

Fructose Intolerance, Breath Test Kit (H₂)

Sampling Instructions

INST 017_02 ENG

ATTENTION! This breath test must not be performed if you have a hereditary (congenital) fructose intolerance. A single high intake of carbohydrates is not a concern, even in cases of undiagnosed diabetes. However, if there is any uncertainty, the test should be performed under medical supervision.

1. Is the sampling kit complete?

Please check if the collection kit is complete. Each kit includes:

- Sampling instructions
- Medical history form
- Requisition form
- Test protocol
- 5 sample tubes with a red rubber seal. **Caution! Do not open the tubes, as this releases the vacuum!**
- Plastic hygiene mouthpiece (blue, black or other colors)
- Sampling unit with bag and needle
- 25 gr fructose
- Bubble envelope
- Return envelope

If any of the above is missing or damaged, please contact us, and we will send you a replacement kit immediately.

2. How to prepare properly

1. Please pay attention to the following instructions. Deviations from these instructions may result in improper evaluation of the test results.

If unsure, call the Diagnostiki Athinon team at +30 210-7777654, Monday through Friday, 8 a.m. to 7 p.m.

Breath gas analyses should be performed within 5 months of receiving the test kit and the sampling tubes should be sent back to the laboratory immediately. If 5 months are exceeded, please call us to send you new tubes.

If you are taking medication, please note the following:

- Antibiotics should be discontinued 4 weeks prior.
- Laxatives should be discontinued at least 3 days before.
- Vitamins, probiotics, and other supplements should be discontinued for at least 24 hours before the test.
- If possible, the subject's medication should be taken after the test; otherwise, it should be taken one hour before the start of the test.

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If you are going to perform several breath tests (e.g., to investigate sorbitol, lactose, or fructose intolerance, or check for SIBO), the **time interval between the different tests should be at least 2 days**.

If there have been previous gastrointestinal examinations in which intestinal cleansing was performed (e.g., colonoscopy), the breath test should be performed at least after **4 weeks**.

The breath test should be conducted on an **empty stomach** in the morning. Do not eat **12 to 16 hours before** and during the test period. In addition, no soft drinks or sugary drinks (including “diet” soft drinks) should be consumed.

After the last meal, **ensure no dairy products, fiber, raw foods, or foods that cause bloating (e.g. beans, cabbage, or green vegetables) have been consumed**. Meat or fish, as well as rice, are ideal for the evening meal before the test. In addition, **no fruit or soft drinks, juices, or beverages containing fructose should be consumed**.

Do not **smoke** or **chew gum** at least 12 hours before sampling.

On the morning of the test, drink **one glass of lukewarm water** to flush out any gas-producing bacteria from your intestine.

Do not use **denture adhesives** on the day of the test.

Schedule the day of the test, so that you can **avoid physical activity**. You should remain calm throughout the test but not fall asleep. Samples should always be collected while sitting (and after sitting, wait at least 1 minute before collecting the sample).

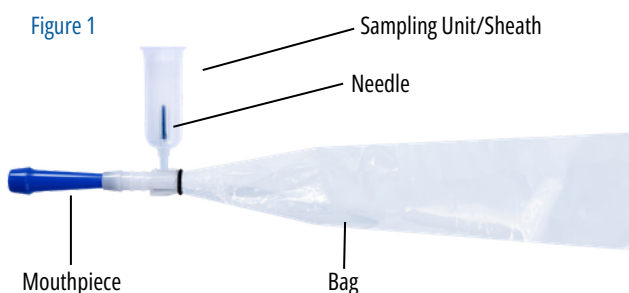
Record **any symptoms** during the test in the test protocol. This information is necessary to assess the severity of SIBO.

Please always note the sampling time in the test protocol and precisely adhere to the collection times. Otherwise, the measurement results may not be reliably interpreted.

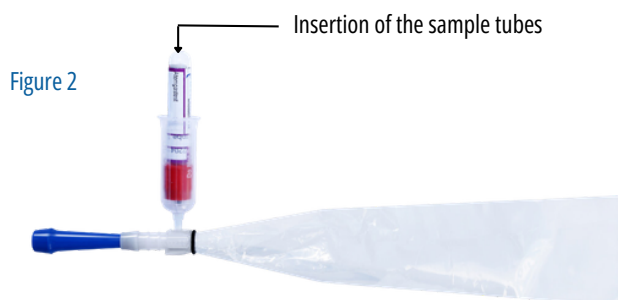
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3. Conducting the test

1. Remove the sample tubes and note the sampling date on the tubes. Keep the sample tubes ready for sampling by arranging them in ascending order of number (Sample 1 to 10).
2. Before taking the lactulose, the basal value of exhaled gases (Sample 1) must be measured.
Unpack the plastic hygiene mouthpiece and place it on the narrow free end (**not** the one with the bag attached to it, **nor** the one with the needle), as shown in **Figure 1**.



3. Insert the sample tube - without applying any pressure - into the sampling unit/sheath (**Figure 2**), with the sealing plug facing the needle.
Caution! The needle must not yet penetrate the rubber plug.



Do not touch the inside of the sampling unit/sheath with your fingers (contains sharp needle)!

4. Hold the mouthpiece and the breath bag with one hand and leave your other hand free.
5. Hold the mouthpiece to your mouth and breathe deeply through your nose. Then exhale steadily and continuously through your mouth, blowing into the bag.
6. **Without removing the device from your mouth** and while the bag is full, use your free hand to immediately push the sample tube into the sampling unit/sheath, so that the needle penetrates the rubber plug.
Hold that position for approximately 2 seconds before removing the device from your mouth.

Caution! The sample should be collected during exhalation. During sample collection, the bag should be filled with exhaled air. The contact between the mouth and the mouthpiece should not be interrupted.

7. Open the container containing the test substance, fructose. Dissolve the contents in 300 ml of warm water. Stir until the powder is completely dissolved. You can prepare the solution the day before and store it in the refrigerator until you are ready to use it.
8. Now, drink the prepared fructose solution. Record the time in the test protocol.

9. Take breath test samples numbered 2-10 at the following time intervals
 - **Sample 2:** 30 minutes after drinking the fructose solution
 - **Sample 3:** 60 minutes after drinking the fructose solution
 - **Sample 4:** 120 minutes after drinking the fructose solution
 - **Sample 5:** 180 minutes after drinking the fructose solution

When sampling, follow the procedure described under points 3 to 6.

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4. Sending the samples

Place all sample tubes in the bubble envelope. **Caution! Once the envelope is closed, it cannot be opened again.**

Place the bubble envelope inside the return envelope, along with the **completed forms** (medical history form and requisition form) and **test protocol**.

Call your **local ACS Courier representative**, and send the sample to Diagnostiki Athinon at the recipient's expense.

If you are **outside Greece**, please **phone or email Diagnostiki Athinon** so we can send you the necessary return forms and arrange your appointment with the **local DHL / FedEx representative**.

>> **Send the sample immediately after collection**

>> **Do not send the sample on Fridays or the eve of holidays**

5. Important note

Dosage in children

For **children under 6 years of age**, please ask us about the test. Otherwise, children should receive only a certain portion of the prepared fructose solution, which is proportionate to their body weight. See the table on the right.

Body Weight	Dosage
15 - 18 Kg	120 ml
18 - 21 Kg	150 ml
21 - 25 Kg	180 ml
25 - 29 Kg	210 ml
29 - 34 Kg	240 ml
35 - 39 Kg	270 ml
≥ 40 Kg	300 ml (the whole solution)



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