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Operating instructions

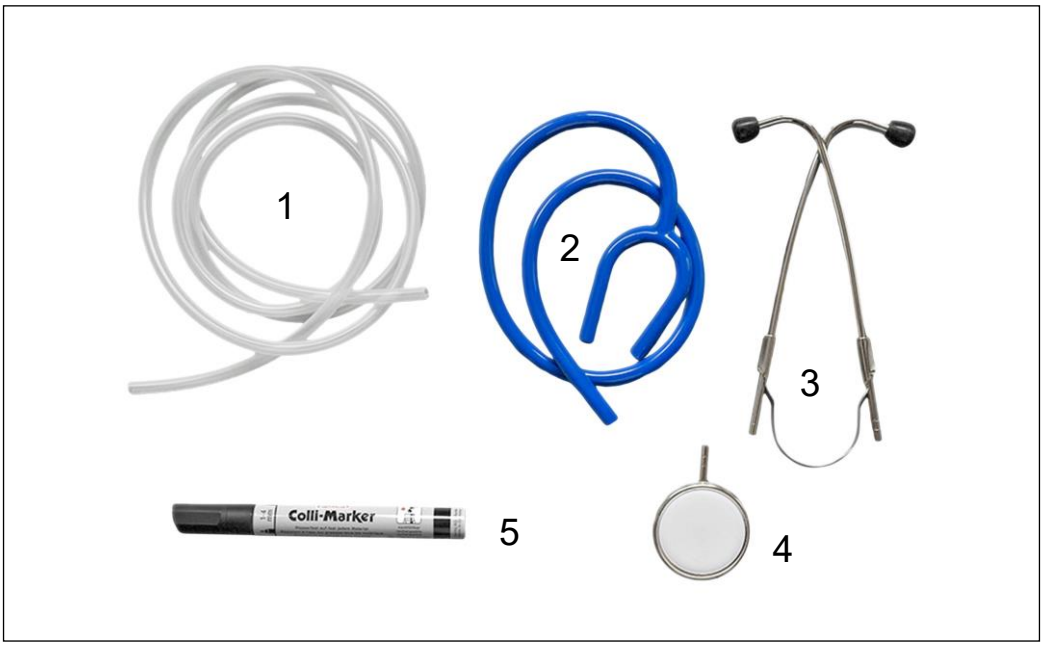

Fig. 1: 64239-00 Device for directional hearing

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1 SAEFTY PRECAUTIONS

Caution!

- Carefully read these operating instructions before operating this instrument. This is necessary to avoid damage to it, as well as for user-safety.
- Do not start up this instrument in case of visible signs of damage to it.
- Only use the instrument for the purpose for which it was designed.

2 PURPOSE AND CHARACTERISTICS

Spatial hearing can be examined using the device consisting of a metal bracket and silicone tube.
The stethoscope can also be used to listen to body sounds such as breathing and heartbeat.

Experiment topics:
Determining the centre of hearing
Listening to breathing and heartbeat

3 FUNCTIONAL AND OPERATING ELEMENTS

1 Tube for directional hearing
2 Tube to the stethoscope
3 Ear hook with olives
4 Membrane (stethoscope head)
5 Marker pen

4 EXPERIMENTS

1. Directional hearing:

In a simple experiment, the direction of an incoming sound can be determined quickly and with astonishing precision during lessons.

This requires the stethoscope, from which the plastic tube with stethoscope head (sound funnel with membrane) is removed.

The two ends of the metal earpiece are now connected to a silicone tube, the centre of which was previously marked with the enclosed text marker. The tube should be at least 1.5 metres long.

The two olives of the metallic earhook are placed in the subject's ears with the tube leading backwards.

Now carefully tap the tube with the highlighter behind the back of the test subject.

2. Listening to the breath sounds

To listen to the breath sounds, you need a stethoscope with a membrane to make the sounds in the lungs audible. The examination head with the membrane of the stethoscope is pressed onto the chest. The rubber tube is designed in such a way that background noise cannot influence the listening sounds. The ear hook with the two ear olives is placed on the front part of the auditory canal so that it is completely closed and only the sounds picked up by the Stethoscope membrane are audible.

How can pupils' breath sounds be listened to?

In the experiments with pupils, the breath sounds are always listened to at the back of the test person. The membrane of the stethoscope is placed at various points on the subject's back. The subject breathes in and out deeply. A clear noise will be audible.

3. Listening to heart sounds

To listen to the heart sounds, place the diaphragm of the stethoscope on the chest slightly to the left of the sternum. The two heart sounds (diastole and systole) can be recognised very well here.

Another way to hear the ‘murmur’ of the blood is to place the membrane of the stethoscope on the carotid artery. It is irrelevant whether the murmur is taken from the right or left carotid artery using the membrane

5 LIST OF EQUIPMENT

- Anestophone
- Membrane with connecting tube
- Silicone tube, 1.5 m
- Marker pin

6 WASTE DISPOSAL

The packaging consists predominately of environmentally compatible materials that can be passed on for disposal by the local recycling service.

Should you no longer require this product, do not dispose of it with the household refuse.

Please return it to the address below for proper waste disposal.

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