1. Before using your new KETONIX® Bluetooth® you must connect it to a power source for at least 12 hours. The sensor will initiate much faster if used more frequently.

2. You also need to charge the optional battery for at least 12 hours. If you don’t use your KETONIX® for a while (more than a week), we recommend to repeat the procedure.

3. Don’t use the KETONIX® Bluetooth® together with cosmetics (lipstick), smoking, mouth wash or in wet areas.

4. After you used your Ketonix®, leave it connected for another minute. This will eliminate moisture in the sensor.

Always store the Ketonix® in the case provided to avoid having any dust or dirt coming into the sensor. Roll the USB cable without any kinks and store it in the side pouch together with the silica-bag.
2. DOWNLOAD SOFTWARE AND CONNECT

The software for your smart device is available from Appstore for iOS and for Android from Google Play.

Install the Ketonix app on your device (surfpad or smartphone).

Don’t forget to enable Bluetooth® on your surfpad/smartphone. Do this before you start the Ketonix® app.

Do not connect/pair to the Ketonix® with your Bluetooth® manager before using the app, if you do this the app will not be able to “see” the device.

When you start the app, tap on the image of your Ketonix®. The device will be connected and the app will switch to the “Measure” tab.

If you can’t see your device in the app, click on the “Refresh” button to update the list.

When the the message “Ready” is seen, it is then ready to take a measure.

It’s important to use a good technique, read more about this in 3. GOOD TECHNIQUE.
3. GOOD TECHNIQUE

To get consistent results, it is important to perform the measures the same way every time. It is important to expose the deepest air from your lungs to the sensor. It is **not** about blowing hard or a huge amount into the device.

- Your Ketonix® should display a steady non blinking blue light.
- Be calm and breathe normal through your nose.
- At the end of a "breathe out", start breathing into the mouthpiece until "all" your air is out!

A common mistake is to “draw in air” before breathing into the mouthpiece. It is a natural reflex and needs some practice to ignore.

1 - PREPARE

Breathe calm and **through your nose for a minute.**

When the unit has a steady non blinking light it is ready to take a measure.

2 - BREATHE OUT

Prepare yourself to **ignore** the inhalation reflex when you put the mouthpiece to your mouth.

**Start breathing out …**

3 - CONTINUE BREATHE OUT

when you are at the end of the exhale … put the mouthpiece to your mouth and continue to empty the last air out from your lungs.

**After a good test, you should gasp for air!**
4. SAVING YOUR RESULT

After you emptied your lungs, let the sensor continue to analyze for 30 seconds. Blowing to hard will chill the sensor and it needs this time to get the heat back. After 30 seconds and the gauge stops increasing, tap on “Save” at the top right.

When you start out using the Ketonix® device, your technique needs practicing to get consistent results. We recommend you to repeat three measures before saving. The gauge will show the highest result you make, if it does not increase, your measure value is not higher than in your previous measure.

When you saved your result there will still be some gas in the sensor. Once the gas is gone the gauge will be zero and the “Ready” message is displayed, you can then take another measure.

When you start out using the Ketonix® device, your technique needs practicing to get consistent results. We recommend you to repeat three measures before saving. The gauge will show the highest result you make, if it does not increase, your measure value is not higher than in your previous measure.

We recommend to take off the mouthpiece and wipe it dry with a paper towel.
5. VIEWING YOUR RESULTS

To view your saved results you tap on the “Analyze” tab.

If no chart is showing you need to tap on “View” in the top left corner. Then tap on “Ketonix”, then “Breath Acetone PPM”. Finally click on the arrow “<“ at the top left corner to close the menu.

To view another period than the default which is a week, tap on the date fields and select alternate dates.
6. VALUE INTERPRETATION

The value you get from the Ketonix® device is an indication of how much your body uses fat as fuel.

By measuring often you can recognize how different lifestyle changes like food, fasting and exercise affects your body’s level of fat burning. As the value is dependent on your technique, it is very important to develop a good one.

The method of using breath and the dependency of technique values will be personal. Common ranges for people using a ketogenic diet is found in the Common levels of PPM Acetone chart below.

There are more factors than the nutrient macros carbohydrates, fat, protein and alcohol that influence your ketosis. Example; our body produce glucose as a response to physical activity and stress. Your body also obey your circadian rhythm and increases glucose and cortisol in the morning to wake you up.

Common levels of PPM Acetone

---

Measuring Breath Acetone for Monitoring Fat Loss
7. THE GAUGE RANGES

The gauge is divided into four different ranges to indicate the current “levels” of ketosis you are in.

A value in the **blue range** indicates a very low level of ketosis. This means your glucose/glycogen is readily available and your insulin levels are elevated.

A value in the **green range** indicates that your insulin levels are normal and you mainly use fat as fuel. Even if you eat a ketogenic diet, the excess energy from your food needs to be stored and the storage hormone insulin is produced. A common name for this range is “Nutritional Ketosis”, a healthy state for most people.

A value in the **yellow range** indicates a low level of both insulin, glycogen and glucose. This range is often referred to as “Therapeutic Ketosis”. High levels of ketones are produced and used and blood sugar is low. Here weight loss is noticeable for most people.

A value in the **red range** (or above!) indicates a very high level of ketosis. Staying in this range for a long time might decrease your metabolism. Every now and then might be normal, if using fasting and exercising together.

---

*If you have Diabetes, you still need to check your glucose. Ketonix is not a replacement for your glucose/blood ketone meters you have diabetes.*
8. ABOUT KETONES

Blood ketones (Beta-hydroxybutyrate) is not the same ketones found in your breath (Acetone).

Breath ketones are present when liver converts fat into ketones. The more breath ketones, the higher conversion of fat into ketones.

Blood ketones are formed from the excess ketones not used for energy. Blood ketones can at any time your body needs more energy be used. A blood ketone measure of 3 mmol/L is only about 15 calories worth of energy which the body could use up quite quickly if needed.

The formation/use of blood ketones also depends on vitamin and mineral availability. It also depends on the level of blood sugar. High blood sugar inhibits the ability to use the blood ketones as energy. This is what happens when people with diabetes type 1 have a high level of glucose and no insulin, both high glucose and high level of blood ketones.

Measuring blood ketones is important to people with little or no insulin production. For people that have a normal insulin production the blood ketone value could vary a lot in the Nutritional Ketosis range. Conversion of fat into ketones are much higher in Therapeutic Ketosis and more blood ketones are also formed, however the level still depends on your bodys ability to form and use them.

Remember, breath ketones is a better indicator of ketosis because it does not have the same metabolic function as blood ketones.

There is several ways you could increase your ketosis. Using the Ketonix® you can find out what works for you. How you react to lifestyle changes depends on your body cells, liver, muscles, food, activity level … etc.

Some common lifestyle changes that affects the level of ketosis are:

- Lower carbohydrates per day.
- Have a moderate amount of protein, 1 gr per kg body weight is common to use.
- Don’t over-eat, excess energy will always be stored and cause insulin to rise and ketosis to decrease.
- Try Intermittent fasting.
- HIIT exercise is very effective to tap into the glycogen stores and increase ketosis.
- Fast between meals. Coffee with cream or fat is like eating. Tea or coffee without cream works.
- Try finding real ketogenic recipies, with a ratio equal or higher than 3:1. Most “Keto Recipies” out in on Internet have a low ketogenic ratio.

The ketogenic ratio is commonly calculated as:

\[
\text{ratio} = \frac{\text{fat gr}}{\text{(protein gr+carbs gr)}}
\]

A ratio of 3:1 means there is 3 times more fat (in grams) than the sum of proteins and carbs (in grams).
9. GENERAL

Alcohol

The sensor is also sensitive to alcohol. However drinking alcohol will suspend the ketosis until the alcohol is metabolized. To see how alcohol affects your ketosis, wait to take a measure until the alcohol is out of your body (day after).

Exogenous Ketones

Using exogenous ketones will not increase ketones in your breath. Ketones in your breath comes from breaking down fatty acids in the liver to the ketone AcetoAcetate from which Acetone is released. A possible reaction is that a high blood ketone value would signal to stop ketosis for some time.

Charging the Optional Battery

When you receive your battery it has for security reasons a very low charge. We recommend that you immediately put it on charge. The short cable in the package is designed to charge the battery. The smallest contact on the short cable is marked "KETONIX® Battery" and should be put in the smaller contact on the battery end. It can only fit in one way, so be careful and do not force the cable end into the battery.

The other end, the larger USB contact is marked with "Power USB 5V/1A" and should be put into a USB port to supply power, a charger or any other USB port.

When you power your battery there is a led inside the cap which starts to blink when charging. When it is fully charged, the led will shine with a steady non blinking light.

Mouthpiece

The mouthpiece has three different positions. Each position have it’s own size of hole to let air out when you blow. To adjust you need to pull the mouthpiece up a few millimeters and then turn it to the position you want, then press it down again. We recommend to set it to the largest hole, this will make it more easy to empty your lungs and get a consistent result.
10. SPECIFICATIONS KETONIX® BLUETOOTH®

Breath Ketone Analyzer

KETONIX®

**KETONIX® Bluetooth®**
Indicates your ketone production by analyzing your breath. A reusable breath ketone instrument that indicates your ketone production by analyzing your breath. It can be used thousands of times at no extra cost. A mobile app will display, log and chart your measures. Record breath ketones locally in your app and/or to an online account (www.ketonix.com). You can anonymously contribute your data to studies of ketogenic diets (Optional). Mouthpiece can be easily removed and cleaned. An extra mouthpiece is included. The mouthpiece has three different settings that can easily be changed to adjust the resistance. Software provides profile management to enable several users to share a device using personal mouthpieces. Comes with a battery and a USB cable for powering the device.

**Minimum Requirements:**
iOS or Android Smartphone/Tablet with Bluetooth® Low Energy support.

**Specifications:**
- Powered by a USB charger 5V or a 5V battery with USB port.
- Hardware calibration controlled by software automatically.
- Measure results are presented in PPM acetone.
- Battery or USB cable is plugged directly into the KETONIX® for flexible power supply when taking measures.

**Weight:** 40 gr (total weight 260 gr).
**Size:** length 130 mm, diameter 25 mm.
**Power:** From USB port 5V 1A, battery (included) or USB charger.

**What is Included:** KETONIX® Bluetooth device, KETONIX® battery, USB cable, cable to charge battery, an extra mouthpiece, a manual and a perfect KETONIX® zipper etui (15x10x5 cm).

---

KETONIX AB, Borgasgatan 12 432 37 Varberg Sweden
www.ketonix.com support@ketonix.com facebook.com/ketonix @ketonixcompany

MSRP $239