

USER MANUAL

ALCOHOL-TESTER

PCE-ALC 20

ENGLISH



User manuals in various languages (français, italiano, español, português, niederlands, türk, polski) can be found via our product search on:
www.pce-instruments.com

INTRODUCTION

Thank you for choosing PCE-ALC 20. By reading this manual, you can comprehensively understand the usage methods of PCE-ALC 20, appreciate its complete functions and simple operation. The product features of the alcohol tester are as follows:

- » Adopting a compact gas circuit design, high-precision sampling system, instrument level circuit design, and advanced algorithms to ensure fast, accurate, and stable measurement;
- » After the test results are displayed, there are green, yellow, and red indicator prompts
- » Rechargeable lithium battery.
- » Adopting Type-c charging interface
- » Can view test records

DEVICE DESCRIPTION

- 1 - Set up
- 2 - Speaker
- 3 - Air outlet
- 4 - LCD
- 5 - Air intake
- 6 - Power button
- 7 - Lanyard hole
- 8 - Charging port



SAFETY OPERATION PRECAUTIONS

Please pay attention to the Warning sign and warning words in this manual. „Warning“ means the situation or action that may cause measurement deviation or damage to the instrument or components. Please do not disassemble the instrument or components for maintenance, otherwise it may cause damage to the instrument or other safety accidents. After a malfunction occurs, please refer it to the manufacturer or authorized maintenance department for handling.

OPERATING INSTRUCTIONS

Power on and off

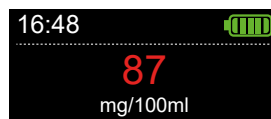
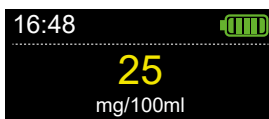
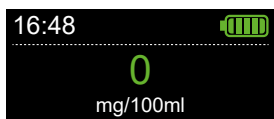
- » Power on: In the shutdown state, long press the „power button“ to turn on the machine.
- » Shutdown: In the power on state, long press the „power button“ and the screen will display „shutdown“ to shut down.

Test operation

- » Press the power button to turn on the machine, and then press the power button again. The machine displays „Please blow air before entering the blowing phase“
- » Blow at the quasi air inlet, please slowly blow at a constant speed for more than 3 seconds during the blowing phase, and the detection will be displayed result later



After testing, if the value is 0, the value display will be green. If it exceeds 20mg/100ml, the value display will be yellow, and if it exceeds 80mg/100ml, the value display will be red.



View Records

- » On the left side of the machine, slide the „Settings key“ up and down to  then press the confirmation button again to enter the view record page. Slide the „Settings key“ on the left side up and down to view the records.

Machine Main Menu

- » On the left side of the machine, slide the „Settings“ button up and down to  and then press it again to enter the main menu settings.

TECHNICAL DATA

Measurement Range	0mg/100ml ... 400mg/100ml (Exhaled alcohol concentration)	
Resolution	0.001 mg/L	
Accuracy	Measurement Range C / (mg/L)	Deviation
	$C < 0.400$	± 0.020 mg/L
	$0.400 \leq C < 1.000$	$\pm 5\%$
	$C \geq 1.000$	$\pm 20\%$
Accuracy Repeatability	Measurement Range C / (mg/L)	Deviation
	$C < 0.400$	0.007 mg/L
	$0.400 \leq C < 1.000$	1.75%
	$C \geq 1.000$	6%
Calibration	Suggest 6 months	
Temperature Range - Operation	$-5^{\circ}\text{C} \dots 40^{\circ}\text{C}$	
Temperature Range - Storage	$-20^{\circ}\text{C} \dots 70^{\circ}\text{C}$	
Ideal Operation Conditions	Temperature: $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Humidity: $< 80\% \text{RH}$ Pressure: 86kpa ... 106 kpa No vapor or electromagnetic interference in the environment to influencing the normal working conditions of the device.	
Blowing Time	2.5 seconds (flow rate: $\geq 20\text{L/min}$)	
Display	0.96 LCD display screen	
Dimension(LXWXT)	Approximately 52mm long $\times$ 64.5mm (width) $\times$ 17mm high	
Battery	150mAh rechargeable lithium battery	

INSTRUCTIONS AND PRECAUTIONS FOR USE

- » It takes time for alcohol to enter the body for digestion and absorption. Please take a test 10 minutes after drinking alcohol. The test results will show dynamic changes with the absorption of alcohol in the body.
- » Please blow slowly for 3 ... 5 seconds at a constant speed, and keep the breath stable and uninterrupted. Test the breath as deep as in the lung which is closest to the alcohol content in the blood.
- » If the test result is greater than 0.1900% BAC, it is suggested to take the next test at an interval of 2 minutes to allow for full recovery of the sensor.
- » Do not blow oral saliva, residue or smoke into the air inlet of the machine, which will damage the machine and interfere with the test results.
- » The change curve of the body's absorption of alcohol is formed with the tests every 10 minutes.
- » Different bodies have different absorption curves.
- » Different individuals are affected by factors such as gender, age and physical status, the content of alcohol dehydrogenase in the human body is different, the absorption capacity of alcohol is different, and the test results are different.
- » The final confirmation of drunk driving is based on the blood alcohol content of the hospital blood test.

(Note: The test results are for reference only, and the final results are subject to the hospital blood test data. The manufacturer and the seller will not bear any legal responsibility for the accidents caused by Driving under the influence or other behaviors of the users of this product. Do not Driving under the influence and high-risk operations!)

KIND REMINDER

- » For the safety of you and others, please do not drive after drinking.
- » Do not place the machine in high temperatures or expose it to sunlight inside the vehicle, as it may cause damage to the sensor
- » The company's products have a one-year warranty, and any quality issues are repaired free of charge within one year, except for human damage.
- » For safety reasons, this product uses a safer protective plate lithium battery, so please charge it promptly when the battery is low and there is an alarm. If the battery is discharged excessively, it will activate the device protection mechanism, causing the device to be unable to charge.
- » Please use this product at least 1 ... 5 times a month, otherwise it may cause damage to the sensor and battery.

PRECAUTIONS FOR USING AN ALCOHOL TESTER

- » Twenty minutes after drinking, the alcohol vapour evaporates from the mouth and the alcohol is absorbed into the digestive tract. Further tests are more accurate. If alcohol is present, a value will be displayed, but if no alcohol is present, the value will be 0. Some foods and medications contain traces of alcohol, which have a short-term effect and do not last long.
- » Test immediately after drinking. If the test value of normal people exceeds 300mg/100ml, there will be signs of Alcohol intoxication.
- » The speed of alcohol absorption varies from person to person, and is influenced by various factors such as gender, genetic genes, height, weight, and physical condition. The number and activity of alcohol degrading enzymes in the human body vary, and the ability to decompose alcohol varies, resulting in different results of post alcohol testing.
- » The detection value after drinking changes in a parabolic curve over time, and after reaching a peak, it gradually decreases over time. Due to the dynamic process of alcohol decomposition in the body, there may be small fluctuations in continuous test results, but the overall trend is decreasing.
- » Human reactions such as blushing, dizziness, and headaches are physiological reactions caused by the decomposition of alcohol into acetaldehyde in the body, and are not directly related to the alcohol content in the body. Because the instrument only reacts with Alcohol flush reaction, the test result may be „0“ even if there are the above symptoms.
- » The test result is extremely high Alcohol by volume. It is recommended to conduct a second test at an interval of more than two minutes to fully zero the chemical reaction in the instrument, so that the test is more accurate.
- » Avoid blocking the airway with saliva, food residue, etc., and avoid damaging the sensor with irritating gases such as smoke.
- » For the safety of your and your family's lives, it is recommended to detect a result of 0mg/100mL and return to normal physical condition before starting work.
- » This device is only used as a reference for pre inspection and personal behavior constraints, and is not used as a monitoring and evidence collection basis for whether motor vehicle drivers have drunk and driven. The test results are for reference only. The detection basis for the traffic police to judge whether the driver drives after drinking shall be subject to the blood test in the hospital. The manufacturer and the seller will not bear any legal responsibility for the accidents caused by Driving under the influence or other behaviors of the users of this product.

DISPOSAL

For the disposal of batteries in the EU, the (EU) 2023/1542 directive of the European Parliament applies. Due to the contained pollutants, batteries must not be disposed of as household waste. They must be given to collection points designed for that purpose. In order to comply with the EU directive 2012/19/EU we take our devices back. We either re-use them or give them to a recycling company which disposes of the devices in line with law. For countries outside the EU, batteries and devices should be disposed of in accordance with your local waste regulations. If you have any questions, please contact PCE Instruments.

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