iCO™ Smokerlyzer®

User manual

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Intended Use

The iCO Smokerlyzer® is a breath test carbon monoxide monitor intended for single-patient use by people trying to stop smoking or in clinical smoking cessation programmes and research. CO monitors are used as a motivational tool by smoking cessation professionals. Monitoring an individual's breath CO levels indicates their level of nicotine dependency and can also act as a fool-proof marker of recent smoking activity.

Logging the CO levels and showing how smoking cessation can reduce these to normal healthy levels can be used to motivate the individual during their endeavours to quit smoking. Each CO level band can be associated with a particular risk group and health-impairment factor.

Using the power of SmartPhone or Tablet applications, the iCO Smokerlyzer® device will have an intelligent live display, guiding the user through the process of providing a breath sample for measurement. After the breath test, access is given to the results recording and reporting platform that can be accessed by both the individual and the clinician as part of the ongoing smoking cessation process.

Introduction

Carbon monoxide is a toxic, odourless, colourless, tasteless gas. It is formed by incomplete combustion of organic material at high temperatures, with an insufficient oxygen supply.

When inhaled, CO displaces oxygen in the bloodstream to form carboxyhaemoglobin (COHb). This starves the body tissues of the oxygen, vital to repair, regeneration and general living. CO can remain in the bloodstream for up to 24 hours, depending on factors such as physical activity, gender, and inhalation intensity. The half-life is about 5 hours.

Technical Specification

Warranty	6 months
Concentration range	0-100ppm
Detection Principle	Electrochemical sensor
Accuracy	<±15%
Repeatability	<±5%
H_2 Cross Interference	<6%
Operating life	Approx. 200 tests/3 years (Whichever is sooner)
Sensor Sensitivity	1ppm
MOQ	Please contact Bedfont Scientific Limited
Dimensions	Approx. 28mm diameter x 115mm long
Weight	Approx. 35g
Storage Temperature	0 – 50°C
Operating Temperature Range	15 – 35°C
Operating & Storage Humidity	10 – 90% non-condensing
Operating & Storage Pressure	800 – 1200 mbar

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Safety Information and Device Symbols

Type of protection against electric shock	Internal battery powered equipment
Degree of protection against ingress of liquid	IPXO - not protected against water ingress
Degree of safety application in the presence of a flammable anaesthetic mixture with air, oxygen or nitrous oxide	Equipment not suitable for use in the presence of flammable mixtures.
CE Mark	
Serial number	
Keep dry	
Dispose of according to WEEE	
Manufacture by and Date	
Bedfont Logo	

iCO Layout

Mouthpiece

Breath Exhaust outlet

Pin Code

LED Indicator

Audio Lead Connector

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Instructions for Use

Carefully remove the iCO Smokerlyzer device and cable from the packaging and follow the Quick Start Guide instructions.

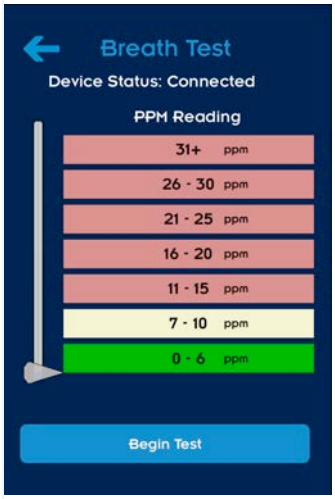
1. Download the Smokerlyzer App onto the SmartPhone or Tablet
2. Connect the provided cable between the iCO and the SmartPhone/Tablet headphone socket
3. Adjust the headphone volume to 100%
4. Start the Smokerlyzer App
5. Type in the Pin Code, clearly shown on the iCO device rear label
6. Enter the Clinician name and Email Address, (Can be your own) or Skip
7. Enter your Name and Email Address

The Smokerlyzer App home screen is now in view and ready to take your first breath test.

Taking a Breath Test

First check that the iCO Smokerlyzer is connected to the Headphone socket of the SmartPhone or Tablet and the volume control is at maximum 100%

From the Smokerlyzer Home Screen select “New Breath Test”.



After a few seconds, on the Breath Test screen the “Begin Test” button will come active. Select “Begin Test” to proceed.

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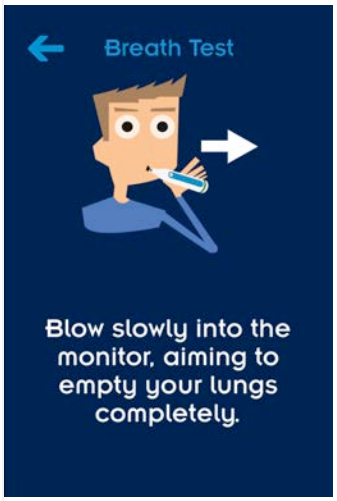
	Follow the on screen instruction to Inhale and hold your breath. (It is important to inhale deeply & fully).
	Now continue to hold your breath for 15 seconds. There is a 15 second countdown clock displayed to assist you.
	At the end of the 15 second breath hold time, slowly blow into the monitor, it should take about 15 to 20 seconds to fully empty your lungs.

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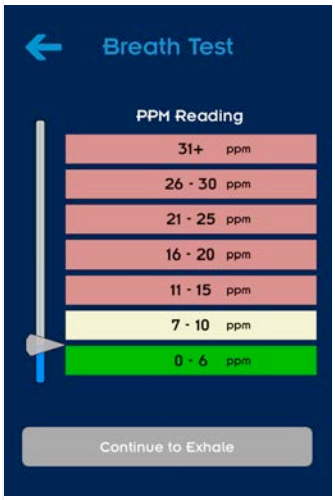
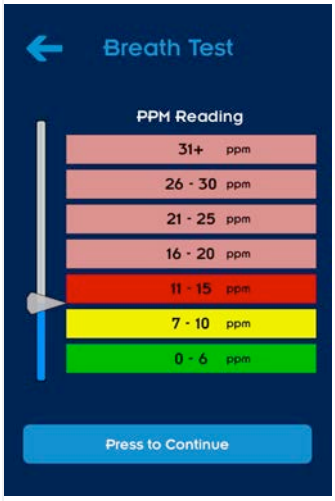
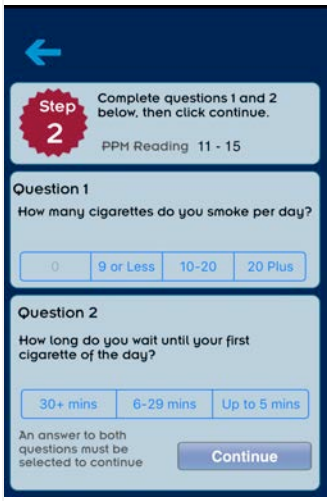


After a few seconds of exhaling, the Breath Test monitor screen will appear, showing the current reading. The pointer on the left will slowly rise to its final value. Keep exhaling until the grey "Continue to Exhale" button changes to a blue "Press to Continue" button (about 15 seconds). But, don't stop exhaling until you have fully emptied your lungs, or for as long as possible.



When you have fully emptied your lungs, you may now select the blue "Press to Continue" button.



Please answer the two questions on this screen truthfully, by selecting the relevant answers. The "Continue" button will not come active, (bright blue), until all questions have been answered.

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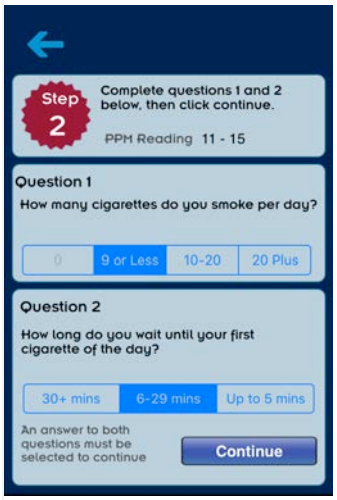
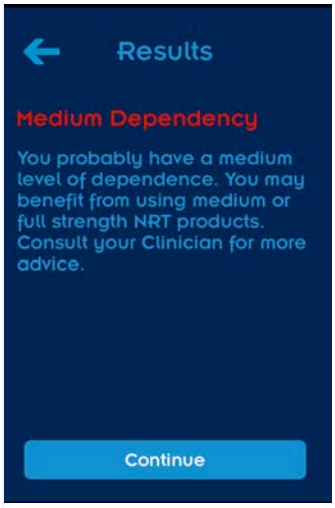
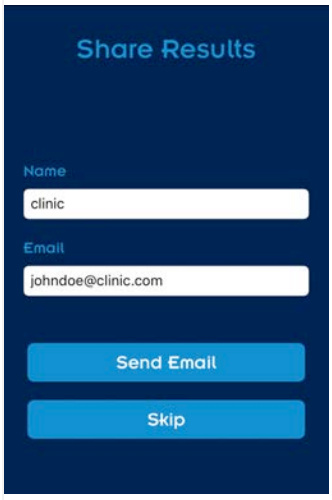


Once the two questions have been answered the “Continue” button is now active. Please select “Continue” to proceed.



Your dependency result is now displayed. Please read this and then select “Continue”.



You are now able to share your results. (Check that the email name & address are correct and then select “Send Email”). If you do not wish to do this, then select “Skip”. (This will take you back to the home screen).

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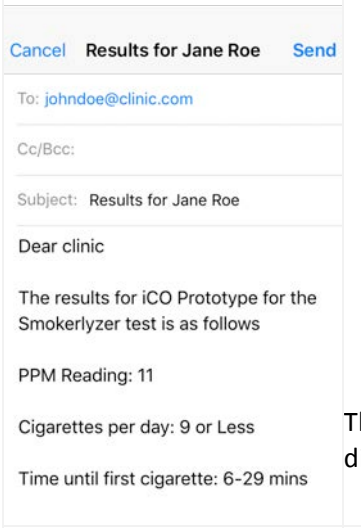
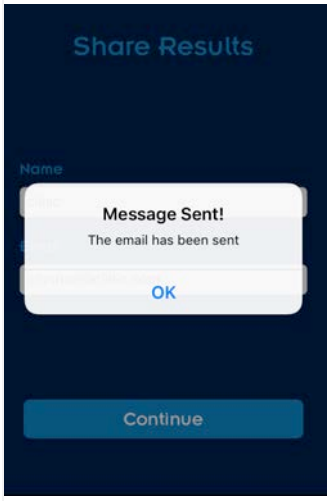


The contents of the Email to be sent are displayed. Select “Send” to send email.



A notification that the Email has been sent is displayed. Dismiss this by selecting “OK” and then select “Continue” to complete. You will now be back at the Home Screen.

Checking your Results and Progress

To check on your Results and progress, carry out the following steps:-

From the Home Screen, select “Results”.

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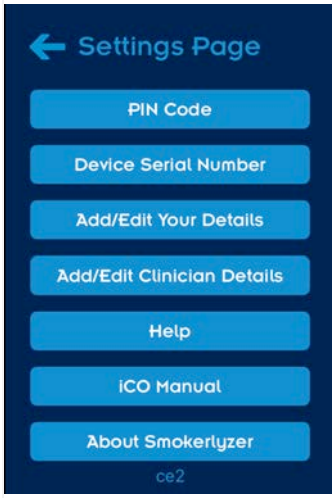
The Results Graph is displayed in landscape mode, (if there are more than 7 results). You can scroll the results left and right with your finger. When you have finished looking at the results, select the "back arrow" at the top/left of screen. This will return you to the Home Screen.

To Change any Details, Settings or obtain Information

To change any Email addresses and settings or find information about the iCO or App:-

From the Home Screen, select "Settings"



From the Settings Page, select the appropriate action you wish to take.

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Warnings and Maintenance

1. Hands should be washed regularly in accordance with infection control practice.
2. Please do not attempt to modify the equipment in any way or use accessories not specified by the manufacturer. Any attempt to do so will invalidate the warranty and may compromise the safety of the device.

Cleaning

1. The iCO Smokerlyzer® product is moulded with PC/ABS plastic, which is easy to keep clean.
2. Use non-alcohol based anti-bacterial cleaning wipes only.
3. NEVER use alcohol or cleaning agents containing alcohol or other organic solvents as long term exposure to these vapours will damage the CO sensor inside.
4. Under no circumstances should the instrument be immersed in liquid or splashed with liquid.

Troubleshooting

"An iCO device is not properly connected, please reconnect the device or choose the manual option"
Make sure the Audio Cable is connected at both ends, between Smartphone and iCO.

"An iCO device is not properly connected or the volume is not high enough…."
Make sure the Audio Cable is connected at both ends, between Smartphone and iCO,
Also check that the volume control on your Smartphone is on maximum (100%).
Repeated test done too soon after previous test; holding the cable end of the device, wave iCO Smokerlyzer about for 15 – 20 seconds to remove residual contents from previous test and then repeat test.

Repeated zero readings after breath test
Even a non-smoker should give a low reading of less than 6ppm.
Check that you are completely emptying your lungs when exhaling in to the device.
Possible Faulty Sensor.

Unexpected high reading after breath test
High levels of Carbon Monoxide in vicinity – (i.e. faulty Boiler), re-take test outdoors if possible.
Interference from a Radio or TV transmitter if you live close to one, re-take test away from transmitter.
Sensor has been exposed to Alcohol, do not use Alcohol based wipes. Leave iCO Smokerlyzer for 24Hrs in fresh air before use.
Incorrect Pin Code, re-enter Pin Code to value on the rear label of the iCO Smokerlyzer.

Spares

iCO Cable	Audio Lead

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Warranty

Bedfont Scientific Limited warrants the iCO Smokerlyzer® product to be free of defects in materials and workmanship for a period of 200 tests or 3 years, (whichever is the soonest), from the date of shipment. Bedfont's sole obligation under this warranty is limited to repairing or replacing, at its choice, any item covered under this warranty when such an item is returned, intact and prepaid, to Bedfont Scientific Limited or the local representative. This warranty are automatically invalidated if the product is repaired, altered, labels removed or otherwise tampered with by unauthorised personnel, or have been subject to misuse, neglect or accident.

Never dispose of any electronic instrument or batteries in domestic waste. At the end of the product's life, contact Bedfont or its distributor for disposal instructions.

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Notes:

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Contact Bedfont or one of our worldwide Smokerlzyer® distributors for a free demonstration

www.bedfont.com
Tel:+44 (0)1622 851122
Email: ask@bedfont.com

A full list of our worldwide distributors can be found at
http://www.bedfont.com/distributors/

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Issue 1- November 2015, Part No: LAB432
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