Gut Microbiome Test Small

Lab test Stool

Name: **Sample Report** Date of test: **09/13/2023** Analysis-ID: **DUMMY-32**

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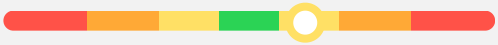
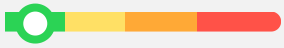
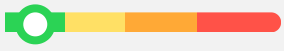
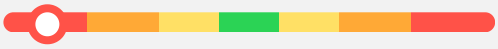
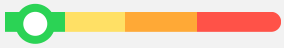
[illegible]

Determination of aerobic bacteria

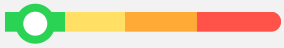
Name	Your value	Unit	Reference value	Scale
Escherichia coli	4,0 x 10^8	CFU/g stool	10^6 - 10^7	
Escherichia coli Biovare	< 1,0 x 10^4	CFU/g stool	< 1,0 x 10^4	
Proteus spp.	< 1,0 x 10^4	CFU/g stool	< 1,0 x 10^4	
Klebsiella spp.	< 1,0 x 10^4	CFU/g stool	< 1,0 x 10^4	
Pseudomonas spp.	< 1,0 x 10^4	CFU/g stool	< 1,0 x 10^4	
Enterobacter spp.	1,0 x 10^7	CFU/g stool	< 1,0 x 10^4	
Serratia spp.	< 1,0 x 10^4	CFU/g stool	< 1,0 x 10^4	
Hafnia spp.	< 1,0 x 10^4	CFU/g stool	< 1,0 x 10^4	
Enterococcus spp.	< 1,0 x 10^4	CFU/g stool	10^6 - 10^7	

Determination of anaerobic bacteria

Name	Your value	Unit	Reference value	Scale
Bifidobacterium spp.	3,0 x 10^8	CFU/g stool	10^9 - 10^11	
Bacteroides spp.	5,0 x 10^8	CFU/g stool	10^9 - 10^11	
Lactobacillus spp.	8,0 x 10^5	CFU/g stool	10^5 - 10^7	

Name	Your value	Unit	Reference value	Scale
Clostridium spp.	< 1,0 x 10^5	CFU/g stool	< 1,0 x 10^5	

Mycological stool examination

Name	Your value	Unit	Reference value	Scale
Candida spp.	< 1,0 x 10^3	CFU/g stool	< 1,0 x 10^3	
Candida albicans	1,0 x 10^4	CFU/g stool	< 1,0 x 10^3	
Yeast	negativ	Negative		
Geotrichum candidum	< 1,0 x 10^3	CFU/g stool	< 1,0 x 10^3	

pH value

Name	Your value	Unit	Reference value	Scale
pH value	6.50		5,8 - 6,5	

Specialization

Explanation of your test results

The intestinal flora includes the bacteria and other microorganisms that are naturally present in the intestine. Our intestinal flora have a broad influence on human health and disease. It modulates the immune system, provides the organism with vitamins, participates in the digestion of food components, supplies intestinal epithelium with energy by producing short-chain fatty acids and stimulates intestinal peristalsis.

Determination of aerobic bacteria

Escherichia coli

Name	Your value	Unit	Reference value	Scale
Escherichia coli	4,0 x 10^8	CFU/g stool	10^6 - 10^7	

Escherichia coli belongs to the putrefactive bacteria. Putrefactive bacteria are bacteria that thrive in a neutral to alkaline environment and produce ammonia. At high pH, they grow and can compete with other good bacteria.

Putrefactive bacteria primarily metabolize protein and fat, which produces toxic metabolites such as ammonia, indole, skatole and hydrogen sulfide. This can damage the intestinal mucosa and may lead to an increase in the pH of the colon (> 6.5) in the long term.

Elevated levels are often caused by insufficient activity in the mucosal immune system. If the intestinal flora is characterized by an increased amount of putrefactive bacteria, one can try to reduce the pH value in the intestinal lumen by supplementing with prebiotics or probiotics. This promotes the reconstitution of the intestinal acidification flora and inhibits the growth of putrefactive bacteria. Less toxic metabolic by-products are produced, which alleviates the damage on the intestine and other vital organs such as the liver and kidneys.

Escherichia coli Biovare

Name	Your value	Unit	Reference value	Scale
Escherichia coli Biovare	< 1,0 x 10^4	CFU/g stool	< 1,0 x 10^4	

Escherichia coli Biovare are subspecies of Escherichia coli that does not normally occur in the intestine. There are several types such as hemolytic, mucoid and lactose-negative E. coli. It is not uncommon to find hemolytic or mucoid E. coli while testing a favorable E. coli and alkaline pH.

Elevated levels can also be caused by insufficient mucosal immunity. This is mainly due to too low production of secretory IgA.

Proteus spp.

Name	Your value	Unit	Reference value	Scale
Proteus spp.	< 1,0 x 10^4	CFU/g stool	< 1,0 x 10^4	

Elevated levels of Proteus species often occur in Crohn's disease and urinary tract infections

Klebsiella spp.

Name	Your value	Unit	Reference value	Scale
Klebsiella spp.	< 1,0 x 10^4	CFU/g stool	< 1,0 x 10^4	

High levels indicate an increased inflammatory activity in the intestine. Klebsiella can release histamine and may cause abdominal pain, bloating, gas and diarrhea. Elevated levels of Klebsiella is common after prolonged use of antibiotics.

Pseudomonas spp.

Name	Your value	Unit	Reference value	Scale
Pseudomonas spp.	< 1,0 x 10^4	CFU/g stool	< 1,0 x 10^4	

Elevated levels of Pseudomonas species may occur in inflammation of the intestine. Elevated levels can lead to diarrhea and loose stool.

Enterobacter spp.

Name	Your value	Unit	Reference value	Scale
Enterobacter spp.	1,0 x 10^7	CFU/g stool	< 1,0 x 10^4	

Enterobacter species belong to the putrefactive bacteria. Putrefactive bacteria are bacteria that thrive in an alkaline environment and produce ammonia. At high pH, they grow and can compete with other good bacteria. Putrefactive bacteria primarily metabolize protein and fat, which produces toxic metabolites such as ammonia, indole, phenols and hydrogen sulfide. This can damage the intestinal mucosa and may lead to an increase in the pH of the colon (> 6.5) in the long term.

Enterobacter species are common bacteria in soil and water and are often found in the intestinal tract of humans and animals. High levels are often associated with an inflammatory process in the intestinal mucosa. Enterobacter are opportunistic that can occur as pathogens in hospitals where they cause infections in people with weakened immune systems.

If the intestinal flora is characterized by an increased amount of putrefactive bacteria, one can try to reduce the pH value in the intestinal lumen by supplementing with pre- or probiotics. This promotes the reconstruction of the intestinal epithelial cells and inhibits the growth of putrefactive bacteria. Less toxic metabolic by-products are produced, which alleviates the damage on the intestine and other vital organs such as the liver and kidneys.

Serratia spp.

Name	Your value	Unit	Reference value	Scale
Serratia spp.	< 1,0 x 10^4	CFU/g stool	< 1,0 x 10^4	

[illegible]

Hafnia spp.

Name	Your value	Unit	Reference value	Scale
Hafnia spp.	< 1,0 x 10^4	CFU/g stool	< 1,0 x 10^4	

[illegible]

Enterococcus spp.

Name	Your value	Unit	Reference value	Scale
Enterococcus spp.	< 1,0 x 10^4	CFU/g stool	10^6 - 10^7	

[illegible]

Determination of anaerobic bacteria

Bifidobacterium spp.

Name	Your value	Unit	Reference value	Scale
Bifidobacterium spp.	3,0 x 10^8	CFU/g stool	10^9 - 10^11	

[illegible]

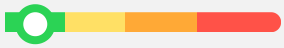
Bacteroides spp.

Name	Your value	Unit	Reference value	Scale
Bacteroides spp.	5,0 x 10^8	CFU/g stool	10^9 - 10^11	

Lactobacillus spp.

Name	Your value	Unit	Reference value	Scale
Lactobacillus spp.	8,0 x 10^5	CFU/g stool	10^5 - 10^7	

Clostridium spp.

Name	Your value	Unit	Reference value	Scale
Clostridium spp.	< 1,0 x 10^5	CFU/g stool	< 1,0 x 10^5	

Mycological stool examination

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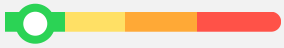
Candida spp.

Name	Your value	Unit	Reference value	Scale
Candida spp.	< 1,0 x 10^3	CFU/g stool	< 1,0 x 10^3	

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Candida albicans

Name	Your value	Unit	Reference value	Scale
Candida albicans	1,0 x 10^4	CFU/g stool	< 1,0 x 10^3	

[blurred]

Yeast

Name	Your value	Reference value
Yeast	negativ	negative

[blurred]

Geotrichum candidum

Name	Your value	Unit	Reference value	Scale
Geotrichum candidum	< 1,0 x 10^3	CFU/g stool	< 1,0 x 10^3	

[illegible]

The properties of the stool

Name	Your value	Unit	Reference value	Scale
pH value	6.50		5,8 - 6,5	

[illegible]

How can you use the results

5R is a treatment protocol developed by the Institute for Functional Medicine in the United States to restore gastrointestinal health and other problems that originate therefrom. If you have any imbalances, we recommend that you follow the program as described below. The program usually takes between 3-6 months to complete.

1. Remove

[illegible]

2. Replace

[illegible]

3. Reinocculate

[illegible]

4. Repair

[illegible]

5. Rebalance

[illegible]

Other information

Milder intestinal inflammation

Mild intestinal inflammation can be a consequence of different diseases and can occur in different parts of the intestine. Most often, the lower part of the small intestine or the upper part of the large intestine is affected, which limits nutrient uptake. Undigested food has a tendency to remain in the intestine, which can cause irritation.

In case of irritation in the stomach/intestine, it is good to take microbium and exclude foods that you are intolerant to. A well-balanced diet should be developed to relieve the stress on the gut. This can be accomplished by eating several smaller meals per day instead of large, heavy meals as well as avoiding certain foods that can sometimes interfere with proper gastrointestinal function.

- Gas producing vegetables: Cabbage, leeks, onions, peppers, mushrooms, legumes
- Hot spices: Chili pepper, paprika powder
- Foods high in fat: Fried food, fatty fish, lard, cheese, mayonnaise
- Foods high in sugar: Sweets, products containing natural and artificial sweeteners
- Beverages: Alcohol, coffee, carbonated beverages and drinks that are too hot or cold

It can be beneficial to wait for food intolerances and exclude foods that may further irritate. Different cooking methods can also facilitate or make the load on the intestine more difficult.

During symptomatic periods, a diet rich in fiber is recommended to reduce inflammation. If you change your diet, remember to do it gradually.

Foods that are usually well tolerated:

- Amaranth, buckwheat, brown rice, millet and quinoa
- Eggs, fish, lean meat and poultry
- Cooked vegetables
- Potatoes and other tubers
- Porridge
- Ripe fruits

Nutritional deficiencies

Imbalances in the intestine can lead to impaired nutrient uptake. If you have any digestive issues, it can be a good idea to test yourself for any deficiency of vitamin B12, iron, magnesium and zinc.

MCT oil

MCT oil is composed of medium-chain triglycerides, which are used in disorders of fat absorption and can be used as a readily available energy source. They can be more easily absorbed and digested independently of bile acids and digestive enzymes. Adding these fats should be done gradually to allow the intestines to adapt.

Fiber-rich food

Dietary fiber are substances that the body can only use to a certain extent. Normally, fibers are excreted undigested, but can also be processed by the intestinal flora and provide beneficial metabolic products such as butyrate that are very valuable for the body.

- Fibers have a structure that requires them to be chewed more and longer. Chewing leads to the release of saliva, which in turn counteracts caries and tooth decay. Chewing a lot also leads to a faster feeling of satiety.
- Dietary fiber swells and binds water. This prolongs the feeling of satiety, it also increases the weight of the stool and stretches the intestinal walls, which triggers the muscles in the intestines to work and stimulates intestinal emptying. Improved bowel movements make it easier for toxic substances to be excreted from the body and reduce the risk of diseases linked to excessive toxin exposure.
- Fibers do not just bind water in the intestine. Bile acids produced from cholesterol are also bound up and excreted in the stool. The body is thus forced to form new bile acids from cholesterol and the cholesterol level is lowered.
- Dietary fiber is important for people with diabetes as it has a positive effect on blood sugar.
- Dietary fiber stimulates the growth of beneficial bacteria and strengthens our natural intestinal flora while reducing the growth of unfavorable bacteria and harmful metabolic substances.

The general dietary recommendation for fiber intake is 25-30 grams of fiber per day for adults. In the table below you can see how much fiber different foods contain:

Type of food	Food	Fiber in g/100 g
Legumes (not cooked)	Broad beans	19.4
	Brown beans	19.4
	Mung beans	16.3
	Soybeans	15.3
	White beans	15.3
Fruit	Pomegranate	10.3
	Passion fruit	10.4
	Raisins	6.7
	Dried apricots	10.3
	Dried figs	10.3
Vegetables	Avocado	4.9
	Brussels sprouts	4.3
	Artichoke	5.9
	Sun-dried tomatoes	12.7
	Wheat sprouts	14.9
Grains	Oatmeal	10.9
	Oat bran	16.9
	Hard bread (wholegrain)	24.9
	Wheat bran	37.3
	Puffed	39.9

Support your intestinal flora through the right diet and beverage

We have a large number of bacteria in our gut. They support our immune system and intestinal mucosa by producing important metabolic products and other nutrients. Which substances the bacteria produce depends a lot on the substrate in the intestine, i.e. food components that can not be broken down by the body. Based on their metabolic products, they support either the acidification or the putrefaction process in the intestinal flora. If the relationship between these two groups is in balance, the intestinal environment is slightly acidic. Lactic acid cultures thrive best in acidic environments while putrefactive bacteria prefer a more alkaline environment.

Undigested food residues after consuming high protein and fatty foods are used by the putrefactive bacteria in the intestinal flora. The metabolic products produced by a dominant putrefactive intestinal flora can stress the liver, cause bloating and gas and in part have carcinogenic effects in the long term. Fiber-rich diets, on the other hand, support an acidic intestinal flora, which supports peristalsis and protects against pathogens as well as cancerogenesis.

A well-balanced diet can largely balance the relationship between acidification and putrefaction. The intake of fat and protein should therefore be kept at a balanced and moderate healthy level.

Some ways to reduce fat and protein intake

- Eat lots of fruits and vegetables
- Avoid excessive intake of high-fat foods
- Eat lean fish, red meat and poultry
- Replace white flour products with whole grains
- Prepare the food carefully by, for example, steaming or baking in the oven rather than broiling, grilling or frying
- Make sure the fats you eat are good fats

This test does not replace medical consultation. Always seek medical attention if you experience severe symptoms

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