

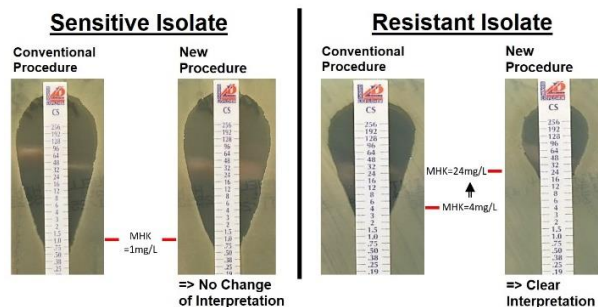
Simple and reliable detection of colistin-resistant bacteria

Medical diagnostics, resistant bacteria, food hygiene, saving antibiotics

DESCRIPTION OF TECHNOLOGY

Colistin is used in human medicine as an absolute reserve antibiotic. Before using, it should therefore be checked whether colistin resistance is already present.

However, conventional methods for colistin resistance determination are complex and are not reliable, particularly in the case of bacteria which carry a plasmid-localized colistin resistance mediated by the gene *mcr-1*.



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With the new nutrient medium colistin-resistant Gram-negative bacteria can be detected clearly and reliably in different biological samples. For the first time, all existing European Commission procedures for the testing of antimicrobial susceptibility (EUCAST) can be used, including agar diffusion-based methods. The technology can also be used in the high throughput process.

APPLICATION FIELDS

Application fields are in microbiological or clinical diagnostics, in food and hygiene testing. All solid or liquid biological samples can be used.

AT A GLANCE ...

Application fields

- Hygiene
- Food analysis
- Clinical diagnostics

Business

- Microbiological laboratories
- Central laboratories
- Food analysis

USP

- Detection of colistin-resistant Gram-negative bacteria with plasmid-localized colistin resistance and chromosomally localized resistance
- Easy-to-use, cost-effective and, above all, reliable process, suitable for routine use

Development status

- Use in the routine laboratory in the hospital of the University of Giessen
- Further steps: Approval of the European Commission for the Testing of Antimicrobial Susceptibility (EUCAST)

Patent status

Priority application filed on 01.06.2017 with the European Patent Office.

ADVANTAGES OF THE PRIOR ART

With the new technology, all colistin-resistant Gram-negative bacteria can be detected, including those which have less colistin resistance, e. g. such as in the frequently mcr-1-mediated colistin resistance.

STATE OF THE PRODUCT DEVELOPMENT

Prototypes are available and can be passed on request.

MARKET POTENTIAL

The area of **clinical microbiology** recorded a turnover of about 750 million US \$ in 2016 in Western Europe. At a moderate annual average growth rate of 2.8%, the market research institute Frost & Sullivan predicts a forecast to grow its market volume to US \$ 863.8 million by 2021 in this subsegment.

The market segment of **food diagnostics and analysis** reached a level of US \$ 2.6 billion in 2012. For the period from 2012 to 2017, Frost & Sullivan calculated an annual growth of 17.5%.

COOPERATION OPPORTUNITIES

On behalf of its shareholder Justus-Liebig-Universität Giessen, TransMIT GmbH is looking for co-operation partners or licensees for distribution / further development in Germany, Europe, USA and Asia.

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