Muster, P3605	
Date of Birth 01.01.2000 w	
Barcode 43071402	
Request Code 2311164667	
Specimen collection date 16.11.2023	
Date of Receipt 16.11.2023 15:31	
Reporting Date 16.11.2023	

P3605 Muster

DAkkS Deutsche Akkreditierungsstelle D-ML-13147-01-00

Laboratoryreport

Sample Material: Hydrogen breath test kit

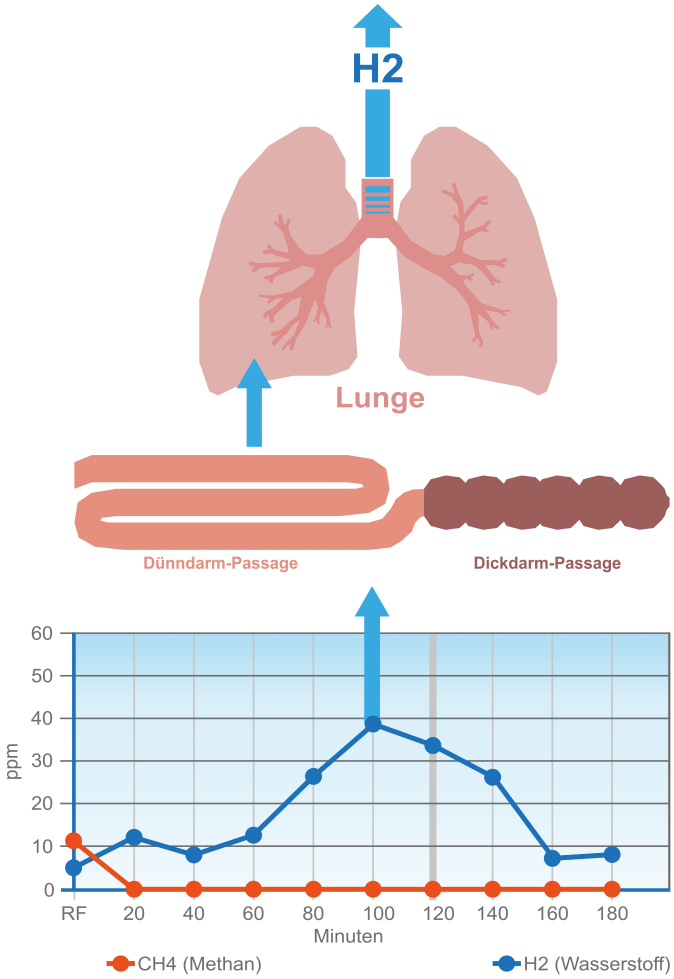
Test	Result	Unit	Initial Result	Norm
gastrointestinal diagnostics				
H2 breath-test (Lactulose):				
Lactulose H2-breath test (basal value)	5,0	ppm		< 20
Lactulose H2-breath test (2nd sample)	12,1	ppm		< 20
Lactulose H2-breath test (3rd sample)	8,0	ppm		< 20
Lactulose H2-breath test (4th sample)	12,6	ppm		< 20
Lactulose H2-breath test (5th sample)	**26,3**	ppm		< 20
Lactulose H2-breath test (6th sample)	**38,5**	ppm		< 20
Lactulose H2-breath test (7th sample)	**33,5**	ppm		< 20
Lactulose H2-breath test (8th sample)	**26,1**	ppm		< 20
Lactulose H2-breath test (9th sample)	7,2	ppm		< 20
Lactulose H2-breath test (10th sample)	8,1	ppm		< 20
Methane-breath-test (Lactulose):				
Methane-breath-test Lactulose (basal value)	11,3	ppm		< 13
Methane-breath-test Lactulose (2nd sample)	<13.0	ppm		< 13
Methane-breath-test Lactulose (3rd sample)	<13.0	ppm		< 13
Methane-breath-test Lactulose (4th sample)	<13.0	ppm		< 13
Methane-breath-test Lactulose (5th sample)	<13.0	ppm		< 13
Methane-breath-test Lactulose (6th sample)	<13.0	ppm		< 13
Methane-breath-test Lactulose (7th sample)	<13.0	ppm		< 13
Methane-breath-test Lactulose (8th sample)	<13.0	ppm		< 13

Methane-breath-test Lactulose (9th sample)	<13.0	ppm	< 13
Methane-breath-test Lactulose (10th sample)	<13.0	ppm	< 13

Allergy diagnostics

Hydrogen breath test (lactulose):

Lactulose is not utilised by the body and **cannot be absorbed**. The carbohydrate passes through the entire small intestine and enters the colon through the ileocecal valve into the colon.
Depending on the respiratory gas formed during the passage through the small intestine **different forms of** intestinal **overgrowth** can be detected. The classical **SIBO** (small intestinal bacterial overgrowth) leads to an increased of hydrogen (H2) in the exhalate. Due to the bacterial overgrowth in the small intestine small intestine leads to an increase in H2 in the exhaled air even before the 120th minute. A later increase in the H2 concentration is then due to the bacterial conversion in the colon after passage of the ileocecal valve.
In the presence of methanogenic bacteria, the formation of H2 can be completely or partially be superimposed by the formation of methane (CH4). As these are bacteria from the domain of the archaea, this is not referred to as bacterial overgrowth bacterial overgrowth, the phenomenon is referred to as **IMO** (intestinal methanogenic overgrowth). Here, too, the time limit is the 120th minute, since after that lactulose has entered the colon. An IMO is Always is always based on a SIBO.



There is a **bacterial overgrowth** of the small intestine (overgrowth syndrome).

Commment

In the case of overgrowth syndrome, bacterial overgrowth in the small intestine leads to the metabolisation of the ingested lactulose by the faulty flora. This produces hydrogen, which is exhaled and leads to an increase in the H2 concentration in the exhaled air. This results in SIBO (small intestinal bacterial overgrowth).
In the presence of methanogenic bacteria, the hydrogen formed can be completely or partially converted into methane, which can then be detected in the exhaled air instead of hydrogen. This would be an indication of an overgrowth syndrome even if the measured hydrogen values are unremarkable.

This medical report has not yet been medically validated