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Ecodesign in food packaging

UNIT 12: Testing of Food Packaging

Quiz and Assignment

Gabriel Laslu, Dipl. Eng. (IDT1), gabriel.laslu@gmail.com

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Quiz

1) Specific EU laws and regulations exist only for 5 of the 17 packaging materials that may come into contact with food. What are the 5 packaging materials that can come in contact with regulated materials:

A.

- Plastics including
- Recycled Plastics
- Ceramic
- Regrowed cellulosic films
- Active and intelligent materials

B.

- Paper and cardboard
- Wood
- Glass
- Metals and alloys
- Adhesives

C.

- Textiles
- Printing inks
- Varnishes and coatings
- Cork

Answer A.

2) Regulation 10/2011 provides for the global migration limit for plastics as follows:

A. The specific migration limit for the plastic components in food is not regulated.

B. Overall Migration Limits (OMLs): Plastic materials and articles do not transfer components in food simulants in quantities greater than 10 milligrams of total components released per m² of contact surface (mg / dm²).

C. Plastic materials and articles shall not transfer their constituents to food in quantities exceeding the specific migration limits set out in Annex I. These specific migration limits shall be expressed in mg of substance per kg of food (mg / kg).

Answer B.



3) Testing of food packaging is carried out in accordance with ISO 2206 standard.

- A. Standard test conditions: 23 ° C, 50% RH
- B. Standard test conditions: 15 ° C, 50% RH
- C. Standard test conditions: 23 ° C, 70% RH

Answer A.

4) Specific migration limits for certain substances are defined as undetectable at a detection limit of:

- A. 10 µg (10-3 g), substances / kg of food (or food simulant).
- B. 200 g of substance / kg of food (or food simulant).
- C. 1 g of substance / kg of food (or food simulant).

Answer A.

5) The migration of components or combinations of food contact materials into packaged food depends on material properties regarding material safety and stability. The migration of compounds is a two-way process, ie, the compounds or components of these food contact materials can migrate from the material into the food, and equally composed of foods can migrate into the packaging material.

A. The best method is to determine the migration of compounds when the composition of the material is known.

B. The best method is to determine the migration of compounds of plastics that migrate to the electron microscope.

C. The best method is to determine the migration of compounds by using food simulants.

Answer C.

6) The Water Vapor Transmission Rate (WVTR) and the Gas Transmission Rate (GTR) of a film:

- A. It is inversely proportional to thickness (decreases with increasing thickness).



B. It is proportional to thickness (increases with thickness increase)

C. It does not depend on the thickness of the material.

Answer A.

7) Burst Resistance: The test measures the ability of a sample of paper, cardboard, foil, film, laminated plastic to resist pneumatic or hydraulic shock.

A. All films, sheets, laminates and heavy and light papers are tested on a machine using compressed air.

B. For pneumatic films, films, laminates and papers, the pneumatic test is used. Heavy paper and cardboard are tested hydraulically (kgf / cm² or lbs / sq. Inch).

C. All films, sheets, laminates and heavy and light papers are tested on a machine using hydraulic pressure.

Answer B.

Assignment

1. Present briefly the main requirements of the laws and rules for food contact materials and nominate their test methods.

