of the data will be available during an audit done by the prime contractor.

2. Alarm system for refrigerated trucks

Refrigerated trucks used for the transport of health care products must be equipped with an alarm system to allow for the sending of an alert in the event of the exceeding of the refrigeration temperature limits in order to allow for the immediate taking of appropriate measures. The criteria of this system are:

2.1 Signal

The alarm must be a visual signal detectable at any time by the truck driver. This visual signal is a signal light that can be rapidly detected. It can be accompanied by a sound signal, but this cannot be used alone because of the risk of non-detection due to the noise in the cab.

For trucks equipped with a GPS, the alarm function can include the automatic sending of an SMS to one or several mobile telephones defined in advance. This measure is highly recommended.

2.2 Connection

The alarm will be connected to the probe positioned at the most critical and representative point for the products transported.

In the event of impossibility, the trailers will be equipped with an alert system such as a display system with reverse reading (allowing the driver to check the temperature of the trailer in real time by simply glancing at his rear-view mirror).

2.3 Programming

The alarm must be triggered when the temperature of the probe reaches the temperature limits, i.e. +2℃ and +8℃. It must take into account the trigge ring time lag (response time of the measuring devices).

The limits must be adjusted taking into account the accuracy **(appendix 1)** of the probe linked to the alarm.

In order to avoid excessively frequent untimely triggering (e.g.: frequent opening of doors), there can be programming of a time lag for the alarm in the event of an exceeding of the upper limit in order to differentiate these triggering from those due to a breakdown or poor closing of the doors. The time lag will be determined as a function of the use of the enclosure. A time lag of the alarm in the event of the exceeding of the lower limit is not authorized.

2.4 Verification

The functioning of the alarm system must be tested at start-up and then on a regular basis, at least once a year. The carrying out of this test must be documented **(appendix 4)** and all of the data will be available during an audit done by the prime contractor.

Conseil central B

Appendix 4

ANNUAL CHECK-LIST OF PREVENTIVE MAINTENANCE APPLICABLE TO THE REFRIGERATED VEHICLES AND ENCLOSURES OF THE CARRIER

Reference of the equipment: .....

LIST OF THE VERIFICATIONS TO BE DONE			VERIFICATION (check the corresponding box)			if intervention: date / parts changed or means implemented	
			YES	NO	N/A	DATE	PIECES / MEANS
VERIFICATION OF COMPRESSORS/CONDENSORS/REGULATORS/EVAPORATORS	**1**	Visual verification of general condition and cleanliness					
	2	Verification of the oil level (indicator lights)					
	3	Verification of seals of all of the circuits (trace of oil on the compressor, all refrigerating circuits, etc.)					
	4	Verification of the valve functioning					
	5	Control indicators (noting of temperature read on the display, alarms)					
	6	Verification of the safety and fastening systems					
	7	Verification of the refrigerants					
	8	Verification and cleaning of the batteries					
	9	Verification of the protection gratings, helices, fins and dehydrating filters					

(continued on other side)

LIST OF THE VERIFICATIONS TO BE DONE		VERIFICATION (check the corresponding box)			if intervention: date / parts changed or means implemented	
		YES	NO	N/A	DATE	PIECES / MEANS
10	Verification of the electrical facilities					
11	Verification of the surveillance system (temperature recorders, probes)					
12	Cleaning of the facilities					
13	Verification of the valves / tubes					
14	Verification of the electrical resistors					
15	Verification of the air filters					

Date of verification: ……../……./…….

Signature: …….

……

Conseil central B

Appendix 5

INCIDENT MANAGEMENT PROTOCOL

Definition of an incident: unplanned event occurring during the chain of distribution which could be the source of a dispute and/or a qualitative or quantitative anomaly of one or several of the products transported. This appendix only applies to incidents that cause a break in the "cold chain".

1. Introduction

All incidents of whatever nature (in particular but not limited to: theft, accident, breakdown of the "cold" generator, destination error, opening of doors for inspection of authorities, etc.) must be recorded and documented in order to allow for their resolution and the establishment of statistics within the framework of quality control and the on-going improvement of performances.

2. Analysis and diagnostic of an incident occurring during a transport or delivery operation

For all incidents, there must be an initial report sent as quickly as possible but within a maximum period of 48 business hours to the prime contractor establishment:

- Describing the nature and the object of the incident,
- Including a plotting of the temperatures,
- Detailing the immediate actions implemented.

This information will then be supplemented by an exhaustive incident report which will be sent by the carrier to the prime contractor within a maximum period of 7 calendar days for evaluation of the nature of the past, present or future impact on the products in distribution.

The elements appearing in this written report must be as precise as possible to allow for the choice of the conservation measures to be taken. They include:

- The transport data: number of the shipping or delivery notice, order number, order/reception dates, carrier's receipt if different from the delivery slip,
- The identification, the number and the physical state of the packages,
- The reason for the incident,
- The precise circumstances of the incident: especially the place, the chronology of the events and the period with temperature deviation: indication of the durations and amplitude in the break in the cold chain , alarms, etc.
- Whether the delivery effectively took place or not. If yes, reception control data,
- A plot of the temperatures during the period concerned by the incident must be included with this report.

3. Handling of incidents: corrective and preventive actions

As immediate action to be implemented, the carrier must verify in priority the proper functioning of the facilities for maintaining the cold chain. If the function is maintained, the products must not leave the truck.

If the function is not maintained, the most rapid of the following conservation actions must be taken immediately:

- Ordering a replacement vehicle which must meet the same conditions for maintaining the cold chain as the preceding one.
- Transfer to a storage area adapted to maintaining a temperatures of 5℃ +/-3℃

If a temperature deviation is identified by the carrier, the packages will not be delivered until the sender decides it is appropriate to do so. If the incident is identified upon reception at the client's premises, the client will issue adequate reservations and will isolate the products in temperature conditions of 5℃ +/- 3℃ while awaiting the instru ctions of the prime contractor.

If the products are not accepted by the receiving establishment, they must be returned without delay to the sender by the carrier.

If the products are delivered to an address other than the one mentioned on the shipping document and accepted by the receiving establishment, the carrier must contact the prime contractor to obtain instructions.

Emergency plans for the handling of the most frequently encountered potential incidents must be established by the carrier and preventive measures presented to and confirmed with each prime contractor at the time of establishing the logistical specifications.

A trend analysis for incidents encountered must be performed regularly (annual frequency is recommended) by the carrier and/or the sender in order to identify the preventive actions: changes of equipment or new emergency plans which must be implemented.

Conseil central B

Appendix 6

AUDIT METHODOLOGY

CONTENTS

A. Introduction

Verification of compliance with these recommendations by subcontractors will take place through regular audits. The methodology described below guarantees that the audits that are carried out respond to two requirements:

- Completeness: the audit table covers all the points mentioned in this document
- Reproducibility: the method proposed guarantees comparable audit results, irrespective of the transporter and/or the auditor in question.

B. Principle of construction of the table

Each of the requirements mentioned is the subject of a line in the audit table. For each point, a 'verification method' is described.

C. Gradation of the discrepancies

Four levels are possible:

Name	Meaning	Example
Critical	Discrepancy preventing use of transporter. The correction of this discrepancy is mandatory, and a second audit must be organised before any collaboration with the transporter.	The transporter uses covered refrigerated trucks.
Major	Discrepancy that has a significant influence on the quality of the overall service. Collaboration with the transporter is not called into question if the discrepancy is corrected immediately.	The XX truck's temperature sensor has not been calibrated for two years, and was found to be defective.
Other	Discrepancy that does not call into question the quality of the overall service, but which may lead to problems if not corrected quickly.	The transit hub has not been regularly cleaned and was found to be dirty and untidy.
Comment	Auditor's suggestion for improvement, without any obligation of implementation.	The temperature reading is performed with the aid of three different MSExcel tables -> use of a single table would enable the avoidance of errors and be more efficient.

Audit table

Process 2.1 Compliance with temperatures

	Requirements	Detail	Verification method
1	2.1.2 Specification of the temperature measurement	Monitoring of temperatures must be performed through the use of reliable temperature measuring systems for which a metrological control (calibration) is in place.	- Verify the existence of a calibration procedure - Verify the ten latest calibrations performed - Monitor the treatment of three non-compliant calibrations
2		The transporter must guarantee the quality of this measuring system and its functioning. Strict compliance with the temperature range of 5℃ +/- 3℃ involves the trans porter taking into account the accuracy of the measurement.	- Verify that the accuracy of the measurement has been taken into account in the calibration procedure - Monitor its application on the ten latest calibrations performed
3		Temperatures must be read constantly. The frequency of the measurement must be in line with the minimum needs of the prime contractor based on the tolerance standards related to their products. The minimum frequency recommended for reading temperatures is every quarter of an hour.	- Verify the existence of a procedure describing the frequency of measurement - Verify that this frequency is at least equal to 15 minutes - Monitor the implementation on 15 different measuring instruments

Process 2.1 Compliance with temperatures (cont.)

	Requirements	Detail	Verification method
4		Each measuring system must have an individual identification number.	- Verify the existence of a referencing procedure for measuring systems - Verify the updated list of measuring systems currently being used
5		The interval between two calibrations must not be longer than 12 months and will be adjusted by the transporter based on considerations of risk, the age of the equipment and results of previous calibrations.	- Verify the existence of a calibration procedure - Verify its compliance
6	Appendix 1	The calibration methodology must be described in specific procedures, detailing: - The method used - The references used - The application range and the maximum permissible error - Analysis of results, it being understood that the maximum permissible error must not be greater than 1℃	- Verify the existence of a calibration procedure
7		The control must be performed using established references (standards, benchmarks, registration dossiers, etc)	- Verify the use of established references

Process 2.1 Compliance with temperatures (cont.)

	Requirements	Detail	Verification method
8		The controls must be performed by employees or transporters trained and certified by authorized persons.	- Verify the existence of a referencing procedure for measuring systems - Verify the updated list of measuring systems currently being used
9	Appendix 1	The registrations must include: - The name of the person who performed the control - The date of the control - The results of the control before and after adjustment/gauging - The date of the next control - The calibration certificate before and after adjustment	- Verify the archiving methods - Monitor the exhaustiveness of data on a random sample of ten records dating from two years before, ten records dating from one year before, and ten recent records
10	2.1.3 Monitoring temperatures and their measurement	The refrigerating set inside the trucks, refrigerated isothermic containers (active) and transit premises used for deliveries of health care products as well as the recording material must be regularly monitored with a minimum required annual frequency.	- Verify the existence of a maintenance procedure of refrigerating set mentioning the minimum annual frequency - Monitor the ten latest truck maintenance records, and the ten latest maintenance records for the refrigerating set - Monitor the treatment of non-compliant maintenances (changing a part, revalidation, etc)

Process 2.1 Compliance with temperatures (cont.)

	Requirements	Detail	Verification method
11	Appendix 2	**Vehicles:** - The insulating capacity of refrigerated vehicles and the efficiency of each vehicle's thermal appliances must be certified in compliance with ATP regulations concerning refrigerated vehicles. The report is available upon request. - A mapping will be made by the positioning of temperature sensors, the number and placement of which will be determined in such a way as to cover the entire volume reserved for the storage of products in the vehicle. This mapping will be made for each type of refrigerated vehicle used (double enclosure/identical thermal appliances) on a number of vehicles representative of the fleet and in the conditions described in standard NF X 15-140. It is intended to show discrepancies of temperature and any critical points. The mapping report will be available upon request. - Monitoring of the vehicle's insulating capacity, of the efficiency of the thermal appliance and of the mapping will be performed on a new vehicle, and then after three years, six years, nine years and twelve years of use. - The mapping report will enable the justification of the positioning of measuring instruments for monitoring the temperature and alarms for the type of refrigerated vehicle in question. A minimum of two measuring instruments is required per vehicle. They will be placed close to the air grill of the thermal appliance and the opening of the refrigerated vehicle. Their exact placement, as well as the possible addition of supplementary measuring instruments, will be correlated with the results of the mapping and the risk management.	- Verify the existence of certification reports and mapping reports - Verify compliance with the requirements of Appendix 2.

Process 2.1 Compliance with temperatures (cont.)

	Requirements	Detail	Verification method
12	Appendix 2	**Enclosures:** - The qualification will include, at least: • A plan of installation • The detailed specifications of the thermal appliance and temperature monitoring systems, as well as their emergency electrical power devices • The maximum load and its spread over the volume reserved for the storage of products - This qualification will include the tests described in standard NF X 15-140 and in particular a mapping of temperatures in the enclosure for a typical load This mapping will be made by the positioning of sensors, the number and placement of which will be determined in such a way as to cover the entire volume reserved for the storage of products in the vehicle, during a period of 24 hours and in accordance with the conditions described in standard NF X 15-140. An open door test must be performed with a duration close to that usually encountered in practice. - The qualification of the enclosure will be performed at its installation and renewed every three years - The qualification report will enable the justification of the positioning of measuring instruments within the enclosure. A minimum of two measuring instruments is required per enclosure. They will be placed close to the thermal appliance(s) and the opening of the refrigerated enclosure. Their exact placement, as well as the possible addition of supplementary measuring instruments, will be correlated with the results of the qualification.	- Verify the existence of a qualification procedure - Verify compliance with the requirements of Appendix 2. - Verify compliance of all enclosures used

Process 2.1 Compliance with temperatures (cont.)

	Requirements	Detail	Verification method
13	2.1.4 Obligation for traceability of temperatures	The transporter must ensure the traceability of the temperature throughout all periods when pharmaceutical products belonging to the prime contractor are in its charge.	- Verify the existence of a procedure detailing methods of continuously recording temperatures
14		The traceability of data must be based on a relevant measuring system and a reliable management system.	- Verify the availability of data (truck+hub) for ten of the last 100 transportations
15		Control of the transport service and temperatures must also include a system of traceability ensuring the constant monitoring of each handling unit (pallets, parcels). The aim is to be aware, at every moment, of the location of the transported handling units, as well as their temperature at every stage of transportation.	- Verify the existence of a procedure detailing the methods of continuously identifying handling units - Monitor the possibility of linking, at any moment, the temperature recordings with the products in question for ten of the last 100 transportations
16		For transport functioning in a network, the temperature data must be rapidly available on all links (trucks, hubs) of the logistical chain. The speed of temperature data collection throughout the consignment chain is an important point as it contributes to the prime contractor's final decision.	- Verify the existence of a procedure detailing the methods of managing network data - Monitor the possibility of linking, at any moment, the temperature recordings with the products in question for ten of the last 100 transportations

Process 2.1 Compliance with temperatures (cont.)

	Requirements	Detail	Verification method
17	2.1.5 Warning system	The transporter must put in place a warning system that enables it to detect any temperature problems. The aim is to enable it to carry out immediate corrective actions and to rapidly inform the prime contractor. The warning system (based on the definition of alarms) must be operational in real time.	- Verify the existence of a temperature warning procedure for: • trucks • transit hubs - Verify the treatment of ten recent warnings
18	Appendix 3	**Refrigerated enclosures:** - The alarm of a refrigerated enclosure must include, at minimum, a visual signal and an auditory signal - The measuring instruments must be linked to a computer system that enables temperatures to be monitored. The approved system may be programmed to send emails, texts or telephone calls to pre-programmed recipients - The alarm is linked to the measuring instrument positioned at the most representative and critical point - The alarm is connected to an electrical system independent of the system that powers the cold group and that which powers the temperature recorder - The alarm must be triggered when the temperature of the measuring instrument reaches the temperature limits, namely +2℃ and +8℃. It must take into account the triggering time. These limits must be adjusted taking into account the accuracy (cf appendix 1) of the measuring instrument linked to the alarm - The functioning of the alarm system must be regularly tested, at least once per year. The performance of this test must be documented	- List all the refrigerated enclosures used by the transporter - Verify the compliance of each enclosure with the requirements of Appendix 3 - Verify the last three tests performed

Process 2.1 Compliance with temperatures (cont.)

	Requirements	Detail	Verification method
19	Appendix 3	**Refrigerated trucks:** - The alarm must be a signal detectable at any moment by the driver of the truck: this signal must be a visual signal. This visual signal is a luminous indicator that is rapidly detectable - For trucks equipped with GPS, the alarm may automatically send a text to one or more pre-identified mobile phones - The alarm is linked to the measuring instrument positioned at the most representative and critical point. If this is not possible, the trailers will be equipped with a warning system such as a backward-reading display (allowing the driver to monitor the temperature of the trailer in real time, simply by glancing in his rear-view mirror) - The alarm must be triggered when the temperature of the measuring instrument reaches the temperature limits, namely +2℃ and +8℃. However, these limits must be adjusted taking into account the accuracy (cf appendix 1) of the measuring instrument linked to the alarm - The functioning of the alarm system must be regularly tested, at least once per year. The performance of this test must be documented(cf appendix 4)	- Verify the compliance of ten vehicles with the requirements of Appendix 3. - Verify the last three tests performed

Process 2.1 Compliance with temperatures (cont.)

	Requirements	Detail	Verification method
20	2.1.6 Duration and conditions of archiving of recorded data	The documents relating to personnel training will be archived by the transporter for a minimum period of one year and the documents relating to the calibration, qualification of enclosures and recording of temperatures throughout transportation for a minimum period of three years after the date of delivery. In the event of an incident, the copy of temperature recordings at the time of the anomaly will be transmitted to the prime contractor for archiving for a period equivalent to the use-by date of the health care product plus one year.	- Verify the existence of an archiving procedure - Verify its compliance with the requirements opposite

Process 2.2 Maintenance and hygiene

	Requirements	Detail	Verification method
21	2.2.1 Obligation for maintenance of material resources	A maintenance programme or maintenance contracts for refrigerating set of trucks and transit premises must be established. The programme must detail the nature of the intervention and the defined frequency as detailed in Appendix 4.	- Verify the existence of a preventive maintenance checklist - Verify its compliance with appendix 4 - Verify its application on ten randomly chosen vehicles
22	2.2.2 Reminder of obligation for transport hygiene	The transport hygiene required for health care products covers both the means of transport itself and the limits on mixing of transported contents.	- Verify the existence of hygiene rules - Verify their compliance
23		The trucks transporting medication must be maintained in a state of cleanliness in compliance with the recommendations set out for the transportation of food (directive 93/43/CEE) and medication.	- Monitor the date and time of the last cleaning and the current state of: • at least three trucks • a transit hub
24		The prime contractor has the right to refuse to load if it considers that the state of the truck is not compatible with these recommendations.	- Verify the provisions made to this end - Verify their application on an actual case, where possible

Process 2.2 Maintenance and hygiene (cont.)

	Requirements	Detail	Verification method
25	2.2.2 Reminder of obligation for transport hygiene	The service provider must have procedures or directives for the cleaning of trucks.	- Verify the existence of procedures - Verify the list of products used - Monitor the possibility of finding the products used during the last ten cleaning operations
26		The transporter must not transport pharmaceutical products with incompatible products such as seafood products, food products and unprocessed meat.	- Verify the existence of a procedure mentioning the prohibition of mixing pharmaceutical products with incompatible products - Monitor the compliance of ten of the last 100 transportations
27		Highly scented products are also prohibited. There must be no risk of contamination throughout the whole distribution network.	- Verify the existence of a procedure mentioning the prohibition of mixing pharmaceutical products with incompatible products - Monitor the compliance of ten of the last 100 transportations

	Requirements	Detail	Verification method
28		A protocol must be in place for covering incidents in transit premises or during a transportation that may call into question the maintenance under the cold chain of the prime contractor's health care products.	- Verify the existence of a protocol for dealing with incidents - Monitor the application of the protocol on the last ten reported incidents
29		In the event of an incident, while continuing to monitor the temperature as much as possible, this protocol is put in place. It must include measures to be taken in order to limit exposures beyond the range (+2℃ ; +8℃) and, at th e same time, to maintain a traceability of events and products (duration and scope of breaks in the cold chain, protective measures for products, false alarms, etc)	
30	Appendix 5	All incidents must be reported to the prime contractor as quickly as possible, and within a maximum delay of 48 working hours: - describing the nature and subject of the incident - including the record of temperatures - detailing the actions implemented immediately afterwards	

Process 2.3 Protocol for incident management (cont.)

	Requirements	Detail	Verification method
31	Appendix 5	This information will afterward be completed by an exhaustive report of the incident which will be transmitted by the transporter to the prime contractor within a maximum delay of seven calendar days in order to assess the nature of the impact – past, present or future – on the products being distributed, and which will include: - The transport data: shipment or delivery slip number, order number, dates of order/reception, receipt for transport if different from delivery slip - The identification, number and physical state of the packages - The reason for the incident - The exact circumstances of the incident: in particular, the place, the chronology of events and the period with temperature deviation: indication of duration and scope of breaks in the cold chain, alarms etc - If the delivery was made or not (if yes, control data at reception) - A record of temperatures during the period of the incident must be attached to this report	- Verify the existence of a protocol for dealing with incidents - Monitor the application of the protocol on the last ten reported incidents

Process 2.3 Protocol for incident management (cont.)

	Requirements	Detail	Verification method
32	Appendix 5	In terms of immediate actions to be implemented, the transporter must first of all verify that equipment maintaining the cold chain is working properly. If it is still functioning, the products must not leave the truck. If it is not functioning, the fastest of the following actions must be taken immediately: • Ordering a replacement vehicle which must satisfy the same conditions of maintenance of the cold chain as the previous vehicle • Transfer to a storage zone adapted to the maintenance of temperatures of 5℃ +/- 3℃	- Verify the existence of a protocol for dealing with incidents - Monitor the application of the protocol on the last ten reported incidents
33		If a temperature fluctuation is identified by the transporter, the delivery of the packages will not be continued until the sender's decision. In the event that the incident is identified at reception by the customer, the latter will list the appropriate reservations and isolate the products in temperatures of 5℃ +/- 3℃ , then await instructions from the prime contractor.	
34		If the products are not accepted by the recipient, they must be returned immediately to the sender by the transporter.	

Process 2.3 Protocol for incident management (cont.)

	Requirements	Detail	Verification method
35	Appendix 5	For preventive reasons, emergency plans for dealing with the most frequently encountered potential incidents must be established by the transporter and presented and approved with each prime contractor at the time when the logistical specifications are drawn up.	- Verify the existence of a trend analysis - Verify the implementation of corrective actions, where applicable
36		An analysis of trends relating to incidents encountered must be performed regularly by the transporter and/or sender in order to identify the preventive actions: equipment changes or new emergency plans that must be put in place.	
37		All health care products transported at the required temperature and caused to be returned, must be sent under the responsibility of the prime contractor.	- Verify the existence of a returns procedure - Monitor the application on the last three returns
38		It must be identified in a way that differentiates it from all other dispatches, with a specific transport document enabling it to be traced.	- Verify the compliance of the returns procedure

Process 2.5 Pick-up and delivery

	Requirements	Detail	Verification method
39	2.5.1 Reminder of pick-up conditions	The products entrusted by the prime contractor to the service provider are fragile (glass vials, syringes, phials, etc). For this reason, the contents must be handled carefully.	- Verify the existence of instructions for handling fragile products - Monitor the breakage rate over the past twelve months
40		The refrigerated trucks used must have a rigid structure. Covered structures are prohibited.	- Monitor the absence of a covered structure in the fleet or the prohibition of their use for the products in question
41		The refrigerated trucks used must be in perfect condition, particularly in terms of the floor and sides so that products are protected from bad weather and the cold chain is maintained in compliance with regulations.	- Monitor the state of at least three trucks
42		During all the stages conferred to the service provider, the handling units must be sheltered from bad weather and any other harmful elements.	- Verify the existence of monitoring procedures of harmful elements - Monitor their application over the past three months

Process 2.5 Pick-up and delivery (cont.)

	Requirements	Detail	Verification method
43	2.5.1 Reminder of delivery conditions	The packages must never be left, even sheltered, in front of a door or in an unwatched vehicle. Likewise, handover of packages to a person other than the designated recipient is strictly prohibited.	- Verify the existence of delivery instructions for drivers - Test the knowledge of three drivers
44		Upon reception of the delivery, only the following packages may be monitored: - those intended for the recipient - those corresponding in allocation and number to the description on the delivery receipt - those without any visually detectable damage - those that have been maintained in temperatures of 5℃ +/- 3℃	- Verify the existence of a delivery procedure - Verify its application over the last ten controls performed
45		In the event that an anomaly is noted at delivery with regard to temperatures, the recipient must list reservations and physically isolate the product in temperatures of 5℃ +/- 3℃, then await the results of the investigation.	- Verify the existence of delivery instructions for drivers - Test the knowledge of three drivers
46		The transporter undertakes to provide the customer with all pertinent information on the cold chain and to inform the prime contractor immediately in the event of a dispute (cf Appendix 5–incident management)	- Verify the existence of a disputes procedure - Monitor its application for the last three incidents

Process 2.6 Training

	Requirements	Detail	Verification method
47		The transporter personnel must have sufficient training to correctly carry out the various operations required. The drivers must be particularly aware of how to behave in the event of an alarm.	- Verify the existence of training modules in the handling of health care products - Verify the existence of a delivery procedure
48		All transporter personnel handling health care products must be made aware of their inherent particularities (medication, products to be kept at 5℃ +/- 3℃, fr agile products, sensitive products, etc)	- Verify that a procedure exists requiring the training of personnel - Verify that the traceability of training is enforced - Verify the training dossiers of two drivers who have recently joined the company and of two drivers who joined two years earlier
49		When temporary workers are used, they must have the same training on the specificities of products provided by the prime contractor.	- Verify the existence of an authorisation procedure for temporary workers in handling pharmaceutical products under the cold chain - Monitor the training dossiers of ten recently employed temporary workers

Process 2.7 Subcontracting

	Requirements	Detail	Verification method
50		Taking into account the diversity and distances of the recipients, as well as possible changes in activity, the transporter has the possibility of subcontracting all or part of the performance of its services. In that case, the transporter is responsible for its subcontractor. It must show proof of a policy of monitoring its subcontractors, particularly through specific contracts and specifications, and must ensure the proper application of recommendations by implementing audits.	- Verify the existence of contracts for subcontractors mentioning the rules - Monitor the performance of audits by the service provider
51		The list of subcontractors approved by the transporter will be transmitted to the prime contractor for each intervention.	- Verify the list of subcontractors

E. Analysis of results

Chart showing, for each process, the number of comments by gradation