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PackAlliance:
European alliance for innovation training
& collaboration towards future packaging

Linking Academy to Industry.

Program: Nowe materiały I biomateriały

Temat: Materiały do produkcji opakowań żywności – wymogi prawne, właściwości oraz ich wpływ na materiały

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Analiza opakowania pod kątem jego bezpieczeństwa powinna uwzględniać:

- Cechy opakowania
- Interakcja z zapakowanym produktem
- Oznakowanie, ostrzeżenia i instrukcje
- Kategorie użytkowników

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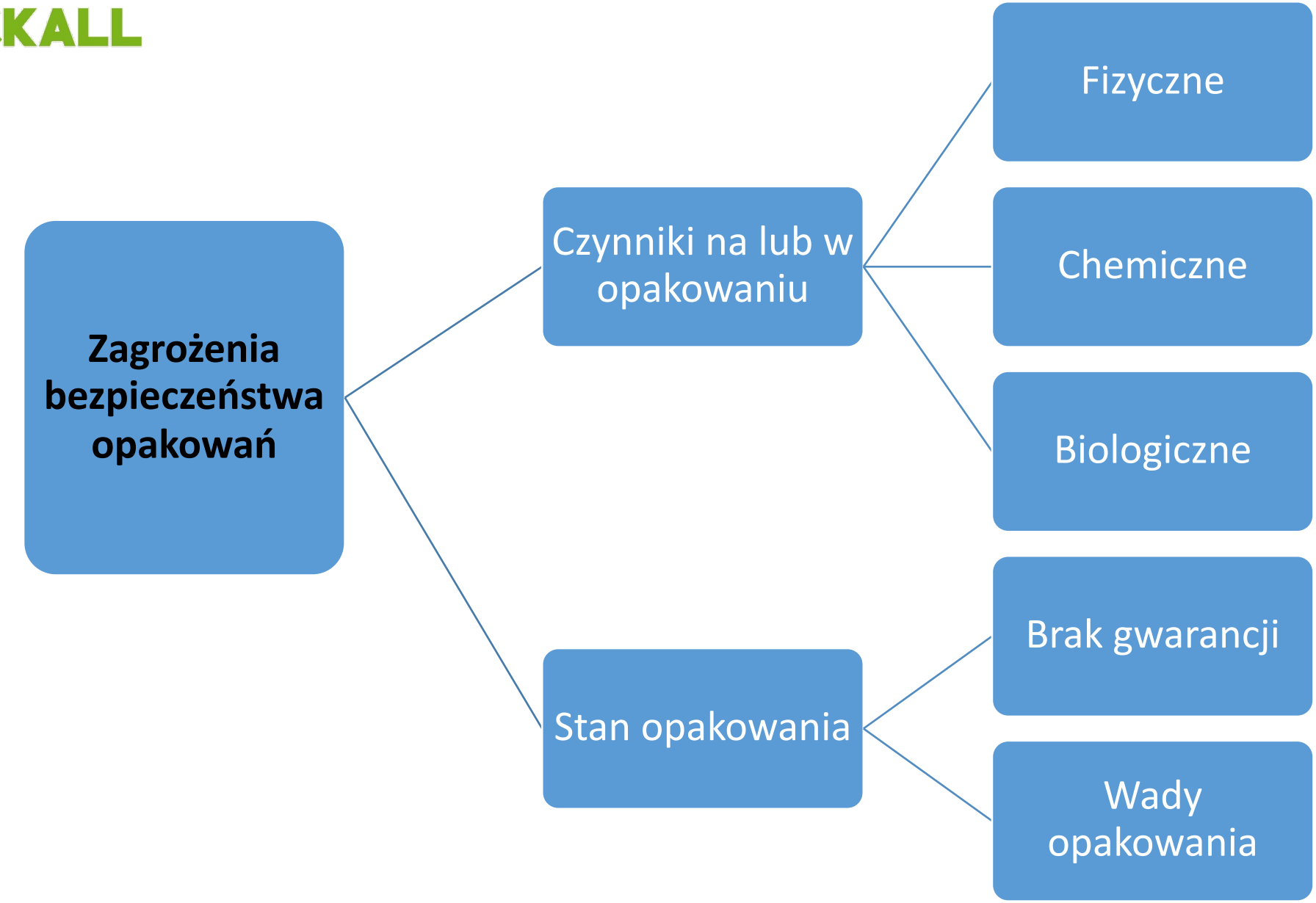

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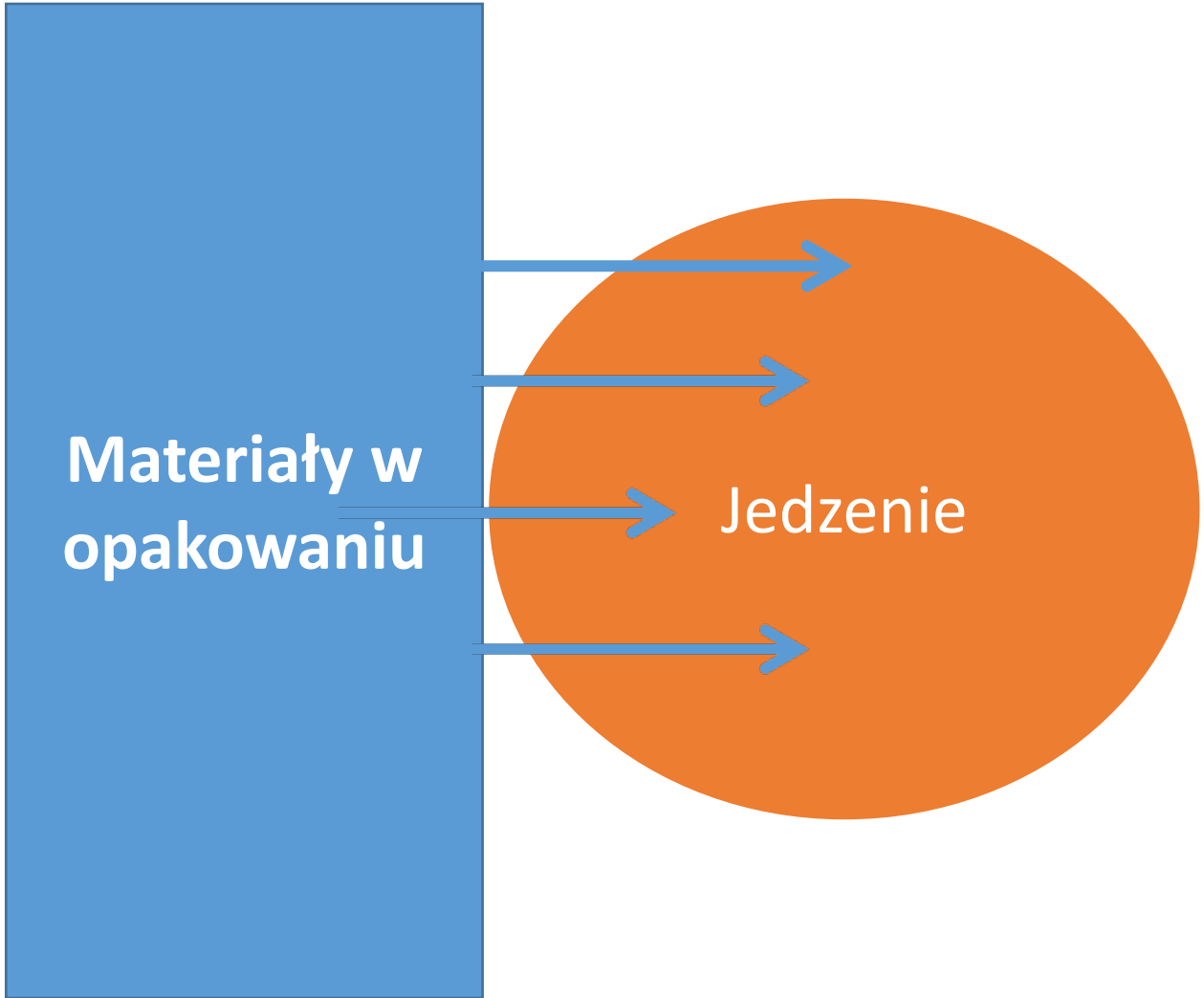
Migracja



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Całkowity limit migracji

Materiały i wyroby z tworzyw sztucznych nie mogą przenosić swoich składników na płyny modelowe imitujące żywność w ilościach przekraczających 10 miligramów uwolnionych składników na dm^2 powierzchni kontaktu z żywnością (mg/dm^2) lub 60 miligramów uwolnionych składników na kg płynu modelowego.

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Imitacje żywności

Imitacje żywności	Abbreviation
Etanol 10 % (v/v)	Płyn modelowy A
Acetic acid 3 % (w/v)	Płyn modelowy B
Ethanol 20 % (v/v)	Płyn modelowy C
Ethanol 50 % (v/v)	Płyn modelowy D1
Vegetable oil	Płyn modelowy D2
poly(2,6-diphenyl-p-phenylene oxide), particle size 60-80 mesh, pore size 200 nm	Płyn modelowy E

For testing migration from materials and articles not yet in contact with food the food simulants that corresponds to a certain food category shall be chosen according Table from Commission Regulation 10/2011.

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Contact time

Contact time in worst foreseeable use	Test time
t ≤ 5 min	5 min
5 min < t ≤ 0,5 hour	0,5 hour
0,5 hours < t ≤ 1 hour	1 hour
1 hour < t ≤ 2 hours	2 hours
2 hours < t ≤ 6 hours	6 hours
6 hours < t ≤ 24 hours	24 hours
1 day < t ≤ 3 days	3 days
3 days < t ≤ 30 days	10 days
Above 30 days	See specific conditions

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Contact temperature

Conditions of contact in worst foreseeable use	Test conditions
Contact temperature	**Test temperature**
T ≤ 5 °C	5 °C
5 °C < T ≤ 20 °C	20 °C
20 °C < T ≤ 40 °C	40 °C
40 °C < T ≤ 70 °C	70 °C
70 °C < T ≤ 100 °C	100 °C or reflux temperature
100 °C < T ≤ 121 °C	121 °C
121 °C < T ≤ 130 °C	130 °C
130 °C < T ≤ 150 °C	150 °C
150 °C < T < 175 °C	175 °C
T > 175 °C	Adjust the temperature to the real temperature at the interface with the food

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Specific migration limits

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

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Plastic materials and articles shall not release the following substances in quantities exceeding the specific migration limits below:

Barium = 1 mg/kg food or food simulant.

Cobalt = 0,05 mg/kg food or food simulant.

Copper = 5 mg/kg food or food simulant.

Iron = 48 mg/kg food or food simulant.

Lithium = 0,6 mg/kg food or food simulant.

Manganese = 0,6 mg/kg food or food simulant.

Zinc = 25 mg/kg food or food simulant.

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Summary

Packaging that under normal or other reasonably foreseeable conditions of its use, taking into account the time of use of the packaging, and depending on the type of packaging and the type of the packed product, does not pose any risk to the consumer or poses a negligible risk. accept its ordinary use and take into account the high level of requirements for the protection of human health and life.

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