

enUS

Instructions for use

 3

es

Instrucciones de uso

 19

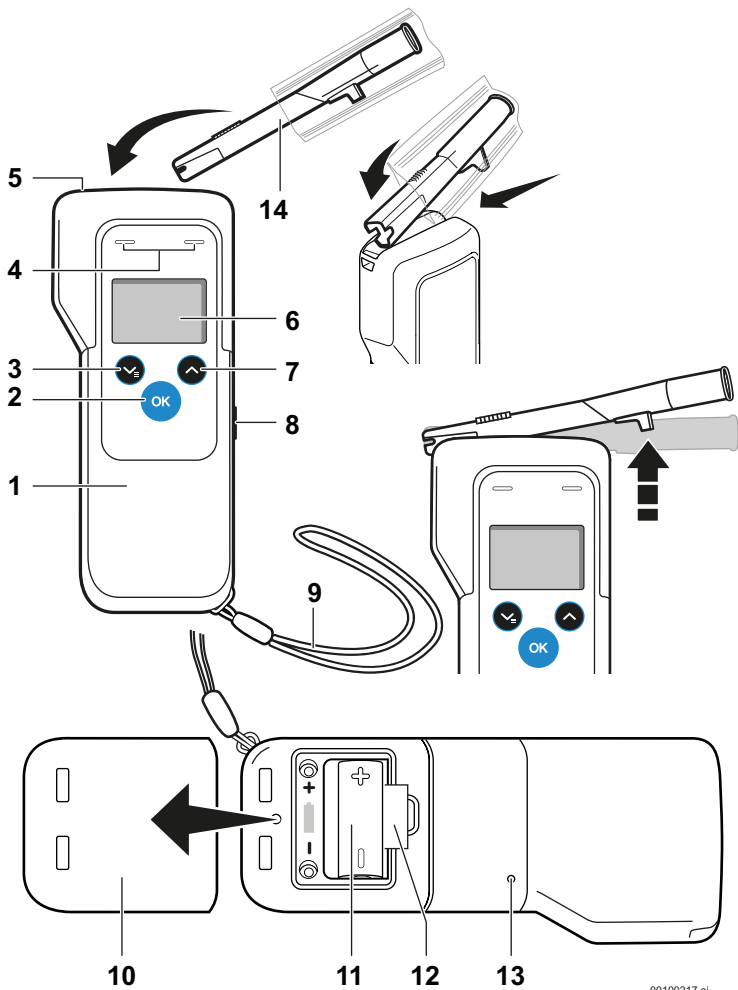
# Dräger Alcotest<sup>®</sup> 6000



## WARNING

Strictly follow the Instructions for Use.  
The user must fully understand and strictly observe the instructions.  
Use the product only for the purposes specified in the Intended use section of this document.





00100217.ai

## 1 Safety-related information

- Before using this product, carefully read these instructions for use and those of the associated products.
- Strictly follow the instructions for use. The user must fully understand and strictly observe the instructions. Use the product only for the purposes specified in the intended use section of this document.
- Do not dispose of the instructions for use. Ensure that they are retained and appropriately used by the product user.
- Only trained and competent users are permitted to use this product.
- Comply with all local and national rules and regulations associated with this product.
- Only trained and competent personnel are permitted to inspect, repair and service the product. Dräger recommend a Dräger service contract for all maintenance activities and that all repairs are carried out by Dräger.
- Do not use a faulty or incomplete product. Do not modify the product.
- Notify Dräger in the event of any component fault or failure.
- Use only genuine Dräger spare parts and accessories. Otherwise, the proper functioning of the product may be impaired.



These instructions for use can be downloaded in other languages in electronic form on the relevant product page ([www.draeger.com/ifu](http://www.draeger.com/ifu)), or a free printed copy can be obtained from Dräger or the distributor.

---

Only use battery chargers, power packs, batteries, or rechargeable batteries that Dräger has approved for this product.

## 2 Conventions used in this document

### 2.1 Meaning of the alert icons

The following alert icons are used in this document to notify the user of possible dangers. The meanings of the alert icons are defined as follows:



#### **WARNING**

Indicates a potentially hazardous situation. If not avoided, it could result in death or serious injury.

---

**CAUTION**

Indicates a potentially hazardous situation. If not avoided, it could result in physical injury. It may also be used to alert against unsafe practices.

---

**NOTICE**

Indicates a potentially hazardous situation. If not avoided, it could result in damage to the product or environment.

---

## 2.2 Typographical conventions

**Text**

Text in bold refers to labeling on the device and screen text.



This triangle indicates options for avoiding the hazard in warnings.

---






This symbol indicates information that may make the use of this product easier.

---

## 3 Description

### 3.1 Product overview (see Page 2)

- 1 Breath-alcohol analyzer
- 2  button (switch instrument on/off, confirm entry)
- 3  button (access menu, set value)
- 4 LEDs
- 5 Mouthpiece receptacle (configurable: right or left)
- 6 Display
- 7  button (set value)
- 8 USB connection (Important: Not for charging the device, for service only)
- 9 Wrist strap
- 10 Battery compartment cover
- 11 Battery
- 12 Pull strap for battery replacement
- 13 Loudspeaker (Important: No reset button)
- 14 Mouthpiece

### 3.2 Intended use

The Dräger Alcotest<sup>®</sup> 6000<sup>1)</sup> breath-alcohol analyzer is used to measure the alcohol concentration in human breath. The measurement should not be used as grounds for medical or therapeutic treatments.

## 4 Use



### WARNING

Small parts of the device may become detached and be swallowed.

- ▶ The device is not intended for children under 3 years.
- 

### 4.1 Prerequisites for use

The device is factory-calibrated when delivered. If the calibration date is longer ago than 12 months, the instrument should be calibrated, e.g., by DrägerService.

- Observe a wait time of approx. 15 minutes after the last consumption of alcohol.
- The wait time cannot be reduced by rinsing the mouth with water or with non-alcoholic beverages.
- Residual mouth alcohol or aromatic beverages (e.g., fruit juice), mouth sprays containing alcohol, medication and drops, as well as belching and vomiting may cause incorrect measuring values.

#### 4.1.1 Before sampling

- The subject must breathe regularly and calmly before sampling.
- The subject must be able to provide the required minimum breath volume for the sampling.

#### 4.1.2 Attaching the wrist strap

The wrist strap should be used to secure the device on the wrist.

1. Guide the fastening lug on the wrist strap through the eye on the device.
2. Pull the top part of the wrist strap through the fastening lug.

#### 4.1.3 Preparation for use

1. Ensure that the batteries are charged and inserted.
2. Ensure that a clean mouthpiece is attached.


---

1) Alcotest<sup>®</sup> is a registered trademark of Dräger.


3. Ensure that the device is held firmly and securely by using the wrist strap as intended.

#### 4.1.4 Switching the instrument on and off

Switching the instrument on:

1. Hold down the  button for about 1 second.
2. Wait until the instrument displays that it is ready to measure.

Switching the device off:

1. Hold down the  button for about 3 seconds. A switch-off count down will be shown as well. If the display is off, stop pressing the button. Otherwise the device will be switched on again.



The instrument will switch off automatically approx. 2 minutes after the last use.

---



Switching off the instrument does not reduce the post-test waiting period before you can perform another test.

---

## 4.2 Initial start-up




A setup wizard is opened when the instrument is switched on for the first time. This step is not required for pre-configured instrument.

The following settings are made using the setup wizard:







- Language
- Date format
- Date
- Time format
- Time
- Measuring unit

All settings can be changed later on via the menu.




### Language

A cursor pre-selects one language in the list. Press the  or the  button to select the needed language. If the cursor selects the right language, press the  button to confirm.







## Date

A cursor pre-selects the day of the date. Press the  or the  button to change the day until the actual day is shown. Press the  button to confirm the day. Continue with the month and the year in the same way: press  or  to change and  to confirm.




## Time format

A cursor pre-selects a time format. Press the  or  button to select the needed time format. If the cursor selects the needed time format press the  button to confirm.

## Time

A cursor pre-selects the hours of the time. Press the  or  button to change the hour until the actual hour is shown. Press the  button to confirm the hour. Continue with the minutes in the same way: press  or  to change and press  to confirm.

## Measurement unit

A cursor pre-selects a measurement unit in the list. Press the  or  button to select the needed measurement unit. If the cursor selects the needed measurement unit, press the  button to confirm.

After the setup wizard is finished, the display shows Welcome and continues with **READY** for tests.

The Alcotest<sup>®</sup> 6000 is now adjusted to the desired settings and is ready for breath tests.

Of course these and further settings can be adjusted in the device menu (see Section 4.8 on Page 10).

---

## NOTICE

Loss of default settings

If the battery replacement process takes longer than 5 minutes, the date and time must be reset. A measurement is only possible with the time set.

---

## 4.3 Carrying out an automatic breath sample



A new mouthpiece must be inserted for each new person who provides a breath test.


---



Do not allow any high alcohol concentrations on the sensor, e.g., by rinsing the mouth with a high proof alcohol shortly before the measurement, as this will shorten the service life of the sensor.

### Procedure

1. Remove the mouthpiece (order no. 68 10 690 "Standard", 68 11 055 "with exhalation non-return valve") from the packaging.  
For hygiene reasons, leave the protective wrapping around the mouth contact area until the mouthpiece is firmly attached to the instrument.
2. Attach the mouthpiece at an angle to the mouthpiece receptacle and press it into the receptacle.  
The fluted markings (press-on surface) on the mouthpiece face upwards while this is done.  
The mouthpiece audibly snaps into place (see Page 2).
3. Remove all packaging.


Keep the  button pressed for approx. 1 second until the startup screen is displayed. An optional self-test is carried out. The following is shown on the display for approx. 4 seconds:

- **READY**
  - The instrument is ready to measure.
4. Blow evenly and without interruptions into the mouthpiece. A progress bar is displayed. An adequate breath flow is signaled by a continuous tone.
  5. Without any further action from the user, the device takes automatically a test sample at the end of the breath of the test subject.
  6. When an adequate breath sample is provided, the continuous tone stops with an audible click. The test subject can stop blowing.

The test result is displayed with the date and time after a few seconds (depending on the device temperature and the measured concentration).

In case of a negative alcohol test, **0.00** will be displayed. In case of a positive alcohol test, the measured alcohol level will be displayed.

Performing another measurement:


- To prepare a new measurement, press the  button.  
After the sensor's recovery time (see "Technical data" on Page 16) **READY** is displayed and the device is ready to use again.



#### 4.4 Carrying out a manual breath sample (optional)

If the test subject cannot provide the required minimum volume, the sampling can be triggered manually.

Carrying out a manual breath sample:



1. Follow steps of the automatic breath sample.
2. If the progress bar is displayed after starting the breath sample, tap the  button at the desired time to analyze the breath sample.

In the results display, **MANUAL** is also displayed.

#### 4.5 Carrying out a passive breath sample (optional)

During passive sampling, the sampling is manually initiated by the instrument user. Possible applications include the testing of ambient air or the breath of persons for the presence of alcohol.

Carrying out passive sampling:

1. Keep the  button pressed for approx. 1 second until the startup screen appears.
2. Hold the instrument, which is ready to measure, into the air to be analyzed **without** a mouthpiece.
3. Tap the  button to initiate the measurement.

In the results display, **PASSIVE** is also displayed. If no alcohol is detected, **No Alcohol** will be displayed and the LED will be green. In case alcohol is detected, **Alcohol** will be displayed and the LED will be red.

#### 4.6 Removing the mouthpiece

1. Push the mouthpiece up and out of the mouthpiece receptacle (see illustration on Page 2).
2. Dispose of the mouthpiece in accordance with local regulations.



Do not reuse a mouthpiece.

#### 4.7 Menu control

Accessing the menu:

- Press the  button.

Navigating in the menu or changing settings:











- Press the  or  button.
- Confirm the selected feature/input with the  button.














Exiting the menu:















- In the sub-menu, select the **Back** menu item.
- In the main menu, select the **Measuring** menu item.

## 4.8 Menu items

The following table provides an overview of the menu options and how to use them:

Menu option	Description	Interaction instruction
Measuring	Option to leave the menu and to go back to the <b>READY</b> screen to perform a test.	<ul style="list-style-type: none"> <li>● Hold the  button for 2 seconds to leave the menu.</li> </ul>
Bluetooth® (optional)	Menu option to switch Bluetooth® on or off.	<ul style="list-style-type: none"> <li>● Select Bluetooth® On or Off with the  or  button.</li> <li>● Confirm with the  button.</li> </ul>
	 The device is set up for connection to an app via Bluetooth®.	
	 An active Bluetooth® connection is displayed by a corresponding symbol in the display.	
	 Bluetooth® must not be selected in aircraft.	
Printer	Menu option to set a default printer and to switch the function on and off.	<ul style="list-style-type: none"> <li>● Select the printer using the  and  buttons.</li> <li>● Confirm with the  button.</li> </ul>

Menu option	Description	Interaction instruction
Results	Overview of the last 10 tests performed on the device (incl. result, date, time, test ID). There is one test displayed per screen.	<ul style="list-style-type: none"> <li>● Navigate through the test result list using the  and  buttons..</li> <li>● Hold the  button for 2 seconds to leave the submenu.</li> </ul>
Infoscreen	Serial no and part no of the device	<ul style="list-style-type: none"> <li>● Hold the  button for 2 seconds to leave the submenu.</li> </ul>
Next service	Overview, in how many days the device... <ul style="list-style-type: none"> <li>● should get serviced,</li> <li>● should be adjusted</li> <li>● and should get an accuracy check.</li> </ul>	<ul style="list-style-type: none"> <li>● Hold the  button for 2 seconds to leave the submenu.</li> </ul>
Date & time	Date, time as well as date format (yyyy/mm/dd, yyyy-mm-dd, mm/dd/yyyy, dd.mm.yyyy) and time format (12h, 24h) can be adjusted. The submenu can be left via the <b>Back</b> option.	<ul style="list-style-type: none"> <li>● Change the digits using the  and  buttons.</li> <li>● Confirm with the  button.</li> <li>● Select the <b>Back</b> option and hold the  button for 2 seconds to leave the submenu.</li> </ul>
Contrast	The display contrast can be adjusted within 5 levels.	<ul style="list-style-type: none"> <li>● Select the contrast setting using the  and  buttons.</li> <li>● Confirm with the  button.</li> <li>● Hold the  button for 2 seconds to confirm the setting and leave the submenu.</li> </ul>

Menu option	Description	Interaction instruction
Speaker	Any acoustical signals of the device can be turned off or to a volume of 50 % or 100 %.	<ul style="list-style-type: none"> <li>● Adjust the volume using the  and  buttons.</li> <li>● Confirm with the  button.</li> <li>● Hold the  button for 2 seconds to confirm the setting and leave the submenu.</li> </ul>
Language	The language of the display can be adjusted.	<ul style="list-style-type: none"> <li>● Select the language using the  and  buttons.</li> <li>● Confirm with the  button.</li> <li>● Hold the  button for 2 seconds to confirm the setting and leave the submenu.</li> </ul>
Measurement unit	The measurement unit for the alcohol test results can be adjusted within the following options: %, ‰, g/L, mg/100 mL, mg%, mg/mL, mg/L, µg/100 mL, µg%, µg/L, g/210 L	<ul style="list-style-type: none"> <li>● Select the measuring unit using the  and  buttons.</li> <li>● Confirm with the  button.</li> <li>● Hold the  button for 2 seconds to confirm the setting and leave the submenu.</li> </ul>
Software version	Software version and part number are displayed.	<ul style="list-style-type: none"> <li>● Hold the  button for 2 seconds to leave the submenu.</li> </ul>
Login	For service technicians only.	<ul style="list-style-type: none"> <li>● Enter the four-digit code to open the service menu.</li> </ul>
Switch off	Menu option to switch the device off.	<ul style="list-style-type: none"> <li>● Tap the  button.</li> <li>● The device switches off.</li> </ul>

## 4.9 Printing measurement results

Every device is equipped with Bluetooth, and can be configured accordingly if necessary. To print the measurement results, the device can be connected to the Dräger Mobile Printer Bluetooth® (see order list, part number: 3700421) via Bluetooth®.




Observe the Dräger Mobile Printer Bluetooth®'s instructions for use.



Bluetooth® must not be selected in aircraft.

## 5 Troubleshooting



A status message is displayed in the event of certain instrument conditions. The number that appears below the message is used for service functions. If the status message remains after switching the instrument on and off several times, contact DrägerService or your dealer.

Fault/message	Cause	Remedy
The instrument cannot be switched on.	Battery drained.	Replace battery.
Volume too low / sample invalid.	Test subject is blowing intermittently or not hard enough.	Blow into the mouthpiece harder and continuously.
Instrument outside temperature range	Instrument is too hot or too cold.	Allow the instrument to cool down or warm up.
↑ ↑ ↑ (over range)	Measuring range exceeded. Alcohol residues that are still in the mouth may cause incorrect measuring values.	A wait time of at least 15 minutes after alcohol was last orally consumed must have elapsed (see Page 7). To repeat, press the  button.
Volume too small	Breath sample volume too small.	Repeat breath sample.
Volume too great	Measuring range exceeded.	Repeat breath sample.

Fault/message	Cause	Remedy
Sample interruption	Irregular exhalation, abrupt end, or inhalation	Repeat breath sample.
Fault number	Instrument fault	Switch the instrument off and on again. If the fault remains, contact DrägerService.

## 6 Maintenance

Dräger recommends that the device be verified for accuracy every 12 months. Calibration and maintenance should only be carried out by authorized persons, e.g., DrägerService.

The last 30 days before next adjustment / service is needed, a day count down will be shown as information in the display after switching on the device. Confirm this information with the  button. After the adjustment / service date has passed, the device counts up how many days it is over requested adjustment / service. This information has to be confirmed by pressing the  button as well.

Have the instrument re-calibrated with an adjustment/service, if an accuracy check does not produce a result per NHTSA's EBT Model Specifications. Adjustment/service should only be carried out by authorized persons, e.g. DrägerService.

### 6.1 Replace battery

1. Switch off the device.
2. Slide the battery cover off.
3. Replace the battery (battery type: 3 V CR123A; order no.: 45 43 808), paying attention to the correct polarity.
4. Fit the battery cover.
5. Check that the time is correctly set.



If the battery replacement process takes longer than 5 minutes, the time must be reset. A measurement is only possible with the time set.

**CAUTION**

Damage to the instrument.

Do not try to charge any kinds of batteries via the USB port. The instrument comes without a recharging function.

Recharge any rechargeable batteries outside the instrument.

---

## 6.2 Cleaning

The instrument should be cleaned with an ethanol-based cleaning agent.

Cleaning the device:

1. Wipe the device down with a disposable cloth with the cleaning agent. Do not apply cleaning agent directly to the device.
- 



Ensure that no liquid enters the gas inlet.

---

2. After cleaning the device, store it unpacked at room temperature (20-25 °C) for at least 24 hours.
3. Afterward, carry out passive sampling to ensure that no ethanol residue remains in the device and the result "No alcohol" is displayed.

Do not immerse in fluids and avoid contact of fluids with the electrical receptacles.

Do not use any cleaning agents containing other alcohols, solvents or substances containing citrus. Wipe down the instrument with a disposable cloth.

---

## 7 Storage

**CAUTION**

Damage to the device

Leaking battery acid can damage the device.

- ▶ Remove the batteries if the device will remain unused for an extended period of time.
-

## 8 Disposal



This product must not be disposed of as household waste. This is indicated by the adjacent symbol. You can return this product to Dräger free of charge for disposal. For more information please contact the national marketing organizations or Dräger.



It is not permitted for batteries to be disposed of as household waste. This is indicated by the adjacent symbol. Collect and dispose of batteries and rechargeable batteries at battery collection centers in accordance with applicable regulations.

## 9 Technical data

### Measuring principle

Electrochemical sensor

### Measuring range

Breath alcohol concentration 0.000 to 0.500 g/210L

Blood alcohol concentration 0.000 to 0.500 % BAC

Small values will be shown as 0.000 0.000 to 0.0063 g/210L

For the above data, a conversion factor of 2100:1 is used to calculate the blood alcohol concentration using the breath alcohol concentration data (factory setting, country-specific conversion factors can be configured).

### Measurement modules

mg/L, µg/100 mL, µg%, µg/L, g/210 L, g/L ‰, %, mg/100 mL, mg%, mg/mL

### Ambient conditions

During operation -5 to +50 °C (23 to +122 °F)  
10 to 100 % r. h. (non-condensing)  
600 to 1300 hPa

During storage -20 to +60 °C (-4 to +140 °F)  
15 to 75 % r. h. (10 to 100 % r. h. <48 h)



**Taking samples**

Respiratory volume	>1.2 L (default)
Breath flow	>10 L/min (default)
Duration of breath	>1.6 s (default)

**Measurement accuracy**

Standard deviation of the repeatability with ethyl alcohol standard

<0.100 % BAC	0.0017 % BAC or
≥0.100 % BAC	1.7 % of the measured value
	Whichever value is higher
<0.50 mg/L	0.008 mg/L
≥0.50 mg/L	1.7 % of the measured value

**Wait time for measurement readiness following a previous measurement with:**

0.25 mg/L	20 s	0.050 %	20 s
0.50 mg/L	40 s	0.100 %	40 s
1.00 mg/L	80 s	0.200 %	80 s
>1.50 mg/L	120 s	>0.300 %	120 s

**Test for accuracy**

Recommendation: every 12 months (local deviations are possible)

**Dimensions**

50/60 mm x 141 mm x 31 mm (W x H x D)

1.92/2.36 in x 5.55 in x 1.22 in (W x H x D)

**Weight**

approx. 5.3 oz (150 g)

**Power supply**

1 x 3 V CR123A

The batteries are designed for up to 1500 measurements (depending on use and the ambient conditions).

## Interface

Micro-USB, 2.0 fullspeed, not for charging the device, for service only

## Protection class

IP 54

## Interface

USB connection for service only

## CE markings

Electromagnetic compatibility

## Configuration possible, see name plate

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.