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Bee products. Organoleptic evaluation and processing of bee products

Modul no. 4: Precision Livestock Farming

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Organoleptic evaluation and processing of bee products

- Bee products available on the market must meet specific requirements described in Polish standards. Poland has some of the most stringent certification standards for organic apiaries in Europe.
- The quality of bee products is assessed using organoleptic, physical, chemical, and serological methods.

- Organoleptic evaluation, conducted through the senses, involves checking the color, taste, aroma, and consistency of the product and comparing it with the requirements described for it in the Standards.

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EXAMPLES OF TASKS WITH SOLUTIONS

1. Carry out an organoleptic assessment of honey, wax, pollen pellets and propolis.

Organoleptic evaluation of honey:

Consistency – watch the honey drip from the spoon or look at the honey crystals in the smear on the glass slide.
Color – observations are made in daylight by viewing the sample against the light.
Honey for testing should be clear, without air bubbles.

Smell – you smell honey that is slightly heated and ground on a glass slide.

Taste – honey tasting. After each honey sample, rinse your mouth with water.

The results are compared with the requirements specified in the Polish Standard for honey.

Organoleptic evaluation of wax:

Consistency – the wax sample is pressed with e.g. a pencil and kneaded with the fingers.
Wax is plastic (flexible), when a cavity is formed, the wax can be formed and does not stick.

Color – observations are made in light falling on the wax lump at an angle of 45^{o}, the color is compared in accordance with the Polish Standard for wax.

Smell – 1g of wax melts and smells before solidifying.

The results are compared with the requirements specified in the Polish Standard for wax.

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Organoleptic evaluation of **pollen pellets:**

Shape and color **- pollen sample is observed in good lighting.**

Smell **– assessed immediately after opening the package.**

Taste **– tasting the pollen.**

The results are compared with the requirements specified in the Polish Standard for pollen.

Organoleptic evaluation of **propolis:**

Consistency **– hold the propolis in your fingers and observe whether it can be kneaded after a short time.**

Color **– observations are made in good daylight.**

Smell **– assessed immediately after opening the package.**

The results are compared with the requirements specified in the Polish Standard for propolis.

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EXAMPLES OF TASKS WITH SOLUTIONS

2. Make varietal identification based on the organoleptic assessment of selected honey samples.

HONEY VARIETY	COLOR	TASTE	SMELL

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2. Solution

HONEY VARIETY	COLOR	TASTE	SMELL
BUCKWHEAT HONEY	dark-tea	slightly burning, sweet and spicy at the same time	strong, resinous, buckwheat scent
LINDEN HONEY	dark yellow, amber	sweet, slightly spicy, burning	intense, with the scent of linden flowers
ACACIA HONEY	Light cream	mild, delicate	a noticeable scent reminiscent of black locust flowers
MULTIFLOWER HONEY	cream-straw	sweet, with a hint of bitterness	delicate, floral
HEATHER HONEY	amber-tea	sweet, spicy and slightly herbal	intense heather
RAPESEEHONEY	light yellow, almost white	very sweet, slightly nauseating, slightly bitter	faint, delicate smell of rapeseed

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EXAMPLES OF TASKS WITH SOLUTIONS

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3. Create a wax candle using the rolling and pouring method.

Rolling candles:

The sheet is trimmed accordingly, and the wick is placed along the edge. Then, it is rolled evenly with increasing pressure. The better we press each roll, the sturdier the candle will be.

Pouring candles:

The wax should be melted in a water bath and then poured into the mold. If the mold is made of plastic or metal, it is advisable to clean the inner walls beforehand with a solvent or dishwashing liquid.

It is important to remember to place the wick inside the mold.

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Thank you for your attention!

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