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Dear valued customer,

Thank you for choosing one of our products. Our name stands for high-quality, thoroughly tested products for applications in the areas of heat, weight, blood pressure, body temperature, pulse, gentle therapy, massage and air. Please read these instructions for use carefully and keep them for later use, be sure to make them accessible to other users and observe the information they contain.

With kind regards
Your Beurer team

About Your Beurer Blood Sugar Measuring Device

The upper arm blood pressure / blood sugar measuring device is designed for non-invasive measuring and monitoring of arterial blood pressure levels of adults as well as measuring blood sugar. You can use it to measure your blood pressure quickly and easily, determine your blood sugar content, save the measured values and display the history and average of the measured values. You are warned in the event of arrythmia. The measured values are classified according to WHO guidelines and evaluated graphically.
1.1 Delivery scope, replacement parts and accessories

Inspect your set for external damage to the carton packaging and for completeness of the content.

<table>
<thead>
<tr>
<th>Item</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1 inflatable cuff</td>
</tr>
<tr>
<td>B</td>
<td>1 blood pressure/blood sugar measuring device</td>
</tr>
<tr>
<td>C</td>
<td>10 test strips</td>
</tr>
<tr>
<td>D</td>
<td>1 lancing device with AST cap for taking blood samples from alternative sites</td>
</tr>
<tr>
<td>E</td>
<td>10 sterile needle lancets</td>
</tr>
<tr>
<td>F</td>
<td>1 practical carry case</td>
</tr>
<tr>
<td>G</td>
<td>4 alkaline batteries 1.5 V AA (provided in the case)</td>
</tr>
</tbody>
</table>

These instructions for use, additional information material
- If the box has sustained extensive damage or if any contents are missing, please return the system to the retailer.
- The blood pressure/blood sugar measuring device, test strips and control solution (available to purchase separately) are all designed to be used together. Therefore use only the test strips and control solution intended for this measuring device.

**Note**
- Only use the manufacturer's original accessories.

**Purchasing supplies**
Test strips, control solution and lancets are also available for purchase without a prescription.

<table>
<thead>
<tr>
<th>Item</th>
<th>REF</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 test strips</td>
<td>REF 464.00</td>
</tr>
<tr>
<td>MEDIUM control solution</td>
<td>REF 457.02</td>
</tr>
<tr>
<td>100 needle lancets</td>
<td>REF 457.01</td>
</tr>
<tr>
<td>Mains power adapter for the BGL60</td>
<td>REF 071.17</td>
</tr>
<tr>
<td>Large inflatable arm cuff</td>
<td>REF 162.628</td>
</tr>
<tr>
<td>Beurer GL32, GL34, BGL60 PC kit (connection cable, driver and test software)</td>
<td>REF 462.10</td>
</tr>
</tbody>
</table>
1.2 Functions of the unit

This unit combines two functions in one unit. It is designed for measuring blood pressure and pulse on the upper arm of adults as well as for measuring the blood sugar content. It is suitable for self-testing.

Using this measuring device, you can quickly and easily:

- Measure your blood pressure/pulse and blood sugar.
- Display and save your measured values.
- Display your average blood sugar measurements from the last 7, 14, 21, 28, 60 and 90 days.
- Set the time and date.
- Set the blood pressure level unit (mmHg or KPa).

The measuring device also features the following control functions:

- A warning in the event of unsuitable temperatures.
- Battery change reminder when battery power is low.

⚠️ Warning

- This unit is only to be used for regular monitoring and not for the diagnosis of diabetes.
- Discuss your insulin dose with your doctor.
### 1.3 Signs and symbols

The symbols on the packaging and the nameplate of the measuring device and accessories have the following meaning:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVD</td>
<td>In-vitro diagnostics</td>
<td>Type BF applied part</td>
</tr>
<tr>
<td>SN</td>
<td>Serial number</td>
<td>Manufacturer</td>
</tr>
<tr>
<td><img src="image" alt="Temperature Range" /></td>
<td>Temperature range +4°C to +40°C</td>
<td>Refer to instructions for use</td>
</tr>
<tr>
<td><img src="image" alt="Not for Reuse/For Single Use Only" /></td>
<td>Not for reuse/For single use only</td>
<td>PCT: Certification for products exported to the Russian Federation and CIS countries</td>
</tr>
<tr>
<td><img src="image" alt="Expiry Date" /></td>
<td>Expiry date</td>
<td>Grüner Punkt: German recycling system</td>
</tr>
<tr>
<td><img src="image" alt="Maximum Shelf Life After Opening in Months" /></td>
<td>Maximum shelf life after opening in months</td>
<td>Contents sufficient for &lt;n&gt; tests</td>
</tr>
<tr>
<td><img src="image" alt="Lot Number" /></td>
<td>Lot number</td>
<td>Order number</td>
</tr>
<tr>
<td><img src="image" alt="Sterilised by Radiation (lancets)" /></td>
<td>Sterilised by radiation (lancets)</td>
<td>Biohazard, risk of infection</td>
</tr>
<tr>
<td><img src="image" alt="Caution, Refer to Accompanying Documents" /></td>
<td>Caution, refer to accompanying documents</td>
<td></td>
</tr>
</tbody>
</table>
For an upper arm circumference of 24 cm to 35 cm.

| mmol/L | Unit of measure for blood sugar value |

The following symbols in these instructions mean

⚠️ **Warning**  Warning instruction indicating a risk of injury or damage to health.

⚠️ **Important**  Safety note indicating possible damage to the unit/accessories.

⚠️ **Note**  Important information to be noted.
2 Safety information and warnings

Risk of infection

![Warning icon]

All components of the measuring device and accessories may come into contact with human blood, and are therefore a possible source of infection.

⚠️ Warning

- This measuring device must display the blood sugar content in \textit{mmol/L}. The measuring unit \textit{mmol/L} appears next to each blood sugar level reading. Be sure to contact customer service if your measuring device does not display \textit{mmol/L}.
- You risk damaging your health if you perform a blood sugar measurement using an unfamiliar unit of measure, since values may be interpreted incorrectly and cause the wrong corrective measures to be taken.
- This measuring device must only be used by one person. There is a risk of infection if the same unit is used by more than one person.
- The lancing device is suitable for self-testing. Never share the lancing device or needle lancet with other people (risk of infection!).
- Use a new sterile needle lancet for each blood test (for one-time use only).

General notes

⚠️ Warning

- Do not use the unit near strong electromagnetic fields, wireless systems or mobile telephones.
- Use only the inflatable cuff provided or original replacement cuffs. Otherwise the unit may give false measured values.
- When the unit is switched off, do not press the on/off button unless the inflatable cuff is attached.
Measuring blood pressure

⚠️ Warning

- Restricted blood flow in an arm due to chronic or acute vascular diseases (including vasoconstrictions) reduces measurement accuracy.
- Values that you measure yourself are useful for information purposes only – they are not intended to replace consultation with your doctor. Discuss your measured values with your physician, but by no means base any personal medical decisions on them (e.g. medications and their doses).
- Erroneous measurements can arise from diseases of the cardiovascular circulation system, just as from very low blood pressure, blood flow and cardiac arrhythmias as well as from other pre-existing conditions.

Measuring blood sugar

⚠️ Warning

- The measured values you determine are useful for information purposes only – they are not intended to replace consultation with your doctor. Discuss your measured values with your doctor regularly. Do not change any aspects of your treatment unless instructed by your doctor.
- Water deficiency or a large loss of fluid, for example by sweating, can lead to false measurement results.
- A very high or very low haematocrit value (proportion of red blood cells) can lead to incorrect measurements. With a very high haematocrit value (over 60%), the displayed blood sugar value may be too low. If you have a very low haematocrit value (below 20%), the blood sugar value may be too high. If you do not know your haematocrit value, ask your doctor.
- Do not use the test strips to take blood sugar measurements of newborn infants.
- Metabolites such as uric acid, ascorbic acid, acetaminophen (paracetamol), dopa, methyldopa, L-dopa and tolbutamide do not influence the results if they are present within the physiological value range.
• Lipemia effects: Increased blood triglycerides up to 22.6 mmol/L hardly affect the results. Above this level, however, the blood sugar test may be affected.
• Only use fresh capillary whole blood. Do not use serum or plasma.
• Use capillary blood obtained without squeezing the puncture site. Squeezing causes interstitial fluid to dilute the blood and leads to a false measurement result.
• Do not use the test strips at elevations over 3275 m

>Note
• The Beurer BGL60 monitoring system is suitable for measuring capillary whole blood.

 STORAGE AND MAINTENANCE

>Warning
• Store the measuring device and accessories out of the reach of young children. Small parts, such as needle lancets, batteries or test strips, can be life-threatening if swallowed. If parts are swallowed, seek medical advice immediately.
• The test strip container contains a desiccant that may cause skin or eye irritations if inhaled or swallowed. Keep the container out of reach of young children.
The Beurer BGL 60 monitoring system is made from precision and electronic components. The accuracy of the measured values and service life of the unit depend on careful use:

- Protect the unit from shock, moisture, dirt, large temperature fluctuations and direct sunlight.
- Do not let the unit fall.

**Batteries/Saving measured values**

⚠️ **Warning**

- Make sure batteries are not accessible to children. Children can put batteries in their mouth and swallow them. This can cause severe harm to their health. In this case, consult a physician immediately!
- Normal batteries must not be recharged, heated or thrown into an open flame (danger of explosion!).

⚠️ **Important**

- Do not disassemble or short-circuit the batteries.
- Always replace all batteries at the same time and use batteries of the same type. Do not use any rechargeable batteries.
- Leaking batteries may damage the unit. If you do not intend to use the unit for a prolonged period, remove the batteries from the battery compartment.

**Caution!**

- Leaking or damaged batteries can cause burns if they come into contact with your skin. In this case, wear suitable safety gloves.
Note

- The stored measured values are retained when you replace the batteries. The date and time are also retained when you replace the batteries and when the batteries are empty.
- Alkaline batteries should be used wherever possible.

Repairs

Note

- Never open the unit. Opening the unit invalidates the guarantee.
- Do not perform any repairs on the unit yourself, otherwise correct functioning of the unit can no longer be guaranteed.
- If repairs are required, please contact customer service.

Disposal

Warning

- When disposing of the materials of the measuring device, be sure to observe the generally applicable safety precautions for handling blood. Carefully dispose of all blood samples and materials with which you have come into contact, in order to prevent injury and infection of others.
- After use, dispose of the test strips and lancets in a sharp-proof container.
Note

In the interest of protecting the environment, the unit must not be thrown out with the household waste at the end of its service life. Please dispose of the unit in accordance with EU directive 2002/96/EC – WEEE (Waste Electrical and Electronic Equipment). For any queries, please contact the municipal authority responsible for disposal.

Standard and rechargeable batteries should not be disposed of along with household waste. As a consumer, you are legally obliged to return used batteries for proper disposal. You can hand in your used batteries at public collection points in your district or sales outlets where batteries of this type are sold.

The following symbols are found on batteries that contain harmful substances:
Pb = battery contains lead
Cd = battery contains cadmium
Hg = battery contains mercury
3 Description of the unit and accessories

3.1 Blood pressure/blood sugar measuring device

<table>
<thead>
<tr>
<th>Item</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cuff tube</td>
</tr>
<tr>
<td>2</td>
<td>Cuff plug</td>
</tr>
<tr>
<td>3</td>
<td>Upper arm inflatable cuff</td>
</tr>
<tr>
<td>4</td>
<td>Connector for mains power adapter (rear side)</td>
</tr>
<tr>
<td>5</td>
<td>Display</td>
</tr>
<tr>
<td>6</td>
<td>Computer port</td>
</tr>
<tr>
<td>7</td>
<td>M - memory button</td>
</tr>
<tr>
<td>8</td>
<td>ON/OFF button (do not press the button unless the inflatable cuff is attached).</td>
</tr>
<tr>
<td>9</td>
<td>▼ / SET: Set button</td>
</tr>
<tr>
<td>10</td>
<td>▲ : Set button</td>
</tr>
<tr>
<td>11</td>
<td>Port for cuff plug</td>
</tr>
<tr>
<td>12</td>
<td>Test strip slot</td>
</tr>
</tbody>
</table>

3.2 Lancing device and needle lancets

<table>
<thead>
<tr>
<th>Item</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cap</td>
</tr>
<tr>
<td>2</td>
<td>Protective disk for the lancet</td>
</tr>
<tr>
<td>3</td>
<td>Sterile needle lancet</td>
</tr>
<tr>
<td>4</td>
<td>Lancet holder</td>
</tr>
<tr>
<td>5</td>
<td>Release button</td>
</tr>
<tr>
<td>6</td>
<td>Tensioning device</td>
</tr>
</tbody>
</table>
Display symbols for blood pressure/sugar

1. Blood drop symbol
2. Code symbol - not functional
3. SYS value display / blood sugar – not functional
4. Test strip symbol
5. WHO classification display
6. Symbol for heartbeats per min
   - Cardiac arrhythmia symbol
7. Pulse value display,
   - Average blood sugar
8. Confirmation symbol
9. Systolic blood pressure (SYS)
10. Blood sugar unit mg/dL
    - not functional
11. Blood sugar unit mmol/L
12. Blood pressure unit mmHg
13. Blood pressure unit KPa
14. Diastolic blood pressure (DIA)
15. Memory symbol
16. DIA value display
Other display symbols

17 Display of date or time
   Date: Day – month
   Time: Hours – minutes
18 Battery change symbol
19 CTL for control solution measurement
20 DAY AVG for average value

7, 14, 21, 28, 60, 90 days

Note
The measuring device is supplied with the following basic settings:

- Blood pressure level unit: mmHg
- Blood sugar unit: mmol/L
3.3 Test strips

Front view

1 Slit for blood collection
2 Hold here
3 Contacts

Rear view

You will know which side is the rear from the "X" symbol.

Insert the test strip into the unit so that the contacts are visible in the slit. Ensure that the front side of the test strip is facing you.

Note

Read the following information about handling and storing your test strips carefully. The test strips are guaranteed to yield accurate measurement results only if you observe all instructions.

Warning

- Each test strip is to be used only once and only for one patient!
Handling test strips

**Note**

- Before using the first test strip, ensure that the seal on the container is unbroken. If the seal is damaged, do not use the test strips.
- Once you have removed the test strip, tightly close the container again immediately.
- Do not use test strips if the expiry date has passed. The use of expired test strips can lead to inaccurate measurements. The expiry date is located on the container next to the hourglass symbol.
- The test strips can be kept for three months once the container is open.
- Make a note of when this time will run out (date of opening + 3 months) on the label. The shelf life decreases if the expiry date is reached before the end of the 3 months (see the date next to the hourglass symbol).
- Do not use the test strips if either of these dates has expired.
- Any part of the test strip may be handled with dry, clean hands.
- Use the test strips immediately upon removal from the container.
- Do not bend, cut, or otherwise modify the test strip.
- Do not use test strips that have come into contact with liquids for the blood sugar measurement.
Storing test strips

Note

- Store test strips in a cool, dry place between +4°C and +40°C. Protect test strips against direct sunlight or heat. Do not store test strips in the fridge.
- Test strips may be stored at a relative humidity between 10 % and 85 %.
- Store test strips only in the original container – never use another container.
4 Using the unit for the first time and basic settings

4.1 Operating the unit with a mains power adapter

- You can also operate the unit with a mains power adapter. To do so, there must not be any batteries in the battery compartment. The mains power adapter is available at a specialist store or the service address using order number 071.17.
- The unit must be operated only with the mains power adapters specified here. Connect the mains power adapter only to the mains voltage listed on the type plate.

4.2 Inserting and replacing the batteries

**Note**

- Four batteries are included in the delivery scope of your blood pressure/blood sugar measuring device. The batteries are stored inside the carry case.

Remove the cover of the battery compartment on the underside of the unit.

When you perform a battery change, remove all batteries. The unit keeps the date and time while you change the batteries. If the battery change lasts a long time, reset the date and time (see "Basic settings", page 23).
3 Insert four new batteries of type **alkaline AA 1.5 V**. Ensure that the batteries are inserted with the correct polarity. See the diagram inside the battery compartment. Do not use rechargeable batteries.

4 Carefully replace the lid on the battery compartment.

**Note**
- When the battery change symbol 🌍 appears, the batteries are almost empty. Replace all batteries as soon as possible.
- When E-b is displayed, the batteries are so empty that no more measurements are possible.

### 4.3 Basic settings

<table>
<thead>
<tr>
<th>Step</th>
<th>Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The measuring device must be switched off. Press the Set button. The year display flashes.</td>
</tr>
<tr>
<td>2</td>
<td><strong>Setting the date and time.</strong></td>
</tr>
</tbody>
</table>

**Note**
- You must set the date and time. Only if you do that can you save your measured values correctly with the date and time and later retrieve them.
- The time is displayed in 24-hour format.
Set the year (calendar extends to 2088) by pressing the ▲ button. Confirm via the Set button.
The month display flashes.
Repeat the above procedure for the month, day, hours and minutes.

3 **Setting the blood pressure level unit**
Press the ▲ button to alternate between the two units, mmHg and KPa. Confirm via the Set button.
The memory symbol ය flashes and "dEL" is displayed.
To delete all stored measured values, press the ▲ button twice.
Press the ON/OFF button or the Set button to switch off the unit without deleting measured values.
"OFF" is displayed briefly and the measuring device switches off automatically.
5 Measuring your blood pressure

⚠️ Warning

- Do not use the blood pressure measuring device on people under age 16, since false measurement results are possible!

ℹ️ Note

- Always measure your blood pressure at the same time of day to guarantee comparable values. Rest for approx. 10 minutes before each measurement. You should wait 5 minutes between two measurements.
- Avoid coffee, tea, alcohol and cigarettes at least 30 minutes before measuring your blood pressure.
- Following exercise and bathing, wait approx. 30 minutes until measuring.
- By nature, your blood pressure differs slightly between arms. Always measure your blood pressure on the same arm.

5.1 Putting on the inflatable cuff

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Put the inflatable cuff on your bare, left upper arm. The blood flow of the arm must not be restricted by clothing that is too tight or something similar.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Position the cuff on the upper arm so that the lower edge sits 2 – 3 cm above the crook of your arm and over the artery. The blue marking of the cuff and the hose point to the crook of your arm.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Now pull the free end of the cuff around your arm, but not too tightly, and fasten the Velcro. The cuff should be loose enough to allow two fingers to fit under it.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Now insert the cuff tube into the port for the cuff plug.

⚠️ Important

- The unit must be operated only with the original cuff. The cuff is suitable for an arm circumference of 24 to 35 cm.
- With order number 162.628, you can obtain a larger cuff for upper arm circumferences of 33 to 43 cm from a specialist store or the service address.

5.2 Assuming the proper posture

You can perform the measurement sitting or lying down. Make sure to prop up your arm and bend it. Always ensure that the cuff is located at the same height as your heart. Keep your fingers loose; do not make a fist.

To prevent false measurement results, it is important that you remain calm during the measurement and do not speak.
5.3 Measuring your blood sugar

1. Begin the measurement by pressing the ON/OFF button.
2. The cuff inflates automatically. The unit counts upwards and the display always shows the current cuff pressure.
3. Once the cuff has reached a sufficient pressure, the air automatically begins to be released slowly. The unit always shows the current cuff pressure during this process. The heartbeat symbol 🏼 flashes simultaneously. As soon as the heartbeat symbol stops flashing, read your blood pressure measured value and pulse.
   For explanations and corrective actions concerning measured values, see the next Chapter "Evaluating a blood pressure measured value", page 28. If an error message is displayed, read the Chapter "Troubleshooting", page 48.
4. Press the ON/OFF button. If you forget to switch off the unit, it switches off automatically after three minutes.

⚠️ Important

- If the measurement requires a higher air pressure, the unit stops releasing air and starts pumping up again.
- You can interrupt or end the measurement at any time by pressing the ON/OFF button. The unit releases the remaining pressure and switches off.
5.4 Evaluating a blood pressure measured value

Your measuring device can process measured values between 50-270 mmHg (systolic), 20-200 mmHg (diastolic) and 40-199 beats/min.

**Blood pressure, WHO classification:**
The World Health Organization (WHO) and the National High Blood Pressure Education Program Coordinating Committee have developed standard blood pressure values for detecting blood pressure levels with high and low risk. However, these standard values serve only as general guidelines, since the individual blood pressure of different people and different age groups etc. deviates.

It is important that you consult your physician at regular intervals. Your physician will provide you with your individual values for normal blood pressure and the value above which the blood pressure level should be regarded as dangerous.

Classification of blood pressure levels for adults (measuring unit: mmHg)

<table>
<thead>
<tr>
<th>Range of the blood pressure levels</th>
<th>Systolic pressure</th>
<th>Diastolic pressure</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 3: severe hypertension</strong></td>
<td>≥ 180</td>
<td>≥ 110</td>
<td>Visit a physician</td>
</tr>
<tr>
<td><strong>Level 2: moderate hypertension</strong></td>
<td>160-179</td>
<td>100-109</td>
<td>Visit a physician</td>
</tr>
<tr>
<td><strong>Level 1: mild hypertension</strong></td>
<td>140-159</td>
<td>90-99</td>
<td>Regular check-up by your physician</td>
</tr>
<tr>
<td><strong>High normal</strong></td>
<td>130-139</td>
<td>85-89</td>
<td>Regular check-up by your physician</td>
</tr>
<tr>
<td><strong>Normal</strong></td>
<td>120-129</td>
<td>80-84</td>
<td>Self-check</td>
</tr>
<tr>
<td><strong>Optimal</strong></td>
<td>&lt; 120</td>
<td>&lt; 80</td>
<td>Self-check</td>
</tr>
</tbody>
</table>

Source: WHO, 1999

The WHO classification in the display shows the range in which the measured blood pressure belongs. If the systolic and diastolic values are in two different WHO ranges (e.g. systolic pressure in the hypertension range level I and diastolic pressure in the normal range), then the WHO classification on the unit always shows you the higher range, in the example given, "Hypertension level I". 
6 Measuring your blood sugar

⚠️ Warning
If you drop the lancing device with a needle lancet inserted, carefully pick it up and dispose of the lancet.

⚠️ Important

- Use the lancing device only with needle lancets from the manufacturer. Use of other needle lancets can impair the function of the lancing device.
- If the lancing device is manufactured by a third party, consult their instructions for use.

6.1 Acquiring blood samples

Preparing to take the blood sample

1 Choose a site on the body from where you wish to take the blood sample. You can use the lancing device to get blood samples from the fingertip or other parts of the body, such as the palm, forearm, upper arm, thigh or calf. We recommend that you take the blood sample from the fingertip. To make the blood sample as pain-free as possible, do not take the blood directly from the centre of the fingertip, but instead from slightly to the side of the centre.

⚠️ Warning

- If you suspect hypoglycaemia: be sure to draw blood from the fingertip. This is because changes in the blood sugar level can be measured quickly in blood samples from the fingertip.
- Measuring from a fingertip and another part of the body (AST) can lead to significantly different measured values. Always consult your doctor before starting to test at alternative sites.
Have the following components ready: Measuring device, container of test strips, lancing device, and a sterile needle lancet. If obtaining a blood sample from a site other than the fingertip, you will also need the AST cap.

Before taking the sample, wash your hands using soap and warm water. In addition to optimal hygienic conditions, this also ensures good circulation of blood through the fingertips. Dry your hands carefully. Also ensure that your lancing site is hygienically clean if taking a blood sample from an alternative site (AST).

⚠️ Warning

If you wipe the lancing site with alcohol, ensure that the site has dried completely before beginning the measurement.

**Taking the blood sample**

⚠️ Warning

- Change the prick point for each test, e.g. another finger or the other hand. Repeated pricks at the same point can lead to inflammation, numbness or scars.
- Do not use the AST cap to take a blood sample from the finger.
- Never squeeze the finger to obtain a larger droplet of blood. Squeezing causes interstitial fluid to dilute the blood; this can lead to a false measurement result.
- Note that inadequate circulation at the puncture site, for example caused by cold or illness, can lead to inaccurate measurements.

1 Twist to remove the cap from the lancing device.
2 Place a sterile needle lancet in the lancing device and push the lancet firmly into place.

3 Remove the protective disc from the lancet by twisting while holding the shaft of the lancet firmly. Retain the protective disc so that you can safely dispose of the used needle lancet after taking the blood sample.

4 You will need to use a different cap depending on the site from which you want to take the sample:
   **Fingertip:** Cap (grey)
   **Other parts of the body:** AST cap (transparent)
   Place the selected cap on the lancing device and twist it into place.

5 **Setting the puncture depth:**
   Five different puncture depths can be selected on the lancing device:
   - 1 to 2: Delicate or thin skin
   - 3: Normal skin
   - 4 to 5: Thick or rough skin
   Turn the cap in the corresponding direction until the arrow points to the desired puncture depth.

6 Pull back the tensioning device until you hear it click into place. If it does not engage, the lancing device may have unintentionally already been tensioned when inserting the needle lancet and could already be engaged.
The lancing device can now be used to take the blood sample. Ensure that the blood remains in a droplet form and is not smeared.

**Blood sample from the fingertip**
Place the lancing device firmly against the finger, slightly to the side of the centre of the fingertip. Press the release button. Lift the lancing device from the finger. You need a round blood drop of at least 0.5 microlitres to form (corresponds to approx. 1.2 mm, original size: ●).

**Blood sample from an alternative site (AST)**
Choose a site that is soft, not next to a bone, with no visible veins and without excessive body hair. Warm the puncture site to ensure good circulation, for example by lightly massaging the area. Place and hold the lancing device against the puncture site for a few seconds and press the release button. Continue to hold the lancing device against your skin until a round droplet of blood has formed under the cap. Keep applying pressure until the size of the blood drop is at least 0.5 microlitres (corresponds to approx. 1.2 mm, original size: ●). Lift the lancing device carefully away from the skin.

If insufficient blood was collected, increase the puncture depth and repeat steps 5 to 7.
9 Untwist the cap and carefully remove it from the lancing device.

10 Place the protective disk you kept earlier flat on a hard surface. Pierce the protective disk with the tip of the needle so that the needle is covered.

11 Carefully remove the needle lancet from the lancing device and discard the lancet in a suitable sharp-proof container. Carefully dispose of all blood samples and materials with which you have come into contact. This prevents injury and prevents infection spreading to other people.

12 Twist the (grey) cap back in place.
### 6.2 Measuring the blood sugar value

<table>
<thead>
<tr>
<th>Step</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hold the measuring device so that the display is facing you.</td>
</tr>
<tr>
<td>2</td>
<td>Insert a test strip, contacts first, into the unit. Ensure that the front side is facing you. You can handle any part of the test strip with clean, dry hands.</td>
</tr>
<tr>
<td>3</td>
<td>The unit switches on automatically and shows the start display. As soon as the flashing blood droplet symbol 🔄 is displayed, the unit is ready to perform measurements.</td>
</tr>
<tr>
<td>4</td>
<td>Hold the blood collection slit (at the point of the test strip) against the blood droplet. Do not press the puncture site (fingertip or other body part) against the test strip. The blood must not be smeared. The blood is sucked into the slit. <strong>⚠️ Warning:</strong> Hold the blood collection slit of the test strip against the blood droplet until the slit is completely filled and you hear a beep. Withdrawing the test strip from the blood droplet before the beep may lead to incorrect measurements.</td>
</tr>
<tr>
<td>5</td>
<td>Once the slit is filled with blood, the unit performs the blood sugar measurement. The measuring device counts down for approx. six seconds. Then the measurement result is shown in the display. Read the measured value. For explanations and corrective measures concerning measured values, see the next Chapter &quot;Evaluating a blood sugar measured value&quot;, page 35. If an error message is displayed, read the Chapter &quot;Troubleshooting&quot;, page 48.</td>
</tr>
<tr>
<td>6</td>
<td>Remove the test strip from the unit and dispose of it carefully in accordance with the applicable guidelines in order to prevent infection of other people.</td>
</tr>
</tbody>
</table>
Note

- If the unit does not begin the measurement, do not subsequently apply more blood. Instead, remove the test strip and end the test procedure. Start again using a new test strip.
- If the test strip is already in the unit and you do not put any blood on it within three minutes, the unit beeps repeatedly to prompt you to remove the test strip and then switches off. Remove the test strip then and reinsert it into the slot, so that the unit switches on again automatically.
- If you experience difficulties applying blood to the test strip correctly, contact customer service.

6.3 Evaluating a blood sugar measured value

Your blood sugar measuring device can process measured values between 1,1 and 33,3 mmol/L. The warning message "Lo" is displayed for measured values below 1,1 mmol/L. The warning message "Hi" is displayed for a measured value above 33,3 mmol/L.

Note

- If you suspect that the blood sugar values are incorrect, first repeat the test and, if necessary, perform a function test using the control solution. If you consistently have reason to doubt the results, contact your doctor.
Blood sugar

The following table shows a classification of blood sugar values according to the guidelines of the German Diabetes Association (DDG).

<table>
<thead>
<tr>
<th>Time of blood sugar measurement</th>
<th>Normal blood sugar values</th>
<th>Suspicious</th>
<th>Diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>On an empty stomach</td>
<td>&lt;5,6 mmol/L</td>
<td>5,6-6,1 mmol/L</td>
<td>&gt;6,1 mmol/L</td>
</tr>
<tr>
<td>2 hours after eating</td>
<td>&lt;7,8 mmol/L</td>
<td>7,8-11,1 mmol/L</td>
<td>&gt;11,1 mmol/L</td>
</tr>
</tbody>
</table>

Source: Deutsche Diabetes Gesellschaft (DDG) 2008
## Evaluating critical measured values

<table>
<thead>
<tr>
<th>Display</th>
<th>Blood sugar</th>
<th>Remedy</th>
</tr>
</thead>
</table>
| ![Lo mmol/L](image) | Hypoglycaemia  
Below 1,1 mmol/L | Immediate medical attention required. |
| ![3.6 mmol/L](image) | Low blood sugar  
Below 3,9 mmol/L | Eat a suitable snack or small meal.  
Follow your physician's instructions. |
| ![8.3 mmol/L](image) | High blood sugar  
fasting  
Above 5,6 mmol/L  
2 hours after eating  
Above 7,8 mmol/L | If the value remains high 2 hours after your last meal, this may indicate hyperglycaemia (high blood sugar). Discuss with your doctor any possible action to take in this case. |
| ![16.7 mmol/L](image) | High blood sugar, possibly ketones  
Above 13,3 mmol/L | Perform a ketone test. Consult your doctor. |
| ![H1 mmol/L](image) | Very high blood sugar  
Above 33,3 mmol/L | Repeat the measurement with a new test strip. If the display shows the same result again: Seek medical advice immediately. |
6.4 Function check with control solution

The control solution is used for checking the whole blood sugar measuring system. This enables you to determine whether the measuring device and the test strips are functioning correctly together and whether the test is performed correctly. It is very important that you perform these tests using the control solution to ensure accurate measuring results.

⚠️ Important

Never use a control solution from other manufacturers. You can only verify the proper function of your measuring device using the Beurer control solution.

When is it recommended to perform a test using the control solution?

- After opening a new test strip container.
- If you suspect that the measuring device or the test strips could be defective.
- If your blood sugar measurement values do not correspond to the way you are feeling.
- If you have dropped the measuring device or it has been subjected to other mechanical strain.
- Every time you suspect that the blood sugar results may be incorrect.

It is sufficient to perform a single control solution test if the result is within the recommended range.

⚠️ Warning

Do not ingest the control solution. The control solution is only to be used for function tests and is for external use only.
Note

- Store the control solution tightly closed at room temperature below 30°C. Do not refrigerate.
- Store the control solution out of reach of young children.
- Do not store the control solution in the medicine cabinet. It may be mistaken for medicine to be consumed.

Preparations

- Do not use the control solution once the expiry date has passed. Using control solution that is out-of-date may lead to incorrect function test results. The expiry date is located on the bottle next to the hourglass symbol.
- The control solution can be kept for three months once the bottle is open. Make a note of when this time will run out (date of opening + 3 months) on the label. The shelf life decreases if the expiry date is reached before the end of the 3 months (see the date next to the hourglass symbol).
- Do not use the control solution if either of these dates has expired.
- Allow the measuring device, test strips and control solution to reach room temperature (+20°C to +25°C).

Performing a function test with control solution

1. Hold the measuring device so that the display is facing you.
2. Insert a test strip, contacts first, into the slot on the measuring device. Ensure that the front side of the test strip is facing you (see "Test strips" page 19).
3. The unit switches on automatically and briefly shows the start display. As soon as the flashing blood droplet symbol is displayed, the unit is ready to perform measurements.
4. Press the memory button [M] to switch to control mode. In control mode, the measured value is not stored and hence does not distort your measurement statistics.
"CTL" appears in the display.

Shake the control solution well before use. Unscrew the cap and squeeze out a drop of solution. Wipe away the first drop and squeeze out an additional drop.

To prevent the remaining control solution in the bottle from becoming contaminated through the tip of the bottle in contact with the test strip, do not apply the drop directly to the test strip. Apply the drop to a clean substrate. Then put the drop on the slit for receiving blood on the test strip. The solution is sucked into the slit. Wipe the tip of the bottle using a clean, dry paper tissue. Once the slit is filled with solution, the unit begins the measurement. The unit counts down for approx. six seconds. Then the measurement result is shown in the display.

Check whether the result is within the specified results range for the control solution. This results range is printed on the container with the test strips.
Results to be expected

At room temperature, the measurement results for 95% of all control solution tests should lie within the results range printed on the test strip container.

⚠️ Warning

The results range printed on the container with the test strips applies only to the control solution. **This is not a recommended value for your blood sugar content.**

If measurement results are outside the specified range, check the following possible causes:

<table>
<thead>
<tr>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>The first drop of control solution was not disposed of.</td>
<td>Eliminate the cause and repeat the test.</td>
</tr>
<tr>
<td>• The tip of the bottle was not wiped clean.</td>
<td></td>
</tr>
<tr>
<td>• The bottle was not shaken vigorously enough.</td>
<td></td>
</tr>
<tr>
<td>The control solution has expired or is contaminated.</td>
<td>Repeat the test with a new bottle of control solution.</td>
</tr>
<tr>
<td>The control solution, test strip or measuring device is too warm or too cold.</td>
<td>Bring the control solution and measuring device to room temperature (+20°C to +25°C) and repeat the test.</td>
</tr>
<tr>
<td>Test strip is damaged.</td>
<td>Repeat the test with a new test strip.</td>
</tr>
<tr>
<td>Test strip is out of date.</td>
<td>Open a new container of test strips. Repeat the test.</td>
</tr>
<tr>
<td>There is a problem with the measuring device.</td>
<td>Please contact customer service.</td>
</tr>
</tbody>
</table>
⚠ Warning

If you repeatedly obtain measurement results with the control solution that are outside of the specified range, refrain from using the system to determine your blood sugar content. Please contact customer service.

7 The Measured Value Memory

Your blood pressure or blood sugar level is automatically stored with every measurement. **Exception:** During a blood sugar measurement with control solution, "CTL" was activated.

The measured value memory can store up to a maximum of 480 values. Once this number is reached, the measured value always replaces the oldest value in the memory. You can retrieve each individual blood pressure/blood sugar measured value. For the blood sugar levels, you can calculate and display the average value for the last 7, 14, 21, 28, 60 and 90 days.

ℹ Note

- If measured values are already stored in the memory and you then reset the date, the average values are calculated according to the new time period.
- "---" indicates that the measured value memory is empty. "OFF" is then displayed briefly and the measuring device switches off automatically.

7.1 Displaying individual values

The individual values of the last 480 measurements are displayed. The unit displays blood pressure and blood sugar levels in mixed order. The determining factor for the order is always the time of measurement. The most recent value is displayed first, and the oldest value is displayed last. At the same time, the measuring device displays the date and time of the measurement in alternation.
The measuring device must be switched off. Press the memory button \([M]\).

The start display appears briefly.
"01" is briefly displayed (Fig. 1) and then the individual value of the last blood pressure or blood sugar measurement (Fig. 2). The display of date and time alternate automatically (Fig. 3).

Every time you press the \(\uparrow\) button again, the previous measured value appears. Pressing the \(\downarrow\)/SET button displays the newer value. You can display a maximum of 480 previous measured values.

After the last available individual value, the most recent measured value is displayed again.

You can cancel the process at any time. To do so, press the ON/OFF button or wait until the unit switches off automatically after 3 minutes.

### 7.2 Displaying average blood sugar levels

You can display the average blood sugar value from the last 7, 14, 21, 28, 60 and 90 days. The measuring device also displays how often you measured your blood sugar during the period selected.

The measuring device must be switched off. Hold down the memory button \([M]\) until the 7-day average is displayed after a brief appearance of the start display.
2 Press [M] repeatedly to display the average value for 14, 21, 28, 60 and 90 days.

3 If you press [M] again after the 90-day average value has been displayed, the display begins again with the average value display for 7 days.

4 You can cancel the process at any time. To do so, press the ON/OFF button or wait until the unit switches off automatically after 3 minutes.

<table>
<thead>
<tr>
<th>Item</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Average value</td>
</tr>
<tr>
<td>2</td>
<td>Number of blood sugar tests within the time period, e.g. 28 tests</td>
</tr>
<tr>
<td>3</td>
<td>Memory symbol</td>
</tr>
<tr>
<td>4</td>
<td>Number of days, e.g. 7</td>
</tr>
</tbody>
</table>

7.3 Deleting the measured value memory

1 The measuring device must be switched off.

2 Slowly press the SET button seven times.

3 Press the ▲ button. The memory symbol 📊 and "dEL" flash on the display.

4 Press the ▲ button again.

   **Note:** Press the ON/OFF button or the Set button to switch off the unit without deleting measured values.

5 "CLr ALL" is displayed briefly, then "OFF" and the measuring device switches off automatically.
7.4 Transferring measured values to a computer

The BGL60 measuring system has a built-in computer interface which you can use to transfer the measured values stored in your unit to a computer. The connection socket is located under the "PC" cover on the right side of the unit. You can acquire the connection cable as the accessory set ,Beurer GL32, GL34, BGL60 PC-Kit’ in a specialist store (see "Delivery scope, replacement parts and accessories", p. 6). Enclosed with the connection cable is a CD with testing software for evaluating your measurement results, which makes it easier for you and your physician to follow your blood sugar trends.

For more information, please refer to the instructions included with the accessory set. These contain all the information you require for the data transfer.

⚠️ **Important**

Only use the original data connection cable supplied by Beurer for data transfer. Otherwise your measuring device or computer may be damaged.

- An effective evaluation is possible only if you have set the date and time correctly (see p. 23).
- It is not possible to take a measurement during the data transmission.
- The measurement data remain stored on the measuring device after being transferred to the computer.
Preparations

- Set the blood pressure/blood sugar measuring device near your computer.
- Install the evaluation software on your computer as outlined in the instructions for the Beurer PC kit.

Transferring your measurement data

1. Remove the rubber cover from the computer interface of the blood pressure/blood sugar measuring device.
2. The measuring device must be switched off. Insert the flat USB connector of the connection cable into a USB port on your PC. Insert the round jack plug into the PC interface port on your measuring device.
3. The start display appears briefly. "PCL" appears on the display on the measuring device. The measuring device is now ready for data transfer.
4. Follow the transferring and evaluating information in the software and in the instructions for the Beurer PC kit.

Disconnecting the unit from the computer

1. Unplug the jack plug from the blood pressure/blood sugar measuring device.
2. The measuring device switches off automatically.
8 Storage and maintenance of the unit

Storing your unit
Store the measuring device after each use in the case provided.

⚠️ Note

- Keep these instructions for use.
- If you will not use the unit for a prolonged period, remove the batteries.

Maintenance
The surface of the unit can be cleaned with a damp cloth (moistened with water or a mild cleaning solution). Dry the unit using a lint-free cloth.

⚠️ Note

The measuring device is made from precision components. The accuracy of the measured values and the service life of the unit depend on careful handling:
- Protect the unit against impact and do not drop it.
- Protect the unit against damaging influences such as moisture, dirt, dust, blood, control solution or water, extremes of temperature and direct sunlight.
- Do not store close to strong electromagnetic fields, wireless systems or mobile telephones.
## 9 Troubleshooting

### Messages on the display for batteries and blood sugar measurement

<table>
<thead>
<tr>
<th>No.</th>
<th>Cause</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-b</td>
<td>Flat batteries</td>
<td>Replace all batteries.</td>
</tr>
<tr>
<td>E-t</td>
<td>Temperature of the measurement room, measuring device or test strip has exceeded the allowable limit.</td>
<td>Repeat test with new test strip as soon as the measurement room, measuring device and test strip have reached room temperature (+20°C to +25°C).</td>
</tr>
<tr>
<td>E-U</td>
<td>Used or contaminated test strip was inserted.</td>
<td>• Insert test strip which has not been used or spoiled.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Repeat blood sugar measurement.</td>
</tr>
<tr>
<td>E-F</td>
<td>Test strip was removed from the unit during measurement.</td>
<td>Repeat blood sugar measurement.</td>
</tr>
</tbody>
</table>

### Messages on the display for blood pressure measurement

<table>
<thead>
<tr>
<th>No.</th>
<th>Cause</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Err 01</td>
<td>Cuff is not tight or the pressure build-up is too low.</td>
<td>Put the cuff on correctly (see &quot;Putting on the inflatable cuff&quot;, page 25) and repeat the measurement.</td>
</tr>
<tr>
<td>Err 02</td>
<td>Systolic pressure indeterminable.</td>
<td>Repeat measurement without moving and without speaking.</td>
</tr>
<tr>
<td>Err 03</td>
<td>Cuff pressure is too high (greater than 300 mmHg).</td>
<td>Do not squeeze the cuff.</td>
</tr>
<tr>
<td>Err 04</td>
<td>Diastolic pressure indeterminable.</td>
<td>Repeat measurement without moving and without speaking.</td>
</tr>
<tr>
<td>Err 05</td>
<td>Deflation rate is too high.</td>
<td>Verify that the cuff is correctly connected to the unit and repeat the measurement. Contact our customer service department if the problem persists.</td>
</tr>
<tr>
<td>No.</td>
<td>Cause</td>
<td>Action</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Err 06</td>
<td>Deflation rate is too low.</td>
<td>Repeat the measurement. Contact our customer service department if the problem persists.</td>
</tr>
<tr>
<td>Err 07</td>
<td>Systolic pressure exceeds the measurement range.</td>
<td>Repeat measurement without moving and without speaking.</td>
</tr>
<tr>
<td>Err 08</td>
<td>Cuff pressure exceeds the measurement range.</td>
<td>Repeat measurement without moving and without speaking.</td>
</tr>
<tr>
<td>Err 09</td>
<td>Cuff pressure is insufficient, even with maximum pump pressure.</td>
<td>The blood pressure is higher than the measurement range. Repeat measurement. Consult a physician if the problem persists.</td>
</tr>
<tr>
<td>Err 17</td>
<td>No pulse detected.</td>
<td>Repeat measurement. Consult a physician if the problem persists.</td>
</tr>
<tr>
<td>Err 31</td>
<td>Internal communication error.</td>
<td>Switch off the unit and switch it on again.</td>
</tr>
<tr>
<td>Err 32</td>
<td>Error from moving too much during measurement.</td>
<td>Do not move or speak during the measurement.</td>
</tr>
<tr>
<td>Err 41</td>
<td>Pulse amplitude changes suddenly.</td>
<td>Repeat measurement without moving and without speaking.</td>
</tr>
<tr>
<td>Err 58</td>
<td>Internal communication error.</td>
<td>Switch off the unit and switch it on again.</td>
</tr>
<tr>
<td>Err …</td>
<td>Every error message not noted in this list is an internal communication error.</td>
<td>Take the batteries out of the unit for a few seconds and then put them back.</td>
</tr>
</tbody>
</table>
Problem: Unit does not turn on.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient power supply when using the power adapter.</td>
<td>Check the plug connection; if necessary, try the mains connection at other sockets.</td>
</tr>
<tr>
<td>Flat batteries</td>
<td>Replace the batteries.</td>
</tr>
<tr>
<td>Incorrectly inserted or missing battery.</td>
<td>Verify that the batteries are inserted correctly (see &quot;Inserting and replacing the batteries&quot;, page 22).</td>
</tr>
<tr>
<td>Test strip is inserted with the wrong side or not completely.</td>
<td>Insert the test strip, contacts first, into the slot on the unit. Ensure that the front side of the test strip is facing you (see &quot;Test strips&quot;, page 19).</td>
</tr>
<tr>
<td>Unit is defective</td>
<td>Contact customer service.</td>
</tr>
</tbody>
</table>

Problem: After inserting the test strip into the unit and applying the blood, the test does not start.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient quantity of blood</td>
<td>Repeat the test using a new test strip and larger blood drop.</td>
</tr>
<tr>
<td>Test strip is defective</td>
<td>Repeat the test using a new test strip.</td>
</tr>
<tr>
<td>Blood was applied when the unit was switched off.</td>
<td>Repeat the test and apply the blood when ⬇️ is flashing.</td>
</tr>
<tr>
<td>The unit's basic settings were changed and the change was not completed (see &quot;Basic settings&quot;, page 23).</td>
<td>Press the &quot;SET&quot; button until &quot;OFF&quot; is displayed. Repeat test.</td>
</tr>
<tr>
<td>Unit is defective</td>
<td>Contact customer service.</td>
</tr>
</tbody>
</table>
**Problem: The blood pressure level is extremely high/low.**

<table>
<thead>
<tr>
<th>Cause</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>You moved or spoke during the measurement.</td>
<td>You should wait 5 minutes between two measurements. Repeat the measurement. Do not move or speak while doing so. Be sure to keep the correct posture during the measurement.</td>
</tr>
<tr>
<td>Your body has not yet relaxed.</td>
<td>Rest for approx. 10 minutes. Repeat the measurement.</td>
</tr>
</tbody>
</table>
## 10 Technical specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (WHD)</td>
<td>110 x 70 x 150 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>433 g (including batteries)</td>
</tr>
<tr>
<td>Electrical power</td>
<td>4 x 1.5 V AA alkaline batteries</td>
</tr>
<tr>
<td>Battery life</td>
<td>More than 350 blood pressure measurements</td>
</tr>
<tr>
<td>Measured value memory</td>
<td>480 measured values with date/time</td>
</tr>
<tr>
<td>Average values</td>
<td>Blood sugar: for 7, 14, 21, 28, 60, 90 days</td>
</tr>
<tr>
<td>Automatic switch-off</td>
<td>3 minutes after the last operation</td>
</tr>
<tr>
<td>Storage/transport temperature</td>
<td>Temperature: +4°C – +40°C</td>
</tr>
<tr>
<td></td>
<td>Relative humidity: 10 – 85%</td>
</tr>
<tr>
<td>Operating ranges</td>
<td>Temperature: +10°C – +40°C</td>
</tr>
<tr>
<td></td>
<td>Relative humidity: 10 – 85% non-condensing</td>
</tr>
<tr>
<td>Measuring units adjustable</td>
<td>Blood pressure: mmHg or KPa (1 mmHg corresponds to 0.133 KPa)</td>
</tr>
<tr>
<td>Blood pressure measurement range</td>
<td>Systolic: 50 – 270 mmHg</td>
</tr>
<tr>
<td></td>
<td>Diastolic: 20 – 200 mmHg</td>
</tr>
<tr>
<td></td>
<td>Pulse: 40 – 199 beats/min</td>
</tr>
<tr>
<td>Glucose measurement range</td>
<td>Glucose: 1.1 – 33.3 mmol/L</td>
</tr>
<tr>
<td>Accuracy</td>
<td>Blood pressure measurement: ± 3 mmHg or ± 2 % from the display</td>
</tr>
<tr>
<td></td>
<td>Heart frequency: ± 4 % from the display</td>
</tr>
<tr>
<td>Blood sample</td>
<td>Capillary whole blood</td>
</tr>
<tr>
<td>Blood quantity</td>
<td>0.5 microlitres</td>
</tr>
<tr>
<td>Measuring time for blood sugar</td>
<td>Approx. 6 seconds</td>
</tr>
<tr>
<td>Calibration</td>
<td>Plasma</td>
</tr>
<tr>
<td>Test method</td>
<td>Amperometric biosensor</td>
</tr>
<tr>
<td>Application</td>
<td>Suitable for self testing</td>
</tr>
<tr>
<td>System function test</td>
<td>Each time the unit is switched on</td>
</tr>
</tbody>
</table>
EMC
This unit complies with European standards EN 61326 and EN 60601-1-2 and is subject to special precautions regarding electromagnetic compatibility. Note that portable and mobile RF communication equipment can affect this unit. Further details can be requested by contacting the customer service address provided below.

Note regarding function of test strips
The test strips enable a quantitative measurement of the glucose content of capillary whole blood. When the slit for collecting blood comes into contact with a drop of blood, it fills automatically through simple capillary action. The blood is sucked into the absorbing slit of the test strip and the measuring device measures the sugar level of the blood.
The test is based on the measurement of an electric current caused by a chemical reaction between the glucose and the test strip reagent. The measuring device analyses this current. The flow of current depends on the glucose content of the blood sample. The results are shown in the display of the measuring device. Only a small quantity of blood is required (0.5 microlitres) and the measurement takes approx. six seconds. The strips can detect blood sugar levels in the range 1.1 to 33.3 mmol/L.

Chemical components of the test strip sensor
- Glucose oxidase 10%
- Electron shuttle 50%
- Enzyme protection 8%
- Non-reactive components 32%

Note regarding function of the control solution
The control solution contains a fixed concentration of glucose that reacts with the test strip. A test with the control solution is performed in the same way as a blood test, but the control solution is used instead of blood. The measurement result from the control solution must lie within the results range. This results range is printed on every test strip container.
Chemical composition of the control solution
The control solution is a red-coloured solution with a D-glucose content of less than 0.2%.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Percentage concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-glucose</td>
<td>0.05 – 0.19%</td>
</tr>
<tr>
<td>Salts</td>
<td>1.4%</td>
</tr>
<tr>
<td>Active ingredient for viscosity regulation</td>
<td>15.0%</td>
</tr>
</tbody>
</table>

Standards
The unit is for self-testing and conforms to the requirements of the European Directive for Medical Devices, the MPG (German Medical Devices Act) and the European standard EN 1060-1 (Non-invasive sphygmomanometers, Part 1: General requirements), EN 1060-3 (Non-invasive sphygmomanometers, Part 3: Supplementary requirements for electro-mechanical blood pressure measuring systems), EN 60601-1, IVD (98/79/EC), EN 61010-1, EN 61010-2-101, EN 13640, EN ISO 15197, MDD (93/42/EC).
In accordance with the MPBetreibV (German Medical Device Operator Ordinance), regular metrology checks must be performed if the unit is to be used for commercial or business purposes. For private use, we also recommend having the manufacturer perform a metrology check every 2 years.

Comparison between measured values and laboratory values
Performance characteristics: Accuracy and precision
Blood sugar test results were compared with the YSI 2300 laboratory instrument. For a concentration < 4.2 mmol/L, ≥ 95% lay within +/- 0.8 mmol/L, while for a sugar concentration ≥ 4.2 mmol/L, ≥ 98% lay within 20% of the reference values. The CV (variation coefficient) is < 5 %. The blood sugar measuring device is therefore comparable with a laboratory system.
11 Guarantee and Customer Service

Guarantee
This product comes with a 3-year guarantee for material and manufacturing faults. The guarantee does not apply:

- in the case of damage caused by improper use
- to wearing parts
- to deficiencies of which the customer was aware at the time of purchase
- to personal negligence on the part of the customer
- in the case of third-party intervention

This guarantee does not affect your statutory rights. In order to make a claim within the warranty period, the customer is required to provide proof of purchase. Claims must be made within a period of 3 years from the date of purchase to BEURER GmbH, Söflinger Str. 218, 89077 Ulm, Germany. In the case of claims against the guarantee, the customer has the right to have the product repaired by us or in a workshop authorised by us. Further rights (of the guarantee) remain unaffected.

Customer service address
If you have any questions, please contact customer service:

GB  Lifestyle MI Ltd.
    P.O. Box 584
    WN1 9EX WIGAN
    Phone: +44 870879 08 12
    E-Mail: customerservice@lifestylemi.com

IRL  Brandlinx Direct Limited
    Hainault House
    Baldonnell Business Park
    Dublin 22
    Phone: +351 1 412 3606
    E-Mail: sales@brandlinx.ie

OUR COMMITMENT TO YOU: We aim to satisfy our customers by providing high-quality healthcare products and the best customer service. If you are not completely satisfied with this product, please contact customer service.