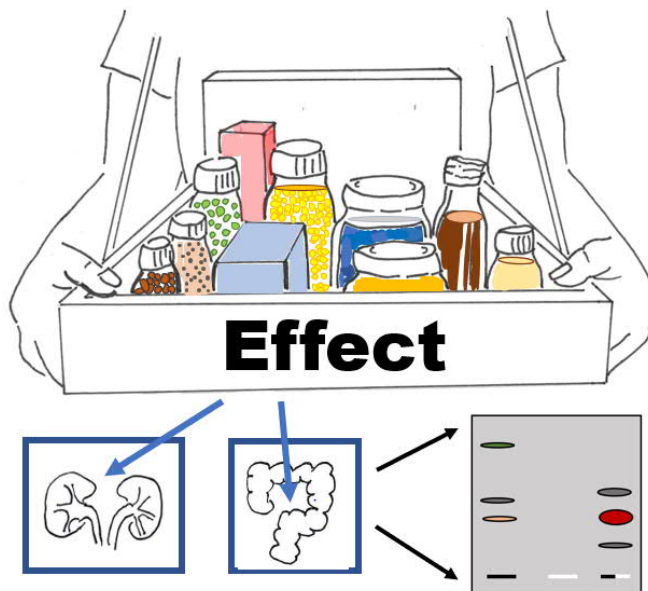


# Test system for food by simulation of metabolism processes

Food safety, analytics, biological effectiveness

## DESCRIPTION OF TECHNOLOGY / PRODUCT

More and more chemical substances are used in food without knowing their effect on the human body, especially the digestive system. These chemical substances can trigger unpleasant consequences such as intolerances and allergies or even be involved in tumour diseases. The new test procedure simulates on a carrier material how the chemical substance or food acts on a certain metabolic process of the human body, e.g. on the gastrointestinal tract. On this carrier, both an analysis of the substance composition of a food and a subsequent biological test are possible. Thus it is possible to show negative but also positive effects of chemical substances or food on human metabolic processes.



Source: TransMIT GmbH

## SCOPE OF APPLICATION

The fields of application are medical nutritional advice, as well as food and environmental analysis. The method can be used in any analytical or microbial laboratory that is accredited to test food and environmental samples.

## AT A GLANCE ...

### TECHNOLOGY FIELD / SCOPE OF APPLICATION

food safety, nutritional medicine, pharmaceutical research

### MARKET / BRANCH

- food analysis
- nutritional advice
- functional food
- health food

### USP

- Reliable and fast procedure
- Analytics and biological effectiveness on one carrier
- Less expensive than conventional methods

### DEVELOPMENT STATUS

- ✓ Alignment of gastrointestinal processes
- ✓ Tests on various food samples
- ✓
- Next step: approval for food analysis

### PATENT PORTFOLIO

Priority application filed at the EPA European Patent Office on 17.07.2020

REFERENCE NO.: **TM 1096**

## ADVANTAGES COMPARED TO STATE OF THE ART

The method combines for the first time on a single carrier the analysis of substance mixtures by means of high-performance thin-layer chromatography with biological tests to demonstrate the biological effectiveness of the separated substances. This is done quickly, reliably and cost-effectively. Very little sample material is required. A variety of designs are possible, adapted to the most diverse metabolic processes. The method can also be applied to metabolic processes in animals.

## DEVELOPMENT STATUS

The functionality has already been successfully demonstrated with different food components and substance mixtures and their effect on the human gastrointestinal tract including the liver. The use of biological tests on the carrier material has been demonstrated with adherent cells and a variety of different bacterial species.

## MARKET POTENTIAL

The product idea lies in the market segment of nutritional medicine, medical analysis and food analysis.

In 2018, the Industry Association for Laboratory and Analytical Technology presented good sales figures and drew a positive balance: The 330 German manufacturers of analytical, bioanalytical and laboratory technology achieved a sales increase of 6.8 percent in 2018 compared to the previous year. Positive impulses came both from the domestic market (+4.3%) and, above all, from international business (+8.7%). The number of employees rose by 6.3% to around 47,000. In 2019, the sales growth was increased by 2.3%, and the industry expects a similar increase in sales for the following year.

## OFFER

On behalf of its shareholder Justus-Liebig-University Giessen, TransMIT GmbH is looking for cooperation partners or licensees for the production, distribution or further development in Germany, Europe, the USA and Asia.

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REFERENCE NO.: **TM 1096**