

# BACtrack® S80



## PRODUCT MANUAL

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This device is intended to measure alcohol in human breath. Measurements obtained by this device are used in the diagnosis of alcohol intoxication.

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## INTRODUCTION

The BACtrack® 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.

## EFFECTS OF ALCOHOL\*

<b>0.02-0.03% BAC</b>	Slight euphoria. Loss of shyness. Depressant effects are not apparent. Impairment possible in some individuals.
<b>0.04-0.06% BAC</b>	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.
<b>0.07-0.09% BAC</b>	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.
<b>0.10-0.12% BAC</b>	Significant impairment of motor coordination and loss of good judgment. Speech may be slurred. Balance, vision, reaction time and hearing will be impaired. Euphoria.
<b>0.13-0.15% BAC</b>	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.

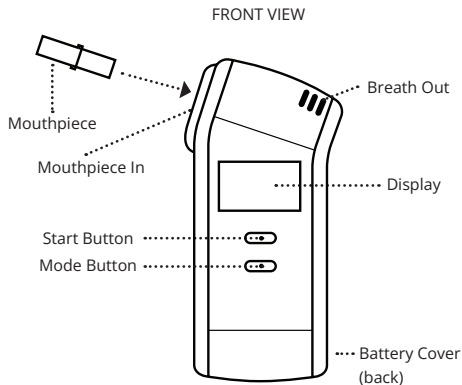
The generally accepted legal standard for alcohol intoxication in Canada/the United States is 0.08%. However, your driving skills can be impaired at any level above 0.00% BAC. It is never safe to drink any amount of alcohol and drive.

## PREPARATION

### INSTALLING THE BATTERY

Install two AAA alkaline batteries in the battery compartment.

### COMPONENTS DIAGRAM



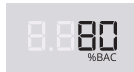
## OPERATION



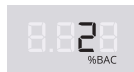
Test subjects should wait 20 minutes after eating, drinking, or smoking before blowing into the BACtrack Breathalyzer. Failure to wait 20 minutes can provide inaccurate test results and damage the sensor.



**STEP 1:** Insert a mouthpiece into the Mouthpiece In slot. Do not force it—mouthpiece will only insert a few millimeters.



**STEP 2:** Press The BACtrack will quickly display the total number of tests performed, and then begin a countdown.



**STEP 3:** When the countdown approaches 2, begin to inhale a deep breath.



**STEP 4:** When the countdown reaches zero, “Blow” will flash and the screen will display three lines. Blow through the mouthpiece for five seconds until there is a double beep sound.

The LCD screen displays the number "0.080" in a large, black, digital font. Below the number, the text "%BAC" is displayed in a smaller font.

**STEP 5:** Once the sensor has analyzed the breath sample, the estimated BAC value will flash for about 10 seconds.

The BACtrack Breathalyzer will turn off automatically in 3 minutes. You can also turn off the breathalyzer during the countdown by pressing and holding down (start button symbol) for 3 seconds.

## ERROR NOTIFICATION

The LCD screen displays the text "FLo" in a large, black, digital font. Below the text, the text "%BAC" is displayed in a smaller font.

If a user does not blow a sufficient breath sample, the LCD will display "FLo". Press start to restart the countdown cycle and retest.

The LCD screen displays the text "Out" in a large, black, digital font. Below the text, the text "%BAC" is displayed in a smaller font.

If there is no breath sample blown within 3 minutes, the LCD will display "Out". Press start to restart the countdown cycle and retest.

The LCD screen displays the text "Out°F" in a large, black, digital font. Below the text, the text "%BAC" is displayed in a smaller font.

If the unit is powered on outside of the acceptable temperature range (0-40 °C or 32-104 °F) the unit will display Out°F and testing cannot be performed.

The LCD screen displays the text "Bat" in a large, black, digital font. Below the text, the text "%BAC" is displayed in a smaller font.

If the battery indicator display is empty, install two new alkaline AAA batteries.

The LCD screen displays the text "Err2" in a large, black, digital font. Below the text, the text "BAC" is displayed in a smaller font.

If the unit displays "Err2" after step 4, it means excessive saliva went into the sensor during the test. Wait 20 minutes, and then try again.

The LCD screen displays the text "Err2" in a large, black, digital font. Below the text, the text "BAC" is displayed in a smaller font.

If the unit displays "Err2" after step 4, it means excessive saliva went into the sensor during the test. Wait 20 minutes, and then try again.

The LCD screen displays the text "Err2" in a large, black, digital font. Below the text, the text "BAC" is displayed in a smaller font.

This error indicates there may be environmental alcohol present which could interfere with the accuracy of the test results. Please make sure there are no other sources of ethanol present (such as lotions or perfumes) and wait at least one hour then try again.

The LCD screen displays the text "Err2" in a large, black, digital font. Below the text, the text "BAC" is displayed in a smaller font.

This error indicates there may be physical sensor damage. Note smoke or saliva can potentially be sources of damage. Please wait 10 minutes then try again. If this error occurs consistently, please contact support@bactrack.com

## ADVANCED MENU OPTION

The BACtrack offers several user-adjustable features through Menu Mode. To enter Menu Mode, turn on the BACtrack and during the countdown hold MODE for 5 seconds. To move between Menu Mode options, press MODE.



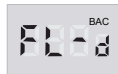
**Units of Measure:** By default, the BACtrack will display test results in %BAC, which is the standard in North America and in many other regions. To change to a different unit of measure, press START. You can select Promille (0/00) or mg/L as alternate units of measure.



**Audible Warnings:** By default, the BACtrack does not sound an audible warning after a specific %BAC result. To set an audible warning after a specific %BAC test result, press START to cycle through %BAC values.



**Blow Time:** The default blow time is 5 seconds. This longer blowing time generally provides a deep lung air sample and a more accurate test result. To adjust the blow time, press START.



**Flow Detection Settings:** Use this option to adjust how hard a user is required to blow. Press Start to change the settings.



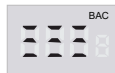
### *Standard level flow*

detection This is the default setting for the unit. This level requires a less forceful breath by the user



### *Medium level flow* detection

Press Start to change to the medium level flow setting.



### *High level flow*

detection Press Start to change to the high level flow setting. This level requires a more forceful breath by the user.



### *User activated test mode*

Press Start again to change to the USER activated test mode. When testing in this mode the operator must press Start during a breath sample to activate the pump and perform a test.

## SPECIFICATIONS

Dimensions	2.3 x 4.8 x 0.8 inches (5.8 x 12.2 x 2.2 cm)
Weight	4.8 oz (136 g) with mouthpiece and batteries
Sensor Technology	Xtend™ fuel cell sensor technology
Detection Range	0.000 – 0.500 %BAC
Test Count	Displays total number of tests performed
Power Supply	Two AA alkaline batteries, included
Battery Life	Approximately 1000 tests
Warm Up Time	10-30 seconds, depending on last use
Response Time	3 seconds
Sensor Accuracy	+/- 0.005 %BAC @ 0.050 %BAC
Operating Temperature	32-104 °F (0-40 °C)

This device has been tested using NHTSA/DOT procedures. In this testing, the accuracy of this device was established at Blood Alcohol Concentrations (BAC) of 0.008 and 0.032, but not at greater concentrations. Additional laboratory testing has been performed at concentrations ranging from 0.00 – 0.40% BAC.

## PRECAUTIONS

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.

Do not blow smoke, food, or liquids into the BACtrack because this will damage the sensor.

Do not test in areas with strong winds, smoke, or in an area where a large amount of alcohol is being consumed.

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.

Replace the two AAA batteries when the battery indicator icon reaches one bar.

Send your tester in for periodic calibration service as required. (See Calibration).

The BACtrack Breathalyzer is designed to be used in a temperature range of 32-104 °F (0-40 °C).

You cannot use the results of this product in court

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.

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**

Please visit [www.bactrack.com/calibration](http://www.bactrack.com/calibration) or call (415) 693-9756 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](mailto: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, and phone number as stated at the time of order

- A copy of your original sales receipt

## **DO NOT DRINK AND DRIVE**

[Mail@obelis.net](mailto:Mail@obelis.net)

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UK Authorised Representative:

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## Questions?

We're here to help.



[support@bactrack.com](mailto:support@bactrack.com)



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



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