

EGG TESTER OV-1-60D

**Operating Manual
REST 676131.001 TU**

1. GENERAL INFORMATION

- 1.1. This operating manual contains the general information concerning the structure and operating of the egg tester OV-1-60D, being also the document certifying the incubator's general specifications. This egg tester is a household device purposed for visual testing of incubator eggs' quality used in the Mini-incubator "KVOCHKA"®, as well as for food eggs' quality control
- 1.2. This incubator can be operated in the normal climatic conditions at the environment temperature +10...+35°C.

2. TECHNICAL DATA

Alternating current voltage, V	220
Power system frequency, Hz	50
Consumed power, W	1-2
Dimensions:	
Length, at the most, mm	130
Width, at the most, mm	52
Height, at the most, mm	55
Gross weight, at the most, kg	0.2

3. COMPLETE SET

Egg tester	1 pc
Operating manual	1 pc
Packing box	1 pc

4. SAFETY REQUIREMENTS

- 4.1. Please read this manual thoroughly and follow the operation requirements.
- 4.2. Do not install the egg tester on the surface with horizontal deviation over 10°.
- 4.3. Do not pull the power cord when disconnecting it from the power net.
- 4.4. If stored in the cold place (lower than 0 °C) the egg tester is to be kept at the room temperature during two hours at the least before connecting it to the power net.

5. DEVICE'S STRUCTURE

- 5.1. The egg tester consists of the mount 1, cradle for stacking eggs 2 (see the figure 1). The light-emitting diodes with power of 1-2 W serves as a source of light. The power cord 3 is inserted into the lower part of the mount 1.

6. PREPARATION FOR WORK

- 6.1. Unpack the egg tester.
- 6.2. Install the egg tester on the horizontal hard surface and connect the plug with the 220 V socket.

7. OPERATION

- 7.1. Before testing the eggs at the egg tester, check up visually if the egg-shell is clean and **INTACT**. The egg-shell is to be homogenous, smooth and clean, the eggs must be normally shaped. Do not select for hatching eggs with cracked and thin shell, calcareous excrescences, rough and wrinkle surface, as well as too small and dirty eggs.

- 7.2. **You can check up with your egg tester:**

7.2.1. Eggs before putting them into the incubator. In the eggs selected for hatching the yolk is to be slow-moving, situated in the center of the egg, and the air-chamber is to be situated in the obtuse end.

Do not select for hatching eggs:

- with off-center, movable, wandering or absent air-chamber;
- with two yolks;
- with blood and other inclusions on the yolk surface or inside the white;
- with stains under the shell;
- with the contents spoilt because of mycelial fungus's and decomposers' effect;
- with homogenous rust-coloured contents;
- with the yolk stuck to the shell;
- with strong objectionable odor.

7.2.2. Eggs during the hatching process.

During the hatching process eggs are checked over the egg tester in order to control the egg embryos' development.

Poultry	Periods for testing the eggs after the hatching beginning, days		
	the 1 st	the 2 nd	the 3 rd
Hens:			
Egg species	6.5	10.5	18.0
Meat-egg and meat species	7.0	11.0	18.5
Ducks and turkeys			
Light species and crosses	8.0	13.0	24.0
Heavy species and crosses	8.5	13.5	24.5
Musk-ducks	10.0	17.0	30.0
Geese			
Light species	9.0	14.0	27.5
Heavy species	10.0	15.0	28.5

- **At the first testing (figure 2)** any well-developed embryo is not seen on the egg tester, it is emerged into the yolk, only its shadow can be seen as well as well-developed vessels on the yolk bag (pos.1). With the poor development the embryo is small, well-seen, it is situated close to the shell, the blood vessels net is poorly developed (pos. 2-3). If the embryo is dead the blood vessels are desolate and dark, are usually ring-shaped (pos.4). Unfertilized eggs are seen as a homogeneous light-coloured ground (pos.5).
- **At the second testing (figure 3)** the eggs with well-developed embryos are seen as a light-coloured ground, covered with a blood vessels net from the obtuse end to the point. The embryo has a shadow image and occupies a quarter of the whole egg (pos. 1-2). With the poor development the blood net does not cover all lateral surface and does not reach the egg's point often (pos. 3). In eggs with the embryo dead circulatory system is absent and the embryo look like a dark stain (pos. 4)
- **At the third testing (figure 4)** the well-developed eggs have image of a dark stain, the shadow of the embryo's neck is seen in the obtuse end and its moving can be noticed (pos. 1). With poor development the blood vessels net can be seen in the obtuse end's and in the point's areas (pos. 2-3). In eggs with the embryo dead

the circulatory system is absent and the embryo looks like a dark stain (pos. 4).

7.2.3 Food eggs (figure 5).

When checking food eggs cull:

1. Eggs with one or more immovable stains under the shell with their total size up to 1/8 of the shell surface – **a small stain** (pos. 1).
2. Eggs with stains under the shell with their total size over 1/8 of the shell surface – **a big stain** (pos.2)
3. Eggs with blood inclusions on the yolk surface or inside the white – **a blood stain** (pos. 3)
4. Eggs with the spoilt contents, as the result of mycelial fungus's and decomposers' effect. **Such eggs are opaque.** (pos. 4)
5. Eggs with homogenous **rust-coloured contents** (pos. 5)
6. Eggs with the yolk **stuck to the shell** (pos. 6)
7. Eggs absorbed the mould odor or with mouldy shell, with green yolk or with strong objectionable odor – **green grill, a mouldy egg** (pos. 7)
8. Eggs with **a defective under-shell membrane**, stored more than one day, excluding the day when it had been laid. (pos. 8)
9. Eggs taken out from the incubator being unfertilized – **a mirage egg** (figure 2, pos.5)
10. Eggs with partial mixing of **yolk and white.**

8. STORAGE OF EGG TESTERS

- 8.1. Protect the egg tester from strong chokes and pushes.
- 8.2. Keep the egg tester in the supplied cardboard box in the dry and warm place.
- 8.3. Do not let moisture to get on the egg tester, as it may cause corrosion and thus the device will be disabled.

THE SECOND TESTING



Fig. 3

THE THIRD TESTING



Fig. 4

FOOD EGGS

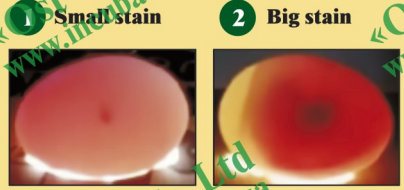


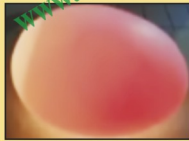
Fig. 5

FOOD EGGS

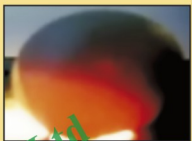
5 Rust-coloured egg



6 Stuck yolk



7 Green grill, mouldy egg



8 Defective under-shell membrane

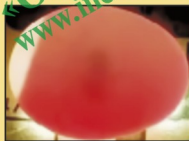
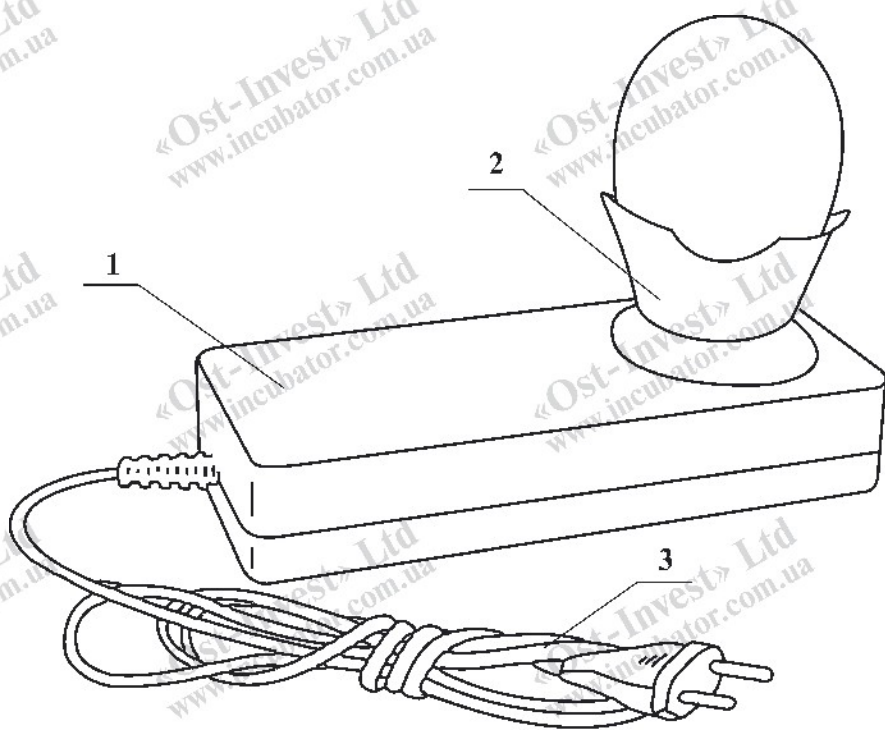


Fig. 5 (continuation)

THE FIRST TESTING



Fig. 2



- 1. Mount
- 2. Cradle for stacking eggs
- 3. Power cord

Fig. 1

9. TROUBLESHOOTING AND FAULT REMOVAL

9.1 If the electric lamp is blown out replace it as follows (figure 1):

- Match the mark A of the mount with the joint line B of the case 2 by turning the mount 5. Remove the mount 5 off from the case 1.
- Replace the blown out electric lamp 3 (a candle-shaped decorative incandescent electric lamp DS 230-60-1 acc. TU U 3.15-00214244-052-95);
- Put the mount 5 on the case 2, with the mark A of the mount matched with the joint line B; fix by turning the case 2 30° regarding the mount 5.

10. ACCEPTANCE CERTIFICATE

- 10.1 The egg tester meets the technical specifications TU U 21356020.001-96 and is certified for operation.

11. MANUFACTURER'S WARRANTY

- 11.1. The manufacturer guarantees that the quality of the egg tester conforms with the technical specifications TU U 21356020.001-96 if the consumer follows the service conditions specified in this manual.

The warranty period is 18 months since the sale date.

The egg tester's service life is 5 years at least since the production date.

The egg tester's owner has right for free repairs during the warranty period subject to this manual presentation.

The warranty repairs will be performed by the manufacturer:

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