Breath Ketone Analyzer

KETONIX®

KETONIX® Mobile
Basic/Professional Manual
Version 1.0 - English

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1. UNPACK YOUR KETONIX® BRONZE

In the package you will find:

- KETONIX® Bronze with USB Cable
- One extra mouthpiece
- Ketonix-case to keep the device in.

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

If you don't use your KETONIX® for a while (more than a week), we recommend to repeat the procedure.

The Bronze model can be used with any USB power source, like phone chargers, power banks, USB hubs, computers etc.

Note that som people not using a low-carb or ketogenic diet, may produce methane from bacterias breaking down carbohydrates. The result is from methane not acetone. It may be an issue called SIBO (Small Intestines Bacterial Overgrowth)

2. Don't use the KETONIX® together with cosmetics(lipstick), perfume, smoking, mouth water or in wet areas. This will decrease the lifecycle of the product!

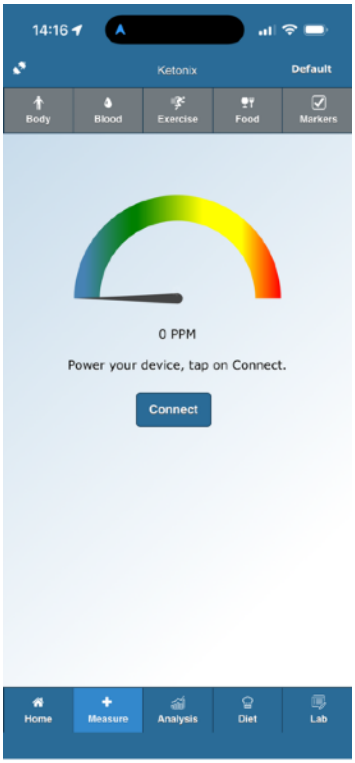
3. After you used your KETONIX®, let it be powered on another minute. This will eliminate moisture in the sensor.

Always keep the KETONIX® in the case to avoid having any debris coming into the sensor. Roll the USB cable smooth and let the silica-bag be together with the KETONIX® in the case.

2. DOWNLOAD SOFTWARE AND CONNECT

The software for your smart device is available from Appstore for iOS

and for Android from Google Play.



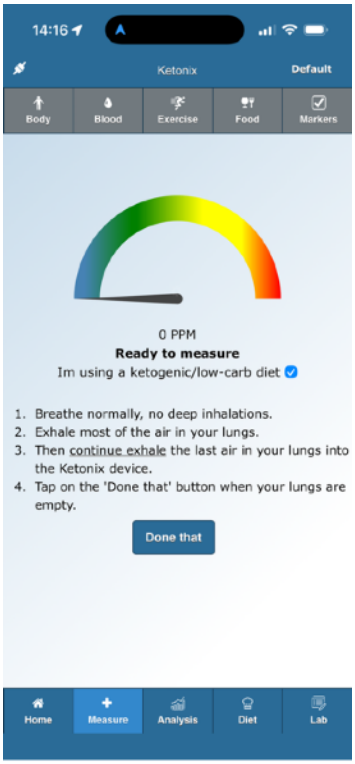
Install the Ketonix app on your device (tablet or smartphone).

Don’t forget to enable Bluetooth® and location services on your tablet/ smartphone. Do this **before** you start the Ketonix® app.

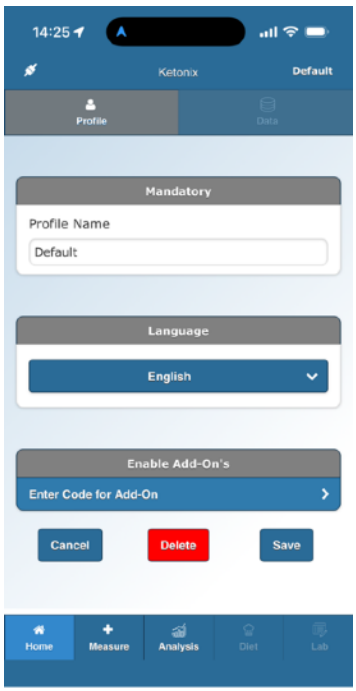
Do not connect/pair to the Ketonix® with your Bluetooth@ manager before using the app, if doing so the app will not be able to “see” the device.

Power your Ketonix and tap on Connect in the Measure tab.

Wait until the message ”Ready” is seen, only then you can take a measure.



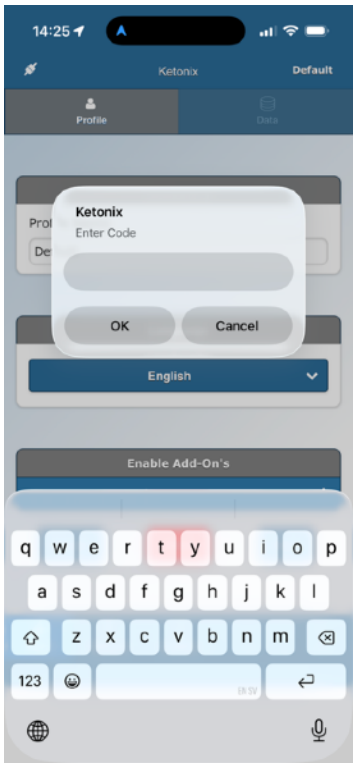
Depending on what upgrades you own, you will see more or less available features. The Professional model has all app features. The Basic model has limited app features.



Enable Mobile App Upgrades

If you purchased an upgrade to your Basic model, you need to tap the "Profile" button to enable the upgraded features.

Then tap "Enter Code for Add-On", and enter the code you received when you purchased the mobile app upgrade.



3. A GOOD TECHNIQUE

To get consistent measures, it is important to perform the measures the same way every time. The important matter is 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 air is out!

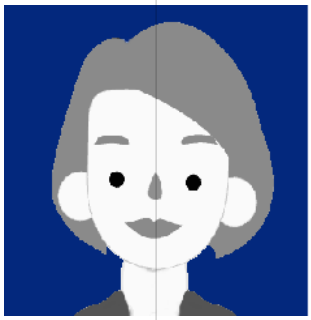
A common mistake is to "take air" before breathing into the mouthpiece. It is a natural reflex and needs some practice to ignore.

1 - PREPARE

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

When the unit have 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. It is easy to miss.

Start breathing out ...

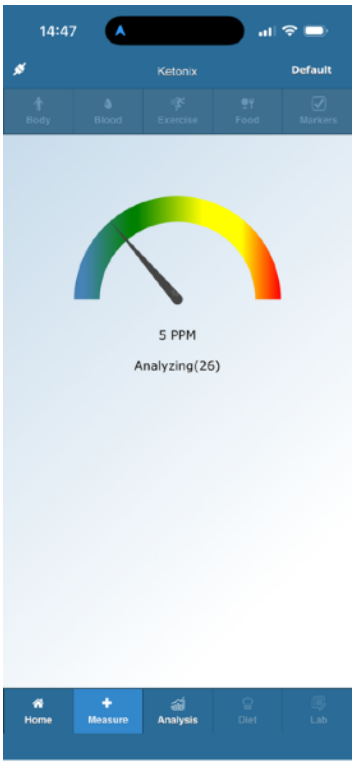
3 - CONTINUE BREATHE OUT

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 measure, you should gasp for air!

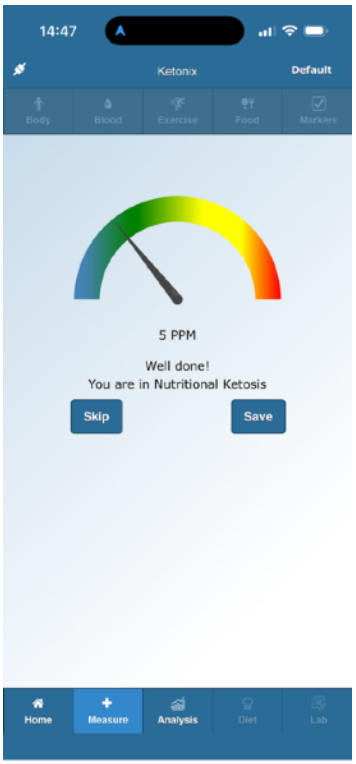
4. TAKE AND SAVE YOUR MEASURE

Tap on the Measure tab. Follow the instructions displayed. After you emptied your lungs (do not blow hard), tap on the "Done that" button below the instructions.



The app will analyze your breath and display the result. You can then decide if you want to save or skip this measure.

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

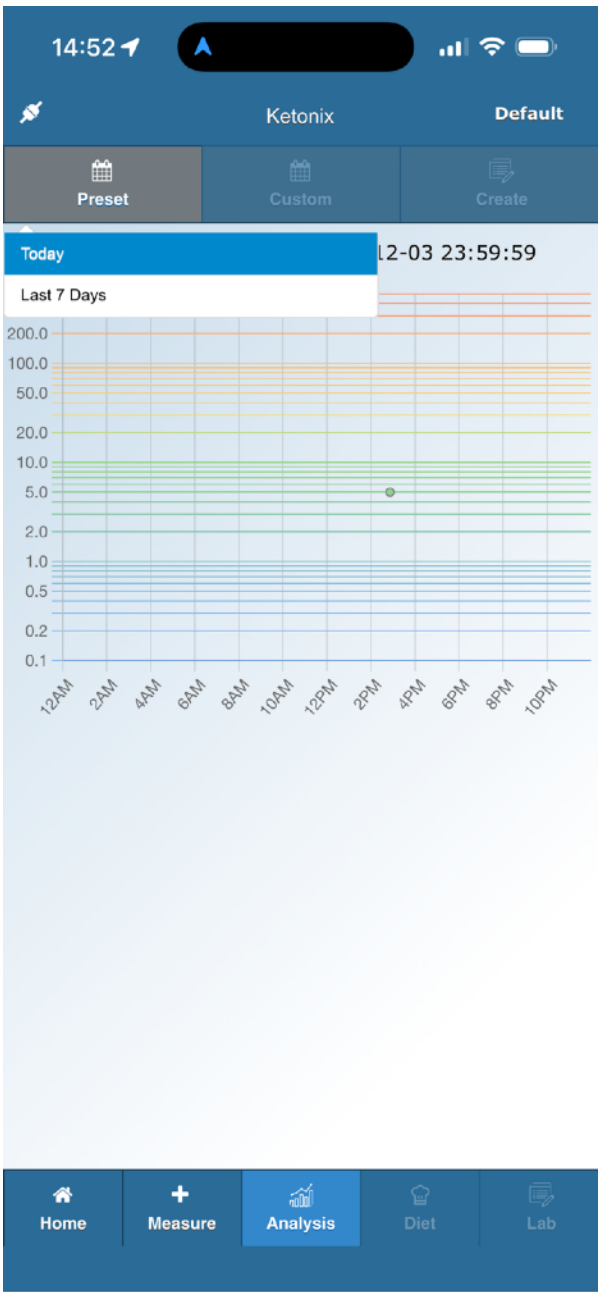


When you saved your measure, there is still some gas inside the sensor. When gas in the sensor is gone and the "Ready" message is displayed, you can take another measure. We recommend to gently take the mouthpiece off and wipe it dry with a paper towel.

5. VIEWING YOUR MEASURES

To view your saved measures you tap on the "Analysis" tab.

Here your saved breath ketones (breath acetone) values are displayed. If you have the Professional or upgraded your Basic model with the Analysis upgrade, you can display other variables you logged here too. It is possible to have two variables in the same chart on top of each other to compare and make intelligent conclusions about lifestyle changes.



The screen above is the Basic view.

To view another period than the default which is a week back, tap on the Preset or Custom tab to select other time ranges.

The "Create" button creates an experiment with the time range and variables you see. It enables you to add more information about what you did, and is easily accessible from the Lab tab. The Lab and create experiments feature is included with Professional and available as an upgrade for the Basic model.

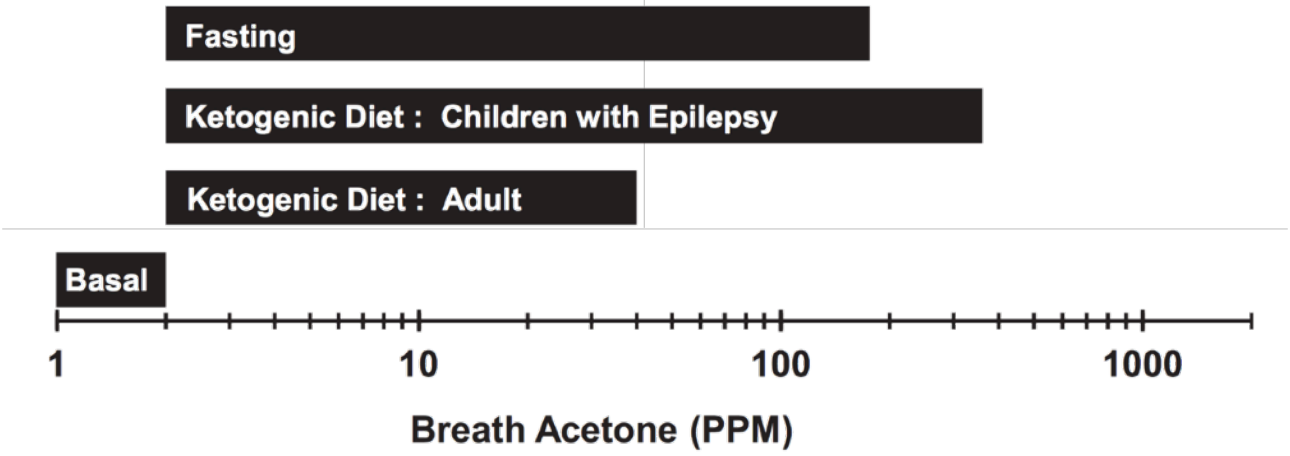
6. VALUE INTERPRETATION

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

By measuring often you could 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 increase glucose and cortisol in the morning to wake you up.

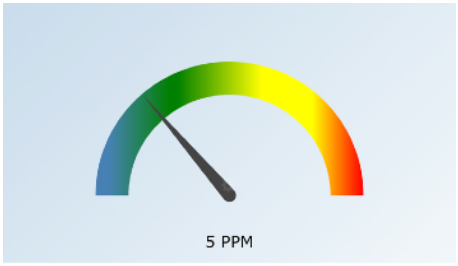


Common levels of PPM Aceton

Obesity (2015) 23, 2327–2334. doi:10.1002/oby.21242
Measuring Breath Acetone for Monitoring Fat Loss
Review Joseph C. Anderson

7. THE GAUGE RANGES

The gauge is colored to indicate how deep ketosis you currently are in. The low end starts at blue and the high ketosis is indicated by a red color.



A value below 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. Cells can easily use fat direct as fuel, glucose is spared and glycogen stores are ready to be used for explosive energy need. It's mainly the brain and heart that require ketones.

A common name for values in the green range is "Nutritional Ketosis", a healthy state for most people.

A value in the **yellow-red 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.

If you have Diabetes, you still need to check your glucose.
Ketonix is not a replacement for your glucose/blood ketone meters when having 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 recipes, with a ratio equal or higher than 3:1. Most “Keto Recipes” on the Internet have a low ketogenic ratio.

The ketogenic ratio is commonly calculated as:

ratio = fat gr **:** (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

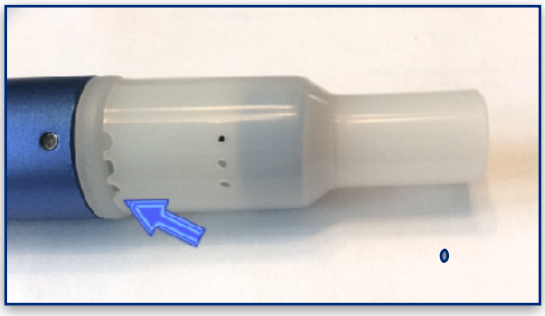
The sensor is also sensitive to alcohol. However drinking alcohol will suspend the ketosis until the alcohol is metabolized. To see how alcohol affects your ketosis, wait to take a measure until the alcohol is out of your body (day after).

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.

Mouthpiece

The mouthpiece has three different positions. Each position have its 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.



Testing individuals that is not using a low-carb/ ketogenic diet.

The sensor is also sensitive to methane. When carbohydrates are digested by bacterias, methane is produced. Some can have issues with the bacterias are located in other location than normal causing the methane to leave the body in more than one place. The sensor can pick this up and display what many would call a false positive. If someone that eats a high carb diet, expects a ketone reading, we would call it a “false expectation”. When using the device in a proper context, e.g using a low-carb or ketogenic diet, the carbs are few and would not influence the reading, its acetone and indicates how the liver produce ketones in that moment.

Testing for methane in breath is commonly done to detect an issue that is called SIBO, Small Intestines Bacterial Overgrowth. This condition can become very unpleasant.

So, even if it is tempting to test your friends, the result can be that your friends methane is higher than your acetone. Explaining this might be more than they can take in.

The Ketonix is a tool to optimize and create **your** lifestyle.

Our mission is to provide a simple, cost-effective and painless method to know if **your** body is in ketosis and the strength of it. With the insight of your level of ketosis you could adjust your actions to increase/maintain your ketosis.

Our support staff use a low-carb/ ketogenic diet and is well trained to understand both the diet and the measure method. They are in contact with the inventor/founder on a daily basis. This means that you as a customer are only one step from the source!

/Team Ketonix

support@ketonix.com