



## Information for employees and students working at the Faculty of Science (W&N)

This AMD information sheet is intended for employees transporting research materials or those who would want to have research materials transported. This transport may be between two labs within the same building, between university buildings, or pertain to a shipment elsewhere. The rules and regulations for receiving research materials are clarified too. Research materials comprise, among other things: chemicals, preparations, plants and animal materials, such as serum, embryos, and FCS.

## 1 Internal transport of research material

### 1.1. Hazardous substances and samples within a building

Hazardous substances must be transported in such a manner that breach of containment or unintended release of the substances is prevented. During internal transport of hazardous substances the packaging must always remain sealed. Transport between floors is allowed by stairs or goods lift only. **Transport using the passenger lift is not allowed!**

*Internal transport refers to the situation in which the research materials remain within the building or on the grounds. If the substances need to cross public roads to another building, the rules for road transport (ADR) apply. Therefore, please make sure delivery will be to the intended building!*

A single bottle is transported best within a bucket. That way, you do not need gloves for your own protection, and contamination of door handles by dirty gloves will be no issue. Wearing gloves in the hallways is not allowed for just this reason!

Use a bottle-rack or cart when transporting multiple bottles or jars. Put bottles or jars in a drip-tray on the cart. That way, you prevent causing a trail of chemicals in the hallway in case of any spillage. It also lowers the risk of bottles and jars tumbling. If you have to transport several waste containers, a drip-tray will often not suffice. In those cases, please use a cart with a raised edge.

### 1.2. Internal transport of classified material (GMOs and nanomaterials)

Category 1 GMO materials (from a ML-I or PCM-I lab) may be transported through the hallways, if the packaging is sealed. Category 2 materials (from a ML-II, PCM-II, or DM-II lab) or nanomaterials may be transported only when provided with a **secondary containment**. For example, use closed tubes in a centrifuge bucket with lid. Another option is using a tube or plate in a "sealing bag" or a sealed sample container wrapped in parafilm to thus create a second barrier. That way, the material will not be released immediately in case of breakage, and contamination of the environment (hallway, lift) by an incident will be prevented.

### 1.3. Internal transport of cryogenics

The transport of liquid nitrogen or helium, or materials submerged in liquid nitrogen is allowed, if the packaging is prevented from tumbling. The Dewars of the cryogenics department are designed in such a manner that tumbling is close to impossible. Other Dewar-flasks may form a risk. Please be aware that 1 litre of

liquid nitrogen equals 640 litres of gas, and may cause suffocation in small enclosed spaces, such as lifts. Even though the goods lifts are specially ventilated, it is preferred that you send the lift to the proper floor and have a colleague wait there to receive the dewar. More information on cryogenics may be found in the AMD Information sheet VOM023 *Cryogenics*.

## 2 Receipt and shipment of research material

If you wish to receive materials, you will have to provide the sender with a complete and correct delivery address (intended building!) to prevent shipments roaming the university grounds. There are requirements according to international conventions that apply to several types of transport regarding the amounts that are exempt, manner of packaging, and accompanying (customs) papers. To transport by road: ADR and VLG; by sea: IMDG; by air: ICAO and IATA. This is a complicated matter. Sometimes you may do it yourself (if so, it is mentioned in the text below), but for other shipments and for transport abroad, it is better to contract it out. This is because you will remain responsible for the shipment as a sender. Furthermore, you yourself are not allowed to transport GMO materials or radioactive materials by public roads.

*The shipment or receipt of classified materials (such as opiates, precursors, pathogens, GMOs, or animal by-products) require permits that are managed at faculty level. You will also need a certified transporter. Please contact the AMD: [BVF@science.leidenuniv.nl](mailto:BVF@science.leidenuniv.nl)*

### 2.1. Chemicals and samples

Chemicals and samples are considered to comprise all hazardous and non-hazardous substances or their mixtures.

**Receipt:** When a package is found to be damaged on receipt, it is advisable not to accept the delivery. In addition to that, specific rules and regulations may apply upon receipt of certain substances. This applies to so-called precursors (substances that may be used to produce drugs or explosives). For these a special exemption will have to be granted by way of a permit. Sometimes a supplier will only provide substances when you fill in an “end-user statement”, sign it, and return it. Please always send a copy of the filled-in end-user statement to the AMD. For opiates a separate permit is arranged for activities and possession. Please ask the AMD if the substance received is included in the permit.

**Shipment:** For the shipment of chemicals or samples you are allowed to use a transporter of your own choice (if properly packaged according to VLG and ADR regulations, or other transport regulations). Within the Netherlands you may consider packaging and labelling a non-hazardous substance yourself, depending on its content.

### 2.2. Biological material (non-classified)

Non-classified biological materials comprise all plant materials (wild type), DNA, proteins, micro-organisms of category 1 or lower, and human cells or cell lines (not being GMOs).

**Receipt:** You are allowed to receive non-classified biological material. Please note: In case of plants or animals you must [verify if these are on the CITES list \(Dutch link\)](#). If they are, you need an import exemption.

**Shipment:** You are allowed to ship biological material with a transporter of your own choice. Please note: not all transporters have experience in transporting frozen materials (-80°C, under “dry ice”) (See 2.3). Within the Netherlands you could consider labelling the shipment yourself. The proper stickers, suitable packaging, and full documentation may be found using the [BVF platform \(Dutch link\)](#).

### **2.3. Biological materials (classified): GMOs, pathogens, or those of animal origin**

Classified biological materials comprise: genetically modified organisms (GMOs), all material of animal origin, and category 2 (pathogenic) micro-organisms.

All of the above mentioned types of classified biological materials may be transported only by designated, certified firms (World Courier, Biologic Services) and **not** by FedEx, DHL, and such. Please have the transporter arrange the documentation. It concerns a complex matter, and the transporter specializes in it. Furthermore, these transporters have experience in transporting frozen shipments (- 80°C, dry ice), and will supplement the dry ice when critical, such as when a shipment remains on an airport over a weekend period.

#### **2.3.1** *GMO materials*

These comprise all GMO materials (plants, animals, and micro-organisms). If you intend to send a GMO cell or GMO micro-organism to a (foreign) lab, you may also consider extracting the DNA and sending the ‘naked DNA’. If you do, it will be considered to be “non-classified biological material”, and you will not have to use a certified firm, and Post-NL, DHL, FedEx, etc. (See 2.2) will suffice.

#### **2.3.2** *Biological material of animal origin: animal by-products*

Material of animal origin falls under special regulations, that is, the Dutch Animal By-products Decree. This decree covers everything of animal origin, such as, tissue, faeces, urine, blood (products), animal cells and cell lines, embryos, or products containing animal material (e.g. Fetal Calf Serum).

**Receipt:** in receiving animal by-products from abroad, use of a certified firm is mandatory. Before receipt, you will have to send a copy of the permit and a correctly filled-in *animal by-products* trade document to the sender. The sender can transfer these documents to the transporter, and include them as accompanying documents with the shipment. The shipment will have to enter the Netherlands through Schiphol (because that is where the permit lies). Materials that contain animal by-products, and that are ordered at a Dutch distributor, are exempt from these rules.

**Shipment:** When you ship animal by-products, you will always have to include a trade document. Within the EU you are obliged to verify whether the recipient has a permit for the receipt of animal by-products. Please contact the AMD for more information.

### 2.3.3 Pathogenic biological materials (category 2 and higher)

Pathogenic materials comprise micro-organisms of category 2 or higher, that is, those that cause diseases of humans, plants, or animals.

**Receipt:** For the receipt of pathogenic materials a faculty permit was arranged by the AMD. Make sure that shipments from abroad are always carried out by a certified firm. Please contact the biological safety officer (“BVF”) for more information.

**Shipment:** For the shipment of pathogenic material for diagnostics within the Netherlands, you do not need to use a certified firm, and Post-NL, DHL, or FedEx will suffice. However, you do need to ensure a proper, double sealed, leakage and breakage proof packaging according to packaging instructions P650 (ADR) and the UN3373 standard: [please ask your BVF about it](#). Please contract out the shipment of pathogenic material abroad to a certified transporter who will also arrange the documentation and may provide information about the packaging.

### 2.4 Radioactive substances

The use and possession of radioactive substances are granted to the Leiden University under a compound permit under the Dutch Nuclear Energy Act (“Kernenergiewet”, KEW). The receipt or shipment of radioactive materials are held under strict requirements, and by designated transporters only. Please contact the coordinating radiation expert (“coördinerend stralingsdeskundige”) of the AMD through: [isotopen@science.leidenuniv.nl](mailto:isotopen@science.leidenuniv.nl).