

## Transport of (frozen) samples from Ny-Ålesund to Germany

### Preparation:

- 1.) Think of the order form (BANF) for sample transport to AWI-Logistics! The BANF-number is relevant to the transport process as reference number.
- 2.) Bring adequate boxes (dry shipper, Styrofoam container, cool bag etc.) with you for the return transport of samples!
- 3.) Inform the station staff in advance about your needs (Form: *Logistics needs* and on-site)
  - Liquid nitrogen is available in the observatory by observatory engineer
  - Dry ice from Kings Bay: 205 NOK per 0.5kg (2.5 kg per package)

Kind of Samples	Transport packaging	Return Transport
ultra-low temperature (-80°C)	dry shipper	1.) Personal luggage or 2.) Courier Company
frozen (ca. -20°)	on dry ice	
refrigerated (ca. 0-8°C)	e.g. cool bag with thermal packs	
ambient temperature	packing without cooling	
freeze-dried	airtight-packed (with or without cooling)	
Live samples	species-appropriate	Courier (with specific export/ import licenses)

### **Transport packaging**

#### Dry shipper / Dewar:

Liquid nitrogen dry shippers (LN<sub>2</sub>) are designed for the safe transportation of biological samples at cryogenic temperatures. Dry shippers are aluminum tanks, lined inside with a porous material which absorbs the liquid nitrogen. However the number of samples that can be shipped is limited.

- Please keep in mind that filling the dry shipper properly (i.e. all liq. N<sub>2</sub> is absorbed) might take several days, so time the filling well to go with your departure. Airlines do not accept dry shippers that contain free, non-absorbed liq. N<sub>2</sub>!
- Be sure that the materials you are transporting are not hazardous materials such as samples frozen in propane, ethane, halocarbon or other hazardous gas or an infectious substance (= dangerous goods).

### Dry ice:

Dry ice is the solid form of carbon dioxide (CO<sub>2</sub>) and available as pellets or blocks. Selection may be driven by local availability. Block ice will provide more longevity. Packages for dry ice must allow for the release and venting of gaseous carbon dioxide. The samples with the dry ice must be enclosed in a Styrofoam box (Limit: 2.5 kg dry ice per package!):

- If block ice is used, any vacant space can be filled with packing material (paper) to slow evaporation and cushion the samples. If pellet ice is used, place a layer of dry ice lining the bottom and then add samples, followed by additional dry ice to fill the box.

This sample-filled Styrofoam box (Not airtight!) must be placed into a sturdy cardboard box or Zarges box which is taped for shipping. (Shipping companies are not accepting Styrofoam boxes as outer layers.)

Dry ice is hazardous because the gas is poisonous to humans. A Declaration for Dangerous Goods form is not required if dry ice is the only hazardous material in the package. Shipping labels for dry ice: "Class 9" and "UN1845"

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### **Transport via personal luggage**

- The shipper assumes the responsibility for sample materials and their transport. Inform yourself about the transport and safety regulations!
- Recommendation: Prepare a "Declaration about scientific sample material" for customs examination. The documents have to contain information about the type of samples, the species, your scientific purpose, responsibility of your institute etc.
- Declare excess baggage by the airlines!
- Inform Kings Bay reception in advance about your cargo. Weight, dimensions and contents are of interest.

### Note:

**Pro:** The fastest and cheapest way of transport under own control!

**Contra:** Due to new baggage-restrictions carry-on luggage by airfreight is sometimes not accepted by the authorities and may cause troubles at the border. AWI-Logistics cannot give you any recommendations or support if you intend to transport your (frozen) samples as personal luggage.

## Transport via Courier Company

We recommend the logistics company **POLE POSITION SPITSBERGEN AS** due to their Arctic experience in handling scientific samples, express and door to door delivery.

- Address: POLE POSITION SPITSBERGEN AS  
Visiting address: Port of Longyear, Po Box 514  
NO-9171 Longyearbyen  
Tel +47 7902 3535  
Fax +47 7902 3536  
Cell +47 9912 4998  
24/7 Duty phone + 47 9500 8480  
[www.pole-position.no](http://www.pole-position.no)
- Cooperation with the Scandinavian express delivery company **JETPAK** ([www.jetpack.com](http://www.jetpack.com))
- **Pricelist** for courier & air freight rates for frozen sample transports from Longyearbyen (LYR) to Bremerhaven (BHV), including courier delivery to your door:

Amount	Express delivery: next day after leaving LYR airport	Economy delivery: latest two work days after leaving LYR airport
5 kg	6.000 NOK	2.000 NOK
10 kg	8.500 NOK	2.500 NOK
20 kg	13.200 NOK	5.500 NOK

Additional service:

800 NOK per shipment for “live tracking services” i.e. staff on duty would check the progress of each shipment from station to station.

- Proposal for routes of transportation NYÅ- BHV:

1.) Morning departure from NYÅ to LYR via *LUFTTRANSPORT* plane

### Service of POLE POSITION SPITSBERGEN AS:

- Transport to SAS airport
- Leaving on afternoon flight: SK4425 LYR-TOS-OSL (offload in OSL, store overnight)
- Safe storage at a terminal in Oslo with a direct link to a dry ice & liq. nitrogen supplier on site
- LH 3137 OSL-FRA (offload & transfer); LH 344 FRA-BRE
- Scheduled arrival in BRE 14:15; transport to BHV, latest delivery to your address by 17:30

2.) Afternoon departure from NYÅ to LYR via *LUFTRANSPORT* plane

Service of *POLE POSITION SPITSBERGEN AS*:

- Store overnight; transport to SAS airport
- Leaving on early morning flight: SK4493 LYR-TOS (offload & transfer); SK4403 TOS-OSL (offload & transfer); LH3131 OSL-FRA (offload & transfer); LH 346 FRA-BRE
- Scheduled arrival in BRE 17:50; transport to BHV; latest delivery to your address by 22:00

**Step by Step-Procedure at AWIPEV base in Ny-Ålesund:**

- 1.) Advance announcement of required sample transport (needs, date, AWI-BANF-number) by station leader/ logistics engineer
- 2.) Inform Kings Bay reception in advance about your cargo. Weight, dimensions and contents are of interest.
- 3.) Booking of sample transport at *POLE POSITION SPITSBERGEN AS* via email to [jetpak@pole-position.no](mailto:jetpak@pole-position.no) (and [rupert@pole-position.no](mailto:rupert@pole-position.no))
  - Essential: Email addresses of project leader/scientists/contact persons for the email information and alert system of the transport status
  - Prepare a pro forma invoice (*JETPAK Commercial Invoice* in Downloads: <http://www.pole-position.no/de/expressfracht.html> )
- 4.) Order confirmation: *JETPACK booking confirmation* with all information and attached address labels

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Links:

Information on KingsBay Webpage (Ny-Ålesund):

[http://www.kingsbay.no/index.php?option=com\\_content&view=article&id=146&Itemid=123#COOPERATION-IGP](http://www.kingsbay.no/index.php?option=com_content&view=article&id=146&Itemid=123#COOPERATION-IGP)

Information about dangerous goods: [http://www.iata.org/whatwedo/cargo/dangerous\\_goods/index.htm](http://www.iata.org/whatwedo/cargo/dangerous_goods/index.htm)

Alternatives (if required):

- *Avinor* (<http://www.avinor.no/lufthavn/svalbard> ): Service in LYN: transport of parcel(s) from *LUFTRANSPORT* plane to SAS airport for further handling Driftssjef Lufthavntjenesten, Morten Ulsnes Telefon: 67 03 54 50
- Courier companies from LYN/SAS Airport: *DHL, Wold Courier*