

Laboratory №1

Analysis of the compliance of organoleptic indicators of food raw materials with standard requirements



Laboratory Manual

Organoleptic Evaluation of Milk

(According to GOST 26809-86 and GOST 13264-88)



Objective

This lab aims to assess the **organoleptic quality indicators of milk** — including its appearance, color, smell, and taste — in accordance with GOST standards. Students will learn to apply **sensory analysis techniques** and interpret results based on standard norms.



Standards Referenced

- **GOST 26809-86** – Milk and Dairy Products: Methods of Organoleptic Testing
 - **GOST 13264-88** – Milk: Sampling and Determination of Quality Indicators
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Materials Required

- Transparent glass (at least 200 ml capacity)
- White paper or board (for background contrast)
- Thermometer (0–50 °C range)
- Timer or watch
- Disposable spoon
- Napkins or paper towels
- Lab coat, gloves, and mask

Sample Preparation

Before evaluation:

- Ensure the milk is **at room temperature** (20–25 °C).
- Shake the milk gently to ensure even consistency.
- Pour about **100 ml** of milk into a clean, dry glass.
- Place the glass on a **white surface** under natural or neutral white light.

 *Imagine a clear glass filled with milk on a white table, with daylight coming from a nearby window — this is your ideal setting.*

Step 1: Appearance and Consistency

Observe the milk visually from the side of the glass:

- It should look **uniform and smooth**, with **no lumps, flakes, or sediment**.
- A **fluid, even texture** is expected.

 *GOST Norm:*

Milk must be **homogeneous, fluid, and free of curdling or visible particles**.

Step 2: Color Evaluation

Hold the glass in front of a white background and look at it from eye level:

- A good-quality milk sample appears **white or slightly creamy-yellow**.
- Any **gray, green, or reddish tints** are considered defects.

 *GOST Norm:*

Color should be **white or slightly yellowish**, with no unnatural shades.

 *Picture the contrast between clean white paper and a smooth, off-white milk tone — that's your reference.*

Step 3: Smell (Odor)

Gently bring the glass closer to your nose and take a slow, deep breath:

- You should detect a **fresh, clean, slightly sweet milk scent**.
- If no odor is noticeable, **cover the glass with a napkin for 1–2 minutes**, then try again.

 *GOST Norm:*

Milk must have a **pleasant, characteristic odor**, with **no sour, musty, or foreign smells**.

 *Imagine the comforting smell of fresh milk from a local farm — mild, creamy, clean.*

Step 4: Taste Test

Use a clean spoon to take a small sip:

- Let it linger on your tongue for a moment before swallowing.
- You're looking for a **smooth, slightly sweet, fresh taste**.
- Any **bitterness, acidity, or metallic flavor** indicates spoilage.

 *GOST Norm:*

The taste must be **clean and pleasant, free from bitterness, sourness, saltiness, or foreign flavors**.

 *Visualize the first sip of a cold glass of milk — refreshing, soft, neutral in flavor.*

Reporting Your Findings

For each indicator, write a brief paragraph describing what you observed, smelled, and tasted. Use sensory words like:

- "The milk appeared smooth and uniform..."
- "It had a pleasant, fresh dairy aroma..."
- "The taste was mild, with no signs of sourness or bitterness..."

Conclude with a **summary statement**:

"The milk sample met all organoleptic criteria according to GOST 26809-86. It was fresh, properly colored, and had a pleasant odor and taste. Therefore, it can be considered a high-quality dairy product."

If any flaws were noted:

"The milk sample failed to meet quality standards. It had a slightly sour odor and grayish tint, indicating spoilage."

Lab Tips and Precautions

- Perform the test in a **neutral-scent environment**.
- Avoid perfumes, smoking, or eating spicy food beforehand.
- Always use **clean utensils** and **single-use containers**.
- Milk samples should be **used within 2 hours** after opening.