Module 1
Terms Used for Shipping Infectious Substances
Overview

- Dangerous goods
- Infectious substances
- Cultures and patient specimens
- Packaging
- Labels
- Markings
- Exercise: Differences between P620 and P650
What are dangerous goods?
Dangerous goods

⚠️ Dangerous goods pose a risk during transport

⚠️ There are nine classes of dangerous goods

⚠️ Three are important to shippers of infectious substances

⚠️ Class 3: Flammable liquids

⚠️ Class 6: Toxic and infectious substances

⚠️ Class 9: Miscellaneous dangerous substances and articles, including environmentally hazardous substances
What are infectious substances?
Infectious substances (class 6.2)

- Under the dangerous goods classification – class 6.2
- Class 6.2 addresses:
  1. Infectious substances (Category A)
  2. Biological substances (Category B)
  3. Biological products
  4. Genetically modified microorganisms and organisms
  5. Medical or clinical waste
  6. Infected live animals
  7. Exempt human/animal patient specimens
  8. Other exemptions
Category A – infectious substances

An infectious substance which is transported in a form that, when exposure to it occurs, is capable of causing permanent disability, life-threatening or fatal disease in otherwise healthy humans or animals.
Category B – biological substances

An infectious substance which does not meet the criteria for inclusion in Category A and has not been determined by a medical professional to have a minimal likelihood that pathogens are present.
What is the difference between cultures and patient specimens?
Cultures and patient specimens

- Cultures are incubated samples (with purpose of multiplying pathogens)
- Patient specimens are collected directly from humans/animals
- These differences are important for the classification of infectious substances
- This classification will affect the choice of packaging
What are some terms you have heard related to packaging of infectious substances?
Packaging terms

- Triple packaging
- Primary, secondary and outer containers
- Packing instruction 620 (P620)
- Packing instruction 650 (P650)
- UN approved packaging
- Overpacks
Triple packaging

- Primary Container
- Secondary Container
- Outer Container
Packing instruction 620 (P620)

This packaging is used for Category A infectious substances.
UN Specification marking

This symbol means the packaging has passed a series of tests. UN approved packaging is required for P620.

4G/CLASS 6.2/05
GB/2470
UN Specification marking

1. The United Nations packaging symbol

2. An indication of the type of outer packaging (in this example a fibreboard box (4G); other examples include a solid plastic box (4H2), or a plastic drum (1H2), applicable to dry shippers)

3. An indication that the packaging has passed a series of tests to ensure that it meets the requirements for Category A infectious substances (Class 6.2), such as:
   - Pressure test at 95 kPa
   - Drop test from 9 m
   - Puncture test at 7 kg
   - Stacking test

4. The last two digits of the year of manufacture (in this example 2013)

5. The country code of the competent state authority that has authorized the allocation of the mark (in this example GB, signifying Great Britain)

6. The manufacturer’s code specified by the competent authority (in this example 2470)
Packing instruction 650 (P650)

This packaging is used for Category B biological materials.
Exercise

Differences between P620 and P650
Exercise: Differences between P620 and P650

- **P620** Category A
  - Primary receptacle (test tube)
  - Secondary packaging (watertight)
  - Cap
  - Absorbent material
  - Specimen record (includes itemized list of contents)
  - Outer packaging
  - Package orientation label (not mandatory when primary receptacle does not exceed 50 ml)

- **P650** Category B
  - Primary receptacle (leakproof or siftproof)
  - Rack-type holder (styrofoam, sponge)
  - Itemized list of contents (specimen record)
  - Secondary packaging (leakproof or siftproof)
  - Rigid outer packaging
  - Proper shipping name
  - To/From labels
  - UN Number
  - UN specification marking
  - Waterproof cap
Exercise:
Differences between P620 and P650

Please identify three features found in P620 and in P650. Then compare the two packages and identify three differences between the two packages.

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Questions and comments