BACtrack® ONYX



PRODUCT MANUAL

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INTRODUCTION

The BACtrack® Onyx is an alcohol screening device, used for the detection of alcohol in the breath. The BACtrack provides a digital result indicating the approximate BAC (Blood Alcohol Content) of the test subject. The BACtrack is easy to use; simply turn on the unit and begin testing in a matter of seconds.

Before you begin testing, please read this manual in its entirety and familiarize yourself with the BACtrack.

ALCOHOL AND ITS EFFECTS ON THE HUMAN BODY

Alcohol is absorbed from the mouth, throat, stomach, and intestines into the bloodstream.

Alcohol ingested by the human body can be detected in the breath because of its presence in the bloodstream. Alcohol cannot be digested and it cannot be chemically changed in the bloodstream. As the blood flows through the lungs, alcohol in the bloodstream moves across the membranes of the lung's air sacs (alveoli) into the air. The concentration of the alcohol in the alveolar air is directly related to the concentration of the alcohol in the blood. As the alveolar air is exhaled, the alcohol in it can be detected by the breath alcohol testing device.

The alcohol concentration in the breath is related to that in the blood, and because of this, an individual's BAC can be determined by measuring alcohol in the breath. The ratio of breath alcohol to blood alcohol is generally estimated to be 2,100:1. Therefore, 2,100 milliliters (ml) of alveolar air will contain approximately the same amount of alcohol as 1 ml of blood.

ALCOHOL IS A DRUG

Alcohol is the chemical (ethanol or ethyl alcohol) resulting from the fermentation of grapes or grain. Alcohol is absorbed directly into your bloodstream. From your bloodstream, the fluids in your body tissues absorb the alcohol. Your brain is made up of a large concentration of fluids and will absorb a large amount of any alcohol you drink. Your liver eliminates the absorbed alcohol at its own rate of time and nothing you eat or drink can speed up the process. Your liver does this by oxidizing the alcohol (converting it into water and carbon dioxide). Coffee, food or any other "cure" will not sober you up; only time will do that.

HOW DOES ALCOHOL AFFECT MY BODY?

Alcohol is a depressant. It has a relaxing effect on the muscles in your body. The muscles of your eyes relax and lose focus. Your eyesight will become fuzzy and you may experience double vision. Brain activity is slowed. Your judgment, reflexes, and coordination are all negatively affected.

Some vision impairments that occur when you have been drinking include:

- Narrowing of your field of vision
- Reduction in your depth perception
- Decreased ability to see in darkness
- Increased sensitivity to glare and a longer time for your eyes to readjust from the glare

Some mental impairment can occur when you have been drinking, including:

- Reduced awareness of danger
- Becoming overly confident and reckless
- Difficulty in making decisions
- Reduction in balance
- Slowed reflexes
- Impaired judgment

HOW DOES ALCOHOL AFFECT MY DRIVING?

We can't emphasize enough how dangerous it is for you to drink and drive. Your vision and your brain are the most important factors in driving safely. If you jeopardize either by drinking, and then you drive, you are likely to be involved in a serious or fatal collision.

Do not use your BACtrack as a tool to determine whether you should operate a motor vehicle or equipment, or perform any other dangerous act. Do not drink and drive. Always have a designated driver when alcohol is being consumed.

From California Department of Motor Vehicles (https://www.dmv.ca.gov)

EFFECTS OF ALCOHOL*

0.02-0.03% BAC	Slight euphoria. Loss of shyness. Depressant effects are not apparent. Impairment possible in some individuals.
0.04-0.06% BAC	Feeling of well-being, relaxation, lower inhibitions and sensation of warmth. Euphoria. Some minor impairment of reasoning and memory. Lowering of caution. Driving skills may be impaired at this level of intoxication.
0.07-0.09% BAC	Slight impairment of balance, speech, vision, reaction time, and hearing. Euphoria. Judgment and self-control are reduced. Caution, reason and memory are impaired. Driving skills are always impaired at this level of intoxication and higher.
0.10-0.12% BAC	Significant impairment of motor coordination and loss of good judgment. Speech may be slurred. Balance, vision, reaction time and hearing will be impaired. Euphoria.
0.13-0.15% BAC	Gross motor impairment and lack of physical control. Blurred vision and major loss of balance. Euphoria is reduced and dysphoria (anxiety, restlessness) begins to appear.

0.16-0.20% BAC	Dysphoria predominates. Nausea may appear.
0.25% BAC	Need for assistance in walking. Total mental confusion. Dysphoria with nausea and some vomiting.
0.30% BAC	Loss of consciousness. Onset of coma. Possible death due to respiratory arrest**.

* The effects of alcohol intoxication are greatly influenced by individual variations among users. Some users will be intoxicated at a much lower BAC than shown on the previous page.

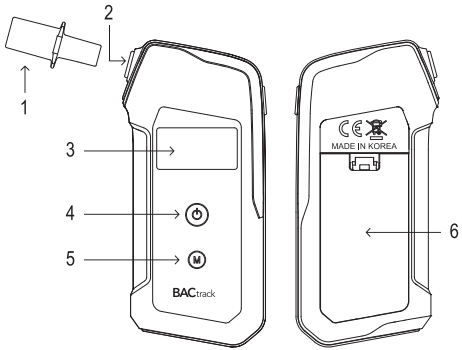
** Death can occur at a lower BAC in some individuals.

The generally accepted legal standard for alcohol intoxication in Canada/the United States is 0.08%. However, your driving skills can be impaired at any level above 0.00% BAC. It is never safe to drink any amount of alcohol and drive.

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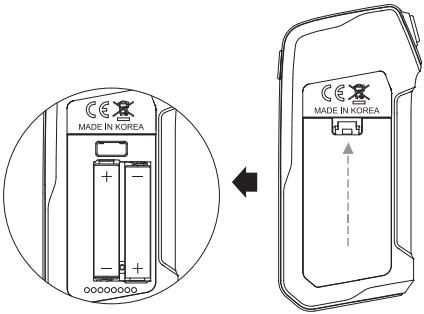
- Digital Breathalyzer
- Two AAA Alkaline Batteries
- Six Mouthpieces
- Carrying Case
- Instruction Manual

PRODUCT DIAGRAM



1. Mouthpiece
2. Mouthpiece Slot
3. High-Quality OLED Display
4. Power Button
5. Menu Button
6. Battery Cover

PREPARATION



Insert two AAA batteries (1.5V Alkaline)

Pull the hook down to open the cover

- Battery Installation: Insert two AAA batteries into battery compartment, ensuring correct polarity.
- Mouthpiece Insertion: Insert a mouthpiece into the slot on the side of the alcohol tester and ensure it fits securely.

OPERATION

STEP 1. POWER ON

Press the Power Button for 2 seconds to turn on the device. The date (mm-dd-yy) and time set in the device will be displayed.



Note: During use, the device will automatically power off after 3 minutes of inactivity.

STEP 2. WARM-UP

The warm-up process will start automatically. When the test is ready, 'START BLOW' will be displayed with a double beep.



STEP 3. MEASUREMENT



Blow through the mouthpiece until the device beeps twice.

Note: Blowing time may vary depending on each test environment and the intensity of blowing.

STEP 4. ANALYZING

When breath is sampled correctly, the analysis process initiates automatically.



STEP 5. TEST RESULT

After a few seconds (depending on the measurement condition), the estimated BAC will be displayed for 4 seconds. During this time, the Power and Menu Buttons will be deactivated.

After displaying the test result for 4 seconds, the display will change to enable the following functions:

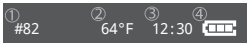


1. Test Number
2. Test Time
3. Previous Result
4. Current Result
5. Display Time

1. RETEST: Press the Power Button briefly to test again.
2. POWER OFF: Press and hold the Power Button for 2 seconds to turn off the device.

Note: The device displays a result of 0.000% BAC even when it detects minimal alcohol levels up to 0.006% BAC. A zero BAC reading should not be considered evidence of complete abstinence from alcohol.

STATUS DISPLAY



1. Total number of tests performed
2. Current temperature
3. Current time
4. Remaining battery power

TROUBLESHOOTING GUIDE

MESSAGE	DESCRIPTION	SOLUTION
BLOW ERROR	**BLOWING TOO SHORT:** Detected breath is insufficient to achieve the accurate result.	**PERFORM A RETEST:** Conduct another test, following all instructions carefully.
LOW BATTERY	**LOW BATTERY:** Battery level is too low for testing.	**REPLACE BATTERIES:** Install new batteries.
SAMPLING ERROR	**SAMPLING SYSTEM ERROR:** Testing cannot be performed due to an issue in the sampling system.	**SERVICE CENTER:** If sampling errors persist, please contact your local seller or customer service center.

MESSAGE	DESCRIPTION	SOLUTION
OUT OF TEMP RANGE	**OPERATING TEMPERATURE ERROR:** Device is outside of its specified temperature range.	**OPERATE WITHIN SPECIFIED TEMPERATURE RANGE:** Use only within the specified operating temperature range.
EXCESS MOISTURE	**BLOW SAMPLE WITH EXCESSIVE SALIVA:** Saliva is detected during the blowing process.	**PERFORM A RETEST:** Conduct another test, following all instructions carefully.

BASIC MENU OPTIONS

ENTERING MENU OPTIONS

During the Warm-up process (Step 2), press and hold the Menu Button for 1 second to enter the menu.

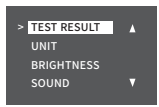
NAVIGATING AND SELECTING MENU OPTIONS

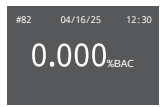
- To move the cursor upwards, briefly press the Power Button.
- To move the cursor downwards, briefly press the Menu Button.
- To select an option, press and hold the Power Button for 1 second.
- To return to the Warm-up process, press and hold the Menu Button for 1 second.

SAVING SELECTED SETTINGS

Press and hold the Power Button for 1 second to save changes directly. In certain menus (TIME: Set Time & Date), you have to press and hold the Menu Button for 1 second to save, and a “Saving Changes” confirmation window will appear. Select “Yes” and then press and hold the Power Button for 1 second to confirm and save. Select “No” and then press and hold the Power Button for 1 second to cancel the change and return to the menu.

Test Result





The screen displays the results from previous tests including test number, test date(mm/dd/yy), test time, measurement result.

- To review previous results, briefly press the Menu Button.
- To view next result, briefly press the Power Button.
- To return to the menu list, press and hold the Menu Button for 1 second.

NOTES

- The most recent test result will appear first.
- The oldest test result will be automatically deleted if the memory is full. Check the number of stored test results regularly and record important information separately.
- Store up to 10,000 test results.

Unit



Set the measurement unit for BAC. Available settings include:

- %BAC, g/210L, mg/100mL, mg/L, µg/L, and ‰
- Default setting is %BAC

- To change the units, briefly press the Power Button or the Menu Button
- To save and return to the menu list, press and hold the Power Button for 1 second.
- To return to the menu list without saving, press and hold the Menu Button for 1 second.

Brightness

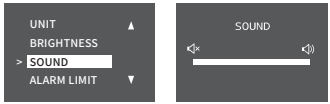


Adjust the display brightness.

- Slide the white bar between the left (dark) and right (bright) positions.
- 5 levels of brightness options available

- To brighten the display, briefly press the Power Button.
- To darken the display, briefly press the Menu Button.
- To save and return to the menu list, press and hold the Power Button for 1 second.
- To return to the menu list without saving, press and hold the Menu Button for 1 second.

Sound



Adjust the sound settings.

- Slide the white bar between the left (low volume) and right (high volume) positions.
- 6 levels of volume options available

- To increase the volume, briefly press the Power Button.
- To decrease the volume, briefly press the Menu Button.
- To save and return to the menu list, press and hold the Power Button for 1 second.
- To return to the menu list without saving, press and hold the Menu Button for 1 second.

Alarm Limit



Set the alarm limit for BAC. Available settings are as follows:

- OFF or 0.020 to 0.100 %BAC in 0.010 %BAC increments (0.20 to 1.00 ‰ in 0.10 ‰ increments)

- To increase the alarm limit, briefly press the Power Button.
- To decrease the alarm limit, briefly press the Menu Button.
- To save and return to the menu list, press and hold the Power Button for 1 second.
- To return to the menu list without saving, press and hold the Menu Button for 1 second.

Information

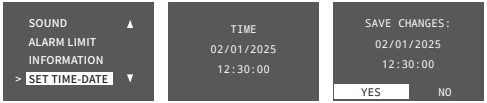


View device information including firmware version, calibration date, and total number of tests performed.

- VER : Current firmware version
- CAL : Latest calibration date (mm/dd/yyyy) and time
- TEST : # Test counts

- To return to the menu list, press and hold the Menu Button for 1 second.

Set Time-Date



Adjust the device time.

- To change digits of time and date, press and hold the Power Button for 1 second.
- To increase the time and date, briefly press the Power Button.
- To decrease the time and date, briefly press the Menu Button.
- Device time is displayed as mm/dd/yyyy, hh:mm:ss.
- To save the mode change, press and hold the Menu Button for 1 second or press the Power Button at the last digit of time (seconds). Select YES by pressing and holding the Power Button for 1 second for confirmation.
- If no changes were made, return to the menu list by pressing and holding the Menu Button for 1 second.

PRECAUTIONS

1. Wait at least 20 minutes after drinking, eating or smoking before testing. Not observing this waiting period can cause inaccurate readings and damage the sensor.
2. Do not blow smoke, food, or liquids into the BACtrack because this will damage the sensor.
3. Do not test in areas with strong winds, smoke, or in an area where a large amount of alcohol is being consumed.
4. Avoid testing in the presence of any substances that contain methyl alcohol, isopropyl alcohol or acetone. These substances may interfere with the results of the test.
5. Replace the two AAA batteries when the battery indicator icon reaches one bar.
6. Send your tester in for periodic calibration service as required. (See Calibration)
7. The BACtrack Onyx is designed to be used in a temperature range of 23 to 122 °F (-5 to 50 °C).
8. You cannot use the results of this product in court.
9. Do not use the BACtrack as a tool to determine whether you should operate a motor vehicle or equipment, or perform any other dangerous act.
10. Do not drink and drive. Always have a designated driver when alcohol is being consumed.

CALIBRATION

All BACtrack products are calibrated during the manufacturing process and should remain accurate for 6 to 12 months depending on the number of tests performed and operating conditions. If the product is used every day, it may need to be recalibrated as frequently as every month.

CALIBRATION INSTRUCTIONS

Visit www.BACtrack.com or call (877) 334-6876 for information on how to get your BACtrack calibrated.

OBTAINING WARRANTY SERVICE

Please be sure to read this instruction manual carefully if you believe your product is not operating properly. If you still feel that your product requires warranty service, please follow these instructions:

Obtain a Return Authorization (RA) number by emailing support@bactrack.com.

When shipping the product back to KHN Solutions Inc., please package the product carefully and ship using a major carrier (UPS, FedEx, USPS, etc). To ensure proper credit for a returned item, be sure to obtain a delivery confirmation on the return shipment. The customer is responsible for all return shipping charges.

Include the following information with your returned product:

- Your Return Authorization number
- Name, address, phone number as stated at the time of order
- A copy of your original sales receipt

SPECIFICATIONS

DETECTION RANGE	0.000 to 0.500 %BAC 0.00 to 5.00 ‰ 0.00 to 2.50 mg/L
ACCURACY	±0.005 %BAC (at 0.100 %BAC and 77 °F) ±0.05 ‰ (at 1.00 ‰ and 77 °F) ±0.025 mg/L (at 0.50 mg/L and 77 °F)
WARM-UP TIME	Within 5 seconds at 0.050 %BAC * Warm-up time may vary depending on the measurement condition.
SENSOR TYPE	Premium fuel cell
POWER SUPPLY	Two AAA size alkaline batteries
MEMORY CAPACITY	10,000 test results with test number, date, and time
MEASUREMENT UNITS	%BAC, g/210L, mg/100mL, mg/L, µg/L, and ‰
BATTERY LIFE	Approximately 1,000 tests
DIMENSION (W x H x D)	54 x 116 x 23 mm
WEIGHT	90g including batteries
CALIBRATION	Every 12 months or after 1,000 tests
OPERATING TEMPERATURE	-5 to 50 °C 23 to 122 °F

BACtrack®

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Questions?

We're here to help.

support@bactrack.com

(877) 334-6876
M-F, 9am-5pm PST

www.BACtrack.com