Transport Of Biological Samples: Air Transport View

Andrea Graf-Gruber
IATA
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Background
About IATA

- The International Air Transport Association is the industry’s global trade association
- Founded in 1945 with 230 members in 130 countries, IATA represents 93% of international scheduled traffic
- IATA’s mission is to represent, lead and serve the air transport industry
- IATA delivers Standards and Solutions to ensure a successful air transport
About Air Cargo

- Scheduled air cargo started 90 years ago with mail
- Essential engine of today’s global economy and airlines business
- Consists of general & special cargo e.g. perishables
- 30% of worldwide value of Cargo transported and 3% in volume
- Speed and on time delivery are the competitive advantages

Example of a Belly Hold Aircraft
Transport of Dangerous Goods
The IATA Dangerous Goods Regulations

 gboolean Basis for the International Regulations

g gboolean Recap of current regulations

g gboolean Changes effective 2011

g gboolean Importance of quality packaging
International Air Transport Regulations

- Originate with International Civil Aviation Organization (ICAO)
- Applicable to States (189) that are signatories to the Chicago Convention
- Detailed in ICAO Technical Instructions
- IATA Dangerous Goods Regulations are recognized by ICAO as the “field guide” for practical reference by industry.
Classification

Division 6.2

- Category A – UN 2814 – “Infectious substances, affecting humans” or UN 2900 – “Infectious substances, affecting animals”, indicative list of pathogens

- Category B – UN 3373 – “Biological substance, Category B”, all other pathogens

- “Exempt human specimens” or “Exempt animal specimens”, patient specimens with a “minimal likelihood” that pathogens are present

- Other exceptions, e.g. blood for transfusions.
Special Provisions

Infectious Substances

- A81, against UN 2814 & UN 2900 permits quantity in excess of normal limits for body parts/organs

- A140, against UN 2814 & UN 2900 identifies that while the technical name is no longer required on package it must be provided on the Shipper’s Declaration.
Packing Instructions

Packing Instruction 602:

- triple packaging

- outer packaging must be “rigid”

- itemised list of contents may describe contents as “suspected category A infectious substance” where pathogen is unknown

- UN specification packaging
Packing Instructions (cont.)

Packing Instruction 650:

- triple packaging
- rigid outer packaging
- diamond shaped marking, must be a minimum of 50 mm

UN3373
Packing Instructions (cont.)

Packing Instruction 650 (Cont.):

- package must be marked with proper shipping name next to diamond marking
- minimum size of packaging
- overpack marking
- name, address and telephone number of responsible person on package or AWB
- clarification of other dangerous goods packed with UN 3373
- The AWB should contain the number of packages
Exempt Specimens

- No “formal” Packing Instruction, but packaging still mandated

- Triple packaging:
  - leak-proof primary
  - leak-proof secondary
  - outer packaging of adequate strength for its capacity

- Package must have one surface with minimum dimensions of at least 100 mm x 100 mm (4” x 4”)

- Package must be marked with “Exempt human specimen” or “Exempt animal specimen”.
Specimen

Primary Receptacle
Leakproof or Siftproof

Absorbent Packing
Materials (for Liquids)

Secondary Receptacle
Leakproof or Siftproof
(e.g. Sealed Plastic Bag)

Outer Packaging

Exempt Human Specimen
2011 Changes

Packing Instruction 602

+ Packing Instruction 602 becomes 620 to align with all other modes of transport
  + Part of the overall restructuring of the packing instructions

Packing Instruction 650
High Quality Packaging
Why Bother?

- The regulations
- Ensure the safe transport of product to destination
- Timely transfers
- Minimizing delays at check-points
Regulations & Guidelines

är 51st Edition  är 10th Edition
Time & Temperature
Sensitive Goods
Perishable goods

Among the first commodities carried by air

Airlines have developed handling techniques for chilled and frozen products, providing shippers with optimum, cost-efficient packaging methods for time and temperature sensitive commodities.

Airlines needed to address the issues related to the cold chain for transport of time and temperature sensitive healthcare products

⇒ Storage of drug products under appropriate conditions of temperature, humidity, and light so that the identity, strength, quality, and purity of the drug products are not affected
⇒ Cooperation between the stakeholder of the supply chain
IATA's Perishable Cargo Regulations (PCR)

- Reference guide for all stakeholders involved in the packaging and handling of perishables for air transportation

- Developed based on the experience of a number of major airlines and the scientific data supplied by research institutions.

- Chapter 17 – Air Transport Logistics for Time and Temperature – Sensitive Healthcare Products

- 10th Edition effective 1st July 2010
IATA Time & Temperature Task Force (TTTF)

- Dedicated Task Force under the IATA Live Animal and Perishable Board Governance to continuously address challenges of Chapter 17

- Comprising Airline & Non Airline Members
  - Supply Chain Stakeholders
  - Organizations
  - Subject Matter Experts
  - Regulatory Bodies

- Tasked to recommend standards for the procedures, documentation, cargo handling, packaging and acceptance of goods from the health care sector in order to facilitate, improve or maintain the logistics thereof.
IATA's Perishable Cargo Regulations

- The current edition of the PCR introduced new requirements for the transportation logistics of healthcare products, such as:
  - Quality Management System Requirement and Service Level Agreements applicable to the above commodities
  - Training Requirements
  - New Label for Time and Temperature Sensitive Healthcare products (mandatory as of 1st July 2010)
Time & Temperature Sensitive Healthcare Products Label – Effective 1st July 2010

- Originally Approved Apr. 2009
- PCR 9th Edition
- ICAO and US DOT insisted on a change of orientation (45°) so as not to be mistaken for a DG label
- Revised Oct. 2009
- PCR 10th Edition
Only for healthcare products as indicated in Chap. 17.

Only to be used when there is a specific agreement in place with the stakeholders (shipper, forwarder, carrier, etc).

Only to be completed as indicated in that agreement (i.e. in the SLA, QMS, SOP, etc).

The temperature indicated on the label is the only one that will be followed during transport (other package markings will be disregarded) – informs on the external handling temperatures.

The label will be a 3 color label with gradients for the effect of the different blues.
Next Steps

- Continuous enhancement of Chapter 17 of IATA's Perishable Cargo Regulations

- Seek for IATA’s Chapter 17 education and compliance

- Gather feedback from stakeholders of the supply chain

- Continuous cooperation with International Organizations and Regulatory Bodies
Resources

- UN SCETDG Website: http://www.unece.org/trans/main/dgdb/dgsucb/c3age.html
- ICAO Dangerous Goods Website: http://www.icao.int/anb/FLS/DangerousGoods/
- IATA Dangerous Goods Website: http://www.iata.org/whatwedo/cargo/dangerous_goods/index
- IATA Perishable Cargo Website http://www.iata.org/whatwedo/cargo/Pages/perishables.aspx

IATA World Cargo Symposium, March 2011, Istanbul
⇒ Dangerous Goods Track
⇒ Time and Temperature Management Track
Thank You
to represent, lead and serve the airline industry