Get the full microbial picture by metagenomic analyses

OMNI Track detects bacteria, yeasts, and moulds - both cultivable and uncultivable microorganisms - within hours, enabling fast reaction to ensure product safety and quality. The solution is offered either as a service where samples are shipped to us for analysis (**OMNI Track**) or as a fully implemented analytical method in your lab (**OMNI Track Pro™**).

Our OMNI Track service packages:

OMNI Track

Analyses of any kind of food and food environmental samples as an **external service** performed at ISI Food Protection:

➲ Complete microbial overview on species level (bacteria, yeasts and moulds)
➲ Expert interpretation of results

	BASIC	PLUS
Service package OMNI Track BACTERIA	☑ Third Generation Sequencing (TGS) - Bacterial species – 16S rRNA gene	☑ TGS – 16S rRNA gene ☑ Cultivation on TSA-SB ☑ Expert interpretation of results
Service package OMNI Track FUNGI	☑ Third Generation Sequencing (TGS) – Fungal species – ITS	☑ TGS – ITS ☑ Cultivation on YGC ☑ Expert interpretation of results
Service package OMNI Track MICROFLORA	☑ Third Generation Sequencing (TGS) – Bacterial and fungal species	☑ TGS – 16S rRNA + ITS ☑ Cultivation on TSA-SB & YGC ☑ Expert interpretation of results

OMNI Track Pro™

Implementation and validation of the **full solution in your lab**:

OMNI Track Pro STARTER PACKAGE

☑ Guidance and support for setting up the lab
☑ Full theoretical and practical training
☑ Access to protocols and implementation
☑ Support with data analysis
☑ Troubleshooting

OMNI Track Pro MEMBERSHIP

☑ Ongoing assistance with data interpretation
☑ Technical support
☑ Back-up laboratory
☑ Access to new protocols
☑ Industry insights and updates

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Application examples:

Monitoring of hygiene status

application area	purpose	benefits
food processing environment: ● **Food contact surfaces**	Monitoring of the hygiene status of surfaces by analysing contact samples, swabs, etc. or of filtrates of the rinsing water if a flushing method is applied.	✓ Tracking the overall hygiene status ✓ Optimisation of hygiene measures ✓ Finding sources of contamination
food processing environment: ● **Air**	Assessment of microbial air quality and the resulting effects on food quality by analysing settle plates or filters from air samplers.	✓ Assessment and improvement of the microbial status ✓ Finding sources of contamination
food processing environment: ● **Water**	Assessment of microbial water quality (e.g. of process water) in filtrates of water samples.	✓ Monitoring of the microbial status ✓ Prevention of food contamination

Assessment of food raw materials and ingredients

application area	purpose	benefits
incoming quality control: ● **Raw materials**	Incoming inspection of raw materials (e.g. of raw milk, meat, fish, vegetables,..).	✓ Assessment of the microbiological quality of raw materials ✓ Avoiding contamination with pathogenic or spoilage microorganisms ✓ Control of process flows
incoming quality control: ● **Food Ingredients**	Microbial inspection of incoming goods (e.g. spices, herbs), Supplier evaluation.	✓ Assessment of the microbiological quality of ingredients ✓ Avoiding food contamination with pathogenic or spoilage microorganisms
incoming quality control and food processing: ● **Starter cultures**	Internal quality control of bulk starter culture, Quality control of direct starter cultures.	✓ Ensuring the quality and composition of either bulk starters or of direct starter cultures

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Application examples:

Supporting Quality Control

application area	purpose	benefits
food processing: ● **Fermentation processes**	Control of fermentation processes (traditional food fermentation and ripening processes, biotechnological processes such as precision fermentation).	✓ Fermentation monitoring and control ✓ Real-time detection of fermentation issues
food processing: ● **Overall process flow monitoring**	Monitoring of the microbial status throughout the entire manufacturing process up to the ready-to-eat product.	✓ Assessment of process steps regarding the impact on the microbial status ✓ Determination of contamination sources ✓ Optimisation of shelf-life and safety of food products
quality control: ● **Spoiled food samples**	Identifying the cause of spoilage.	✓ Detection of contamination source ✓ Enhancing preservation strategies

Supporting Product Development

application area	purpose	benefits
product development: ● **Storage tests**	Assessment of storage stability, determination of shelf life.	✓ Faster and more precise assessment of storage stability / shelf-life ✓ Identification of spoilage microorganisms enables food processors to implement efficient measures to ensure shelf-life
product development: ● **Challenge tests**	Monitoring of behaviour of pathogenic microorganisms as well as of the background microflora.	✓ Faster and more precise assessment of storage stability and food safety

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