



Precision Health Science

About PrecisionGut

The gut microbiome consists of 95% gut bacteria. These bacteria are crucial for how you feel and also how healthy you are. They train your immune system from birth and profoundly influence the development of many serious diseases such as irritable bowel syndrome, leaky gut syndrome, diabetes, obesity, Parkinson's disease and even colon cancer.

The **PrecisionGut** microbiome analysis is the lifestyle product of Precision Health Science, which uses the most modern technologies, intelligent algorithms and the latest scientific publications to create the **PrecisionGut** microbiome report. Precision Health Science has the ISO 15189:2012 accreditation for laboratory quality standards. The **PrecisionGut** analysis is conducted by an acclaimed European medtech company, which worldwide has the only double certified product according to ISO 13485 and ISO 9001 in the microbiome field. This is crucial and stands for the quality of the analysis. In order to ensure the safety of the product, the European medtech company has a quality management system that meets the relevant requirements and optimizes processes so that risks and errors are avoided or minimized as much as possible. ISO 13485 regulates the requirements for quality management systems for producers of medical devices, thus ensuring the high standards of development, production and marketing of medical devices. ISO 9001 also ensures that continuous improvements are made to the products and that measures are taken to safeguard the product.

The innovation of the **PrecisionGut** analysis lies in the unique combination of next- generation DNA sequencing (NGS) with a growing knowledge database on the interactions of the microbiome with the human organism.

Methods & Restrictions

For the **PrecisionGut** microbiome analysis bacterial DNA is extracted from the stool sample, a marker gene (16S) present in all bacteria is amplified by polymerase chain reaction (PCR), and then analyzed by next-generation DNA sequencing (NGS). NGS is a method for determining individual DNA base pairs accurately. The European medtech company analyzes the individual DNA base pairs of gut bacteria, which enables the identification of culturable as well as non-culturable bacteria. The sequence data is processed using a proprietary phylogenetic analysis algorithm. This analysis leads to the identification of your gut bacterial microbiome.

The development of the analytical test as well as the bioinformatic analysis and interpretation of the data after sequencing is performed by the certified European medtech company. Hence, the company ensures standardization of the procedural steps, which is essential for microbiome testing and enables comparison to follow-up tests.