

TRANSPORTATION OF BIOLOGICAL SUBSTANCES BY AIR BIO-105 ADDITIONAL COURSE NOTES



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Compliant with the Transportation of Dangerous Goods Regulations and IATA at the time of publication.

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Legal deposit - 2012-08-14 ISBN: 978-2-923866-16-1

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THESE NOTES ARE A COMPLEMENT TO THE BIO-101 COURSE NOTES
AND ARE NOT INTENDED TO BE USED ON THEIR OWN.

AIR TRANSPORT

STEP 2 - CLASSIFICATION

Classification for air transport is exactly the same as for ground transport.

STEP 3 - PACKAGING

EXEMPT SPECIMENS

Shipments of *exempt specimens* must be packed as for ground transport in *good quality* packaging that will resist to normal conditions for air transport **in addition to absorbents for all liquid content.**

CATEGORY B

Category B substances must be packed in accordance with IATA packing instructions 650 (similar to Type 1B) including the 95 kPa test.

There is a limit of **4 litres** per package as well as 1 L per inner receptacle.

CATEGORY A

Category A shipments must be packed in accordance with IATA packing instructions 620 (similar to Type 1A). There is a limit of **50 mL** per package for passenger aircrafts and 4 L for cargo only aircrafts. Packages must bear the UN markings as illustrated in the section on surface transport.

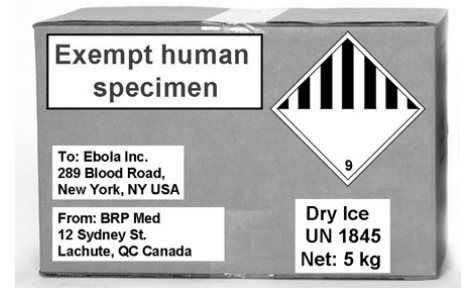
No other substances may be packed with infectious materials with the exception of dry ice and certain stabilizing materials (class 3 and 8)

STEP 4 - MARKING AND LABELLING

All packages prepared for transport must be marked and labelled. The same safety marks required for surface transport must be affixed with additional markings required.

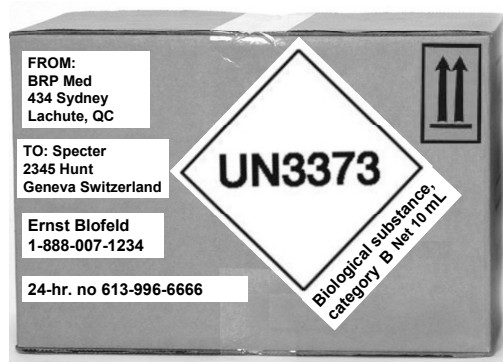
Labels must be at least 100 mm x 100 mm and may be reduced to **half-size** (50mm x 50mm) **only** if the package is too small to accept the full-size labels.

For exempt specimens

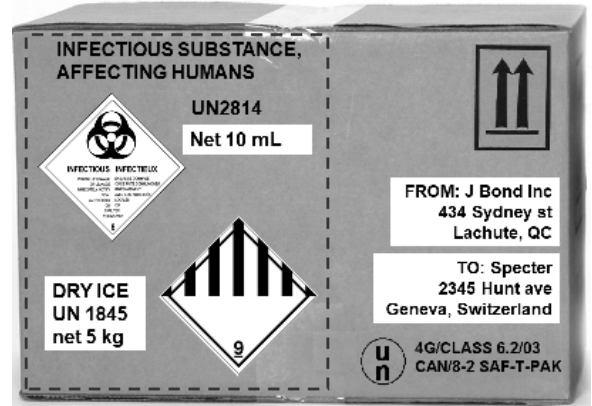
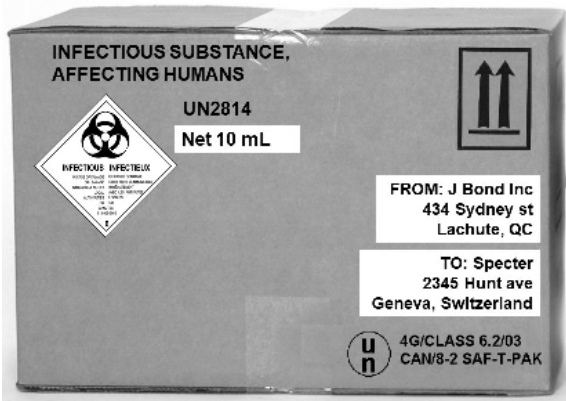


Exempt specimens with dry ice

For Category B:



Shipments of category A :



An additional phone number, for logistical purposes should be included either on the package or the air waybill.

Overpacks

Several packages may be grouped together to form one handling unit. This is known as "over packing". "Over packs" must bear all safety marks that are not visible and legible from the outside, except for package certification marks.

Cargo aircraft only :

Packages that must fly by cargo aircraft only, because of the quantity, must bear the orange CAO label on the same side as the hazard label.



Temperature sensitive label:



STEP 5 - DOCUMENTATION

Air waybill (AWB): An AWB is required for all shipments. This may be completed by the shipper or buy a third party. There are many forms to this document which is basically a transport contract, and the requirements can be completed by simple check marks. This may be completed manually or mechanically depending on your carrier. An additional phone number, for logistical purposes should be included either on the package or the air waybill.

Exempt specimens or Cat B with dry ice.

7 Special Handling / Manutention spéciale

HOLD at FedEx Location / RETENIR à la succursale FedEx
May not be in the same city. Not available for FedEx First Overnight/Peut être située dans une autre ville. Pas disponible pour FedEx First Overnight.

SATURDAY Delivery / Livraison le SAMEDI
Available to select locations. Not available for FedEx First Overnight and FedEx 1Day Freight./Disponible à certains endroits. Pas disponible pour FedEx First Overnight et FedEx 1Day Freight.

Does this shipment contain dangerous goods? / Cet envoi contient-il des marchandises dangereuses?*

Must check one box./Cocher une seule case.

No / Non Yes As per attached Shipper's Declaration./Selon la déclaration de l'expéditeur, ci-jointe. Yes Shipper's Declaration not required./Déclaration de l'expéditeur non requise. Dry Ice / Dioxyde de carbone, solide 1 x 5 kg

Exempt specimen *Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. / *Les marchandises dangereuses (y compris le dioxyde de carbone solide) ne peuvent pas être expédiées dans des emballages FedEx. Cargo Aircraft Only / Avion cargo uniquement

Category A with dry ice

7 Special Handling / Manutention spéciale

HOLD at FedEx Location / RETENIR à la succursale FedEx
May not be in the same city. Not available for FedEx First Overnight/Peut être située dans une autre ville. Pas disponible pour FedEx First Overnight.

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infectious substances *Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. / *Les marchandises dangereuses (y compris le dioxyde de carbone solide) ne peuvent pas être expédiées dans des emballages FedEx. Cargo Aircraft Only / Avion cargo uniquement

SHIPPER'S DECLARATION -CATEGORY A ONLY

Air transport requires the IATA shipper's declaration in the proper format, with red borders. It must be completed in English, in permanent ink. Print and sign four copies, keeping one (for 2 years) and giving three to the carrier). Please use the supplied shipper's declaration in PDF format supplied with the course materials.

SHIPPER'S DECLARATION FOR DANGEROUS GOODS

Shipper _____ **Air Waybill No.:** _____

Page 1 of 1 Pages

Consignee _____ **Shipper's reference No.:** _____
(optional)

For optional use _____

Two completed and signed copies of this Declaration must be handed to the operator

<p>TRANSPORT DETAILS This shipment is within the limitations prescribed for: (delete non applicable)</p> <p style="text-align: right;">Airport of Departure: _____</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">PASSENGER AND CARGO AIRCRAFT</td> <td style="width: 50%; padding: 2px; text-align: center;"> CARGO AIRCRAFT ONLY XXXXXXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXX </td> </tr> </table> <p>Airport of Destination: _____</p>	PASSENGER AND CARGO AIRCRAFT	CARGO AIRCRAFT ONLY XXXXXXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXX	<p>Warning Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to penalties.</p> <hr/> <p>Shipment type: (delete non applicable)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">NON- RADIOACTIVE</td> <td style="width: 50%; padding: 2px; text-align: center;">XXXXXXXXXXXX</td> </tr> </table>	NON- RADIOACTIVE	XXXXXXXXXXXX
PASSENGER AND CARGO AIRCRAFT	CARGO AIRCRAFT ONLY XXXXXXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXX				
NON- RADIOACTIVE	XXXXXXXXXXXX				

NATURE AND QUANTITY OF DANGEROUS GOODS

Dangerous Goods Identification						
UN or ID No.	Proper Shipping Name	Class or Div. (Subsidiary risk)	Packing Group	Quantity and type of packing	Packing Inst.	Authorisation
UN2814	INFECTIOUS SUBSTANCES, AFFECTING HUMANS (add suspected pathogen)	6.2		1 FIBREBOARD BOX X 10 mL	620	

Additional Handling Information _____

Emergency 24 hour No.: _____

<p>I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. I declare that all of the applicable air transport requirements have been met.</p>	<p>Name/ Name of Signatory _____</p> <p style="text-align: right;">Date/ _____</p> <p>Signature (see warning above)</p>
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Dry Ice in an overpack

In the case where dry ice is shipped out with a category A, the dry ice must also be declared. For dry ice overpacked with the infectious material, add the mention « Overpack used » followed by the number of overpacks.

In the following example one box of Cat. A is overpacked with dry ice.

NATURE AND QUANTITY OF DANGEROUS GOODS (See sub-section 8.1 of IATA Dangerous Goods Regulations)						
Dangerous Goods Identification						
UN or ID No.	Proper Shipping Name	Class or Division (Subsidiary Risk)	Packing group	Quantity and type of packing	Packing Inst.	Authorization
UN2814	Infectious substance, affecting humans (HIV culture)	6.2		1 x fibreboard box x 50 mL	620	
UN1845	Dry ice			5 kg overpack used	954	

Dry ice in same box as sample (freezer pack) "All packed in one"

However, if the dry ice is inside the same package, this is known as an ‘all packed in one’ and the document must be prepared in the following manner:

- Insert only the quantity of the dangerous goods;
- Add the mention « all packed in one fibreboard box »

NATURE AND QUANTITY OF DANGEROUS GOODS (See sub-section 8.1 of IATA Dangerous Goods Regulations)						
Dangerous Goods Identification						
UN or ID No.	Proper Shipping Name	Class or Division (Subsidiary Risk)	Packing group	Quantity and type of packing	Packing Inst.	Authorization
UN2814	Infectious substance, affecting humans (Suspected category A infectious substance)	6.2		50 mL	602	
UN1845	Dry ice	9		5 kg	904	

Quantity only

Statement for all dangerous goods packed in same outer package

CHECKLIST - AIR TRANSPORT BIOLOGICAL SUBSTANCES

Category A

- Packing instructions 620

- Package identification
 - ✓ UN2814 Infectious substance affecting humans or UN2900 Infectious substance affecting animals
 - ✓ Class 6.2 label
 - ✓ Package certification
 - ✓ Package orientation labels (2) - if more than 50 mL

- Shippers declaration required (use de supplied template)
 - ✓ Date
 - ✓ Name and address of shipper and consignee
 - ✓ 24-Hr No.
 - ✓ Complete shipping description (with pathogen)
 - ✓ Number of packages and quantity per package (metric units)
 - ✓ Name and signature of shipper and date
 - ✓ ERAP information if required

- Air waybill required (Name and phone number of a person)

Category B

- Packing Instructions 650
- Package identification (in English)
 - ✓ Biological substance, category B
 - ✓ Label UN3373
 - ✓ Name and address of shipper and consignee
 - ✓ 24-HR NO with no. phone
 - ✓ Package orientation labels (2) - if more than 50 mL

- Air waybill required (Name and phone number of a person)

Exempt specimen

- Good quality packaging (3 levels of protection)
- ✓ Absorbent required
- Package Identification: Exempt human specimen (or animal)
- Air waybill required

Dry ice

- Package identification
 - ✓ Dry Ice, class 9 label, UN1845
 - ✓ name and address of shipper and consignee
 - ✓ Net weight of dry ice at any time on parcels

- Shipper's declaration not required (except with Cat A)
- Air waybill required
 - ✓ Dry Ice, class 9, UN1845, number of packages + net quantity.