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HOST DNA DEPLETION → DNA EXTRACTION

OUR DIAGNOSTIC KITS

MOLZYM PRODUCTS	MICROBIAL DNA EXTRACTION	DETECTION	PATHOGEN IDENTIFICATION
Micro-Dx™ CE IVD U-200-024 / U-200-048	**Automated protocol – SelectNA™ *plus* instrument required** Body fluids, tissues and swabs up to **1 ml** Extraction control included	Broad-range 16S/18S PCR assays and sequencing primer	Identification by Sanger sequencing and BLAST analyses
SepsiTest™-UMD CE IVD U-010-024 / U-010-048	**Manual protocol** Body fluids, tissues and swabs up to **1 ml** Extraction control included		
MolYsis-SN*plus*™ IVD CE IVD U-300-048	**Automated protocol – SelectNA™ *plus* instrument required** Body fluids, tissues and swabs up to **1 ml** Extraction control included	Possible analytic methods: NGS Metagenomic/Shotgun- or Whole Genome Sequencing, Targeted/Amplicon-Sequencing, PCR-Assays, Panel-Systems, Probes	

OUR RESEARCH KITS

MolYsis SelectNA™ *plus* D-450-048	**Automated protocol – SelectNA™ *plus* instrument required** Body fluids, tissues and swabs up to **1 ml**	Eluates suitable for various analyses methods: custom PCR assays, broad-range PCR assays + Sanger sequencing, panel systems, hybridization assays, specific assays, NGS, etc.	
MolYsis™ Basic5 D-301-050 / D-301-100	**Manual protocol** Body fluids up to **5 ml*** — To be combined with other DNA isolation systems		
MolYsis™ Complete5 D-321-050 / D-321-100	**Manual protocol** Body fluids up to **5 ml***		
Ultra-Deep Microbiome Prep G-020-025 / G-020-050	**Manual protocol** Body fluids, tissues and swabs up to **1 ml***		
Ultra-Deep Microbiome Prep10 G-030-025 / G-030-050	**Manual protocol** Body fluids, tissues and swabs up to **10 ml**		
Mastermix 16S Complete S-020-0100/0250/1000	**MolYsis™ kits recommended** Optional: custom DNA extraction systems	DNA-free 16S rDNA Assay (incl. SYBR Green I) targeting bacterial DNA	Set of Eubacterial Seq Primers S-775-100
Mastermix 18S Complete S-070-0100/0250/1000		DNA-free 18S rDNA Assay (incl. SYBR Green I) targeting fungal DNA	Panfungal Sequencing Primer S-785-100
Mastermix 16S Dye S-030-0100/0250/1000		DNA-free Mastermix (incl. SYBR Green I) for use with custom primers	
Mastermix 16S Basic S-040-0100/0250/1000		DNA-free Mastermix for use with custom primers or probes	

*Add-on kit for up to 10 ml body fluids available

Flexible solutions can be applied

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OUR WORKFLOWS

DIAGNOSTIC WORKFLOW CE IVD *

MOLZYM PRODUCTS	MOLYSIS™ Depletion of human DNA & isolation of bacterial & fungal DNA	PCR 16S & 18S Amplification of bacterial & fungal DNA	NO / YES	PATHOGEN IDENTIFICATION Sanger sequencing & BLAST analysis
Micro-Dx™ CE IVD	Automated	Eluates are analyzed by broad-range **16S and 18S PCR assays**		Up to **1300 bacteria and fungi identified** on species and genus level
SepsiTest™-UMD CE IVD	Manual			

IVD Compliance

MOLZYM PRODUCTS	MOLYSIS™ Depletion of human DNA & isolation of bacterial & fungal DNA	DETECTION & IDENTIFICATION OF PATHOGENS Eluates can be used with a wide range of molecular methods
MolYsis-SN*plus*™ IVD CE IVD	Automated	**Metagenomic/Shotgun or Whole Genome Sequencing** **Targeted/Amplicon-Sequencing** **PCR-Assays, Panel-Systems, Probes**

IVD Compliance

SEARCH WORKFLOW RUO **

MOLZYM PRODUCTS	MOLYSIS™ Depletion of human or animal DNA & isolation of bacterial & fungal DNA	DETECTION & IDENTIFICATION OF BACTERIA & FUNGI Eluates can be used with a wide range of molecular methods
MolYsis-SelectNA™ *plus*	Automated	**Molzym PCR assays + Sanger sequencing** (e.g. Mastermix 16S Complete, Mastermix 18S Complete, 16S/18S sequencing primer) **Metagenomic/Shotgun or Whole Genome Sequencing** (e.g. Library prep and NGS, Bio-IT) Targeted/Amplicon sequencing (e.g. amplicon of target, library prep and NGS of amplicons, Bio-IT) **Various analyses methods** (e.g. custom PCR assays, Sanger sequencing, panel systems, hybridization assays, probes, specific assays...)
MolYsis™ Basic5 + custom DNA isolation	Manual	
MolYsis™ Complete5		
Ultra-Deep Microbiome Prep & Prep10		

* The Kits comply with the following European regulations and guidelines:
Micro-Dx™ and **SepsiTest™-UMD**: Guideline 98/79/EG for In-vitro-Diagnostic (**IVDD**); conversion to IVDR planned
MolYsis-SN*plus*™ IVD: Regulation (EU) 2017/746 for In-vitro-Diagnostic (**IVDR**)

** **MolYsis-SelectNA™*plus*, MolYsis™ Complete5, MolYsis™ Basic5, Ultra-Deep Microbiome Prep Kits, Mastermix 16S Complete, Mastermix 18S Complete, Mastermix 16S Dye, Mastermix 16S Basic** are for Research Use Only (RUO) and not for use in diagnostic procedures.

MolYsis™ — Host DNA Depletion

MolYsis™

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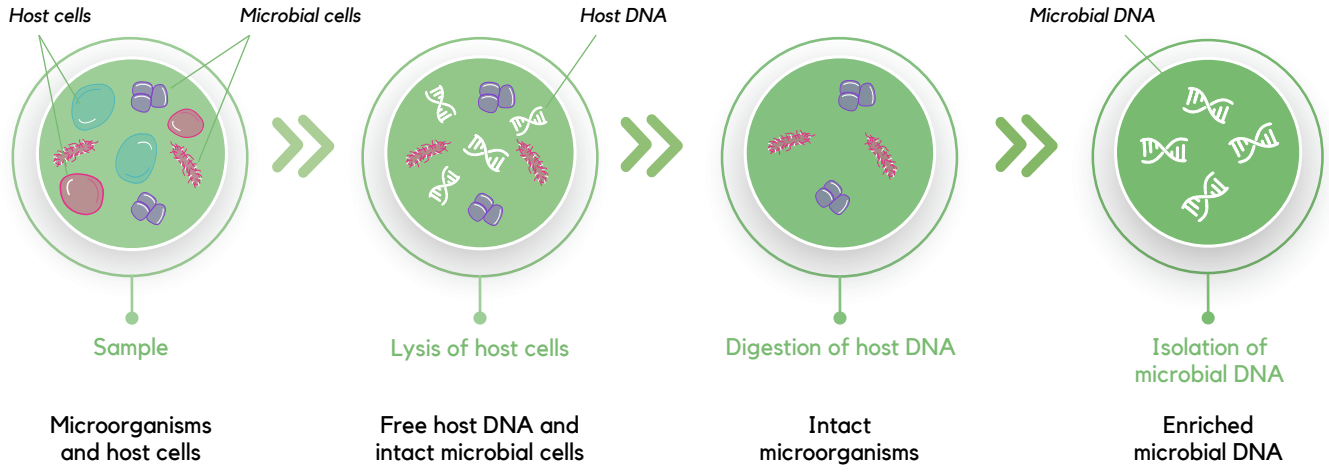
DEPLETION OF HOST DNA FOR SIGNIFICANTLY IMPROVED MICROBIAL ANALYSIS

MolYsis™ addresses the challenge that microbial DNA is severely outnumbered by host DNA in complex human or animal samples. With our proprietary and unique technology, **MolYsis**™, host cells are selectively lysed and up to 99% of host DNA is depleted. In a second lysis step, intact bacteria and fungi cells are lysed and the microbial DNA is purified. The entire workflow can be performed manually or fully automated on our **SelectNA**™***plus*** device. The significantly improved microbial to host DNA ratio ensures highest sensitivities for subsequent NGS, PCR and other molecular microbiological methods.

OUR TECHNOLOGY



PRODUCT FEATURES

- Depletion of host (human or animal) DNA
- Protocols for body fluids, swabs & tissues
- Ideally suited for PCR & NGS applications
- Broad-range lysis of bacteria & fungi
- DNA-free reagents & plastics
- Manual & automated solutions

APPLICATIONS OVERVIEW

The efficient depletion of host DNA and the use of ultra-clean reagents lead to significantly improved detection of bacteria and fungi - even at very low loads. The utility of **MolYsis**™ has been successfully proven in a wide range of applications:

- PATHOGEN DETECTION & IDENTIFICATION
- MICROBIOME ANALYSIS
- CONTAMINATION TESTING
- MONITORING OF DISEASES

Request a quote at info.molzym@bruker.com

MOLYSIS™ BASIC5

MolYsis™ Basic5 is our most flexible solution for depleting host DNA from body fluids and can perfectly be used as a pre-treatment step in combination with your own DNA isolation kit, including manual and automated systems.

MolYsis™ Basic5 *Body fluids*	**≤ 5 ml**	50 reactions	D-301-050
		100 reactions	D-301-100

MOLYSIS™ COMPLETE5

With the **MolYsis™ Complete5** we combine the host DNA depletion with a column-based purification of enriched bacterial and fungal DNA from body fluids. All reagents, plastics and columns provided are guaranteed to be free of microbial DNA contaminations, ensuring reliable and highly sensitive analyses.

MolYsis™ Complete5 *Body fluids*	**≤ 5 ml**	50 reactions	D-321-050
		100 reactions	D-321-100

ULTRA-DEEP MICROBIOME PREP KITS

If you want to analyze tissue or swab samples in addition to body fluids, the **Ultra-Deep Microbiome Prep** kits are the perfect choice. The kits contain all reagents for tissue pre-treatment, host DNA depletion and microbial DNA extraction and purification.

Ultra-Deep Microbiome Prep *Body fluids, tissues & swabs*	**≤ 1 ml** **≤ 0,5 cm³**	25 reactions	G-020-025
		50 reactions	G-020-050
Ultra-Deep Microbiome Prep10 *Body fluids, tissues & swabs*	**1 - 10 ml** **≤ 0,5 cm³**	25 reactions	G-030-025
		50 reactions	G-030-050

AUTOMATION MOLYSIS-SELECTNA™*PLUS*

With the **SelectNA™*plus*** benchtop instrument, we have developed the very first automated system that fully combines host DNA depletion and microbial DNA isolation from body fluids, swabs and tissue samples. By using the **MolYsis-SelectNA™*plus*** kit, one to 12 samples can be processed in parallel, ensuring low hands-on time and contamination-free DNA preparations.

MolYsis-SelectNA™*plus* *Body fluids, tissues & swabs*	**≤ 1 ml** **≤ 0,5 cm³**	48 reactions	D-450-048

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All MolYsis™ and Ultra-Deep Microbiome Prep products are for Research Use Only [RUO] and not for use in diagnostic procedures.

SepsiTest™-UMD — Broad-Range MDx

SepsiTest™-UMD CE IVD

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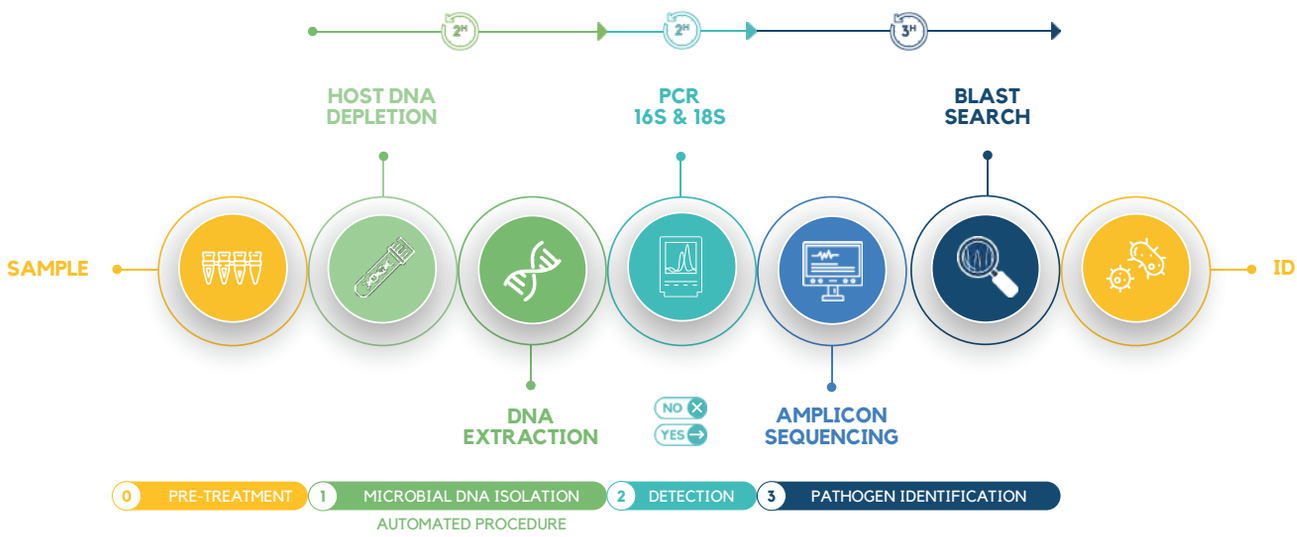
CULTURE-INDEPENDENT MOLECULAR DETECTION OF PATHOGENS

SepsiTest™-UMD is a CE IVD molecular diagnostic test for the *in vitro* diagnosis of pathogens from clinical samples without the need for culture. **SepsiTest™-UMD** is based on a single protocol, including human DNA depletion (MolYsis™), microbial DNA enrichment and extraction from intact bacteria & fungi, followed by 16S and 18S rDNA broad-range PCR and sequencing analysis. With this broad approach and the capability to detect even rare, fastidious and non-growing pathogens, it is the perfect solution to complement standard culture methods in routine diagnostic laboratories.

PRODUCT FEATURES

- Depletion of human DNA ahead of microbial cell lysis for improved sensitivity
- Efficient lysis of bacteria & fungi
- Universal 16S & 18S rDNA PCR detection assays
- Extraction and PCR controls included
- All reagents are free of microbial DNA for highest accuracy of results
- Up to 40 PCR cycles without background
- More than 1 300 bacteria & fungi identified on species & genus level
- Protocols for body fluids, swabs & tissues

DIAGNOSTIC WORKFLOW*



**Steps 0, 1 and 2 are IVD compliant; Step 3 is the responsibility of the user and not part of the IVD workflow.*

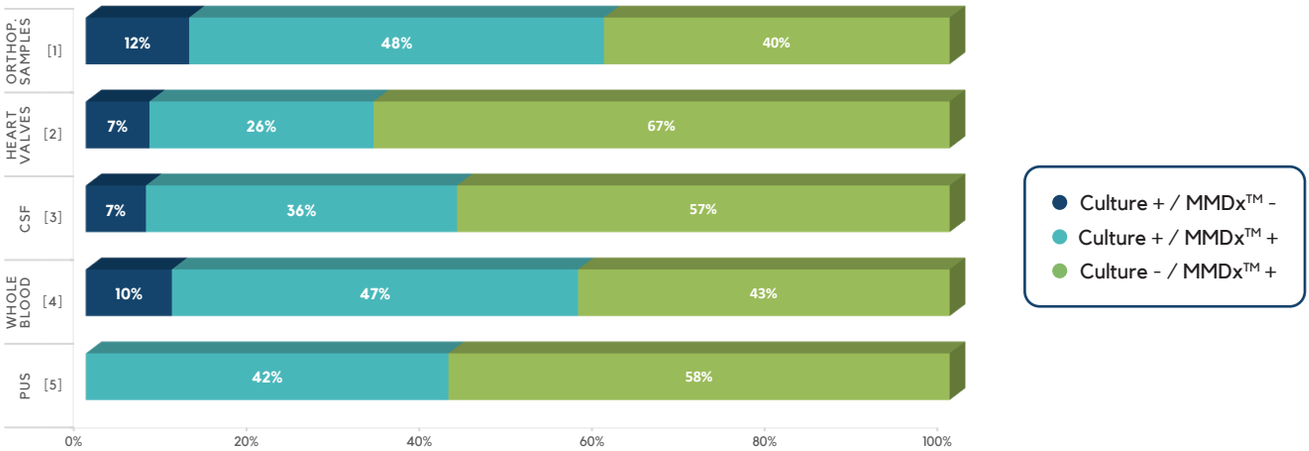
APPLICATIONS OVERVIEW

- COMMON INFECTIOUS DISEASES
- DISEASES BY RARE/FASTIDIOUS PATHOGENS
- SEPSIS
- ENDOCARDITIS
- ORTHOPEDIC INFECTIONS
- MENINGITIS

Request a quote at info.molzym@bruker.com

DIAGNOSTIC ADDED VALUE

Since its release, **SepsiTest™-UMD** has proven to be an accurate and rapid tool for the identification of pathogens - growing or static - directly from samples. The clinical utility was evaluated by analyzing its diagnostic added value especially in culture-negative cases.



Ratio of positive results by culture, MMDx™ or both methods obtained from orthopedic samples, heart valves, CSF, whole blood and pus

A large number of independent studies show that **SepsiTest™-UMD**, as part of Molzym's Molecular Diagnostic Solutions (MMDx™), provides reliable clinical results for better and faster patient management, including therapeutic decisions.

- MMDx™ increases the rate of diagnosis of true infections by the identification of pathogens in culture-negative samples
- Reduced time-to-result: MMDx™ identifies pathogens 12 hours[2] to 8 days[6] earlier than culture
- Diagnosis of true infections in patients who have already started antibiotic therapy
- MMDx™ outcomes support clinicians in decisions on antibiotic therapy: initiation, adjustment or de-escalation

ORDER INFORMATION

SepsiTest™-UMD CE IVD *Manual pathogen DNA extraction and broad-range PCR analysis directly from body fluids, swabs and tissues*	24 reactions	U-010-024
	48 reactions	U-010-048
UMD Tubes RUO *Prefilled vials containing cryo-protectant for storage of 0,4 - 2 ml fluid samples at -70 to -80 °C*	20 tubes	Z-801-020

Automation: The process of human DNA depletion and microbial DNA isolation from body fluids, swabs and tissue samples is also available fully automated on the **SelectNA™*plus*** instrument.

References:
[1] Grif et al., J. Clin. Microbiol. 2012, 50: 2250; [2] Kühn et al., J. Clin. Microbiol. 2011, 49: 2919; [3] Meyer et al., J. Clin. Microbiol. 2014, 52: 1751; [4] Wellinghausen et al. 2009, J. Clin. Microbiol 47: 2759; [5] Gabas et al., J. Infect.. 2019, 79: 462-470; [6] Marsch et al., Interact. Cardia Vas. Thorac Surg. 2015,20: 589-509.

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SepsiTest™-UMD and Add-On 10 are CE IVD-marked in EU and not for diagnostic use in the USA. UMD Tubes are for Research Use Only [RUO] and not for use in diagnostic procedures.

Micro-Dx™ — Broad-Range MDx

Micro-Dx™ CE IVD

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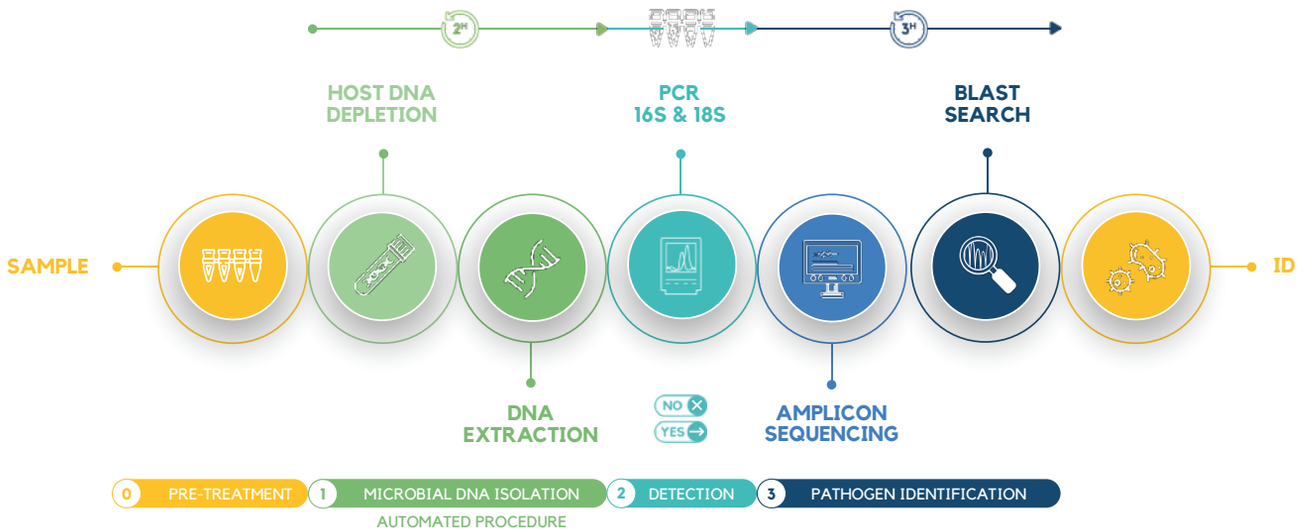
CULTURE-INDEPENDENT MOLECULAR DETECTION OF PATHOGENS

Molecular analysis of microbes directly from samples can be challenging as the contained human DNA compromises the sensitivity of broad-range assays. **Micro-Dx™** addresses this problem and is therefore a unique CE IVD test for culture-free diagnosis of bacterial and fungal targets directly from samples. It includes an automated protocol for depletion of human DNA prior to microbial DNA extraction and purification. For detection of microbial DNA, 16S & 18S rDNA broad-range PCR assays are used, with a first result after only 4 hours. Sanger sequencing and BLAST analysis are applied to identify the pathogens on species or genus level.

PRODUCT FEATURES

- Fully automated depletion of human DNA & isolation of bacterial and fungal DNA
- Broad-range 16S & 18S rDNA PCR detection assays
- One process for body fluids, swabs & tissues
- Flexible capacity of 1-12 samples per run
- All reagents are free of microbial DNA for highest accuracy

DIAGNOSTIC WORKFLOW*



**Steps 0, 1 and 2 are IVD compliant; Step 3 is the responsibility of the user and not part of the IVD workflow.*

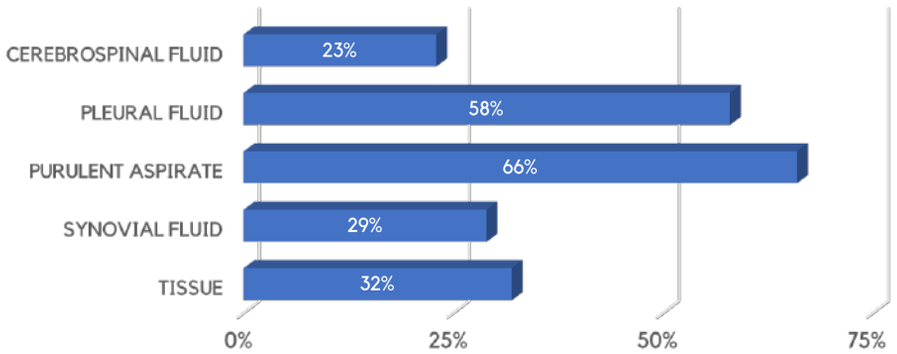
APPLICATIONS OVERVIEW

- COMMON INFECTIOUS DISEASES
- DISEASES BY RARE/FASTIDIOUS PATHOGENS
- ENDOCARDITIS
- ORTHOPEDIC INFECTIONS
- MENINGITIS

Request a quote at info.molzym@bruker.com

DIAGNOSTIC ADDED VALUE

Micro-Dx™ as part of Molzym's Molecular Diagnostic Solutions (MMDx™) is a valuable method for the diagnosis of infectious agents, having the advantage of being culture-independent and therefore being able to even detect rare, challenging and non-growing pathogens.



Positive results [%] with Micro-Dx™ in culture-negative samples[1]

The depletion of human DNA in combination with the ultra-pure reagents enables highly sensitive detection of pathogens and allow treatment decisions to be made based on these results[1],thus improving patient care.

- MMDx™ identifies relevant pathogens in culture-negative samples and in samples from patients treated with antibiotics
- Shorter time-to-result compared to culture: MMDx™-based diagnosis can be made within 7 hours
- Improved pathogen identification: 64% higher positivity rate compared to in-house 16S assays[2]
- Added value in culture-negative infections: Change of antimicrobial treatment in 38% of PCR-positive and 7% of PCR-negative cases[1]

ORDER INFORMATION

Micro-Dx™ CE IVD *Automated pathogen DNA extraction and broad-range PCR analysis directly from body fluids, swabs and tissues*	24 reactions	U-200-024
	48 reactions	U-200-048
Pipette Tips *DNA-free pipette tips for use with SelectNA™plus instrument*	2x [2x 96] tips	D-925-024
	4x [2x 96] tips	D-925-048
	8x [2x 96] tips	D-925-096
Waste bags *For SelectNA™plus instrument*	500 pieces	D-928-500
SelectNA™*plus* CE IVD *Bench-top instrument for host DNA depletion and pathogen DNA extraction*	1 unit	D-400-001
UMD Tubes RUO *Prefilled vials containing cryo-protectant for storage of 0,4 - 2 ml fluid samples at -70 to -80 °C*	20 tubes	Z-801-020

References:
[1] Marbjerg et al., Diagn Microbiol Infect Dis. 2020, 22: 115028; [2] Schubert, ECCMID 2017, oral presentation OS0779

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Micro-Dx™ and SelectNA™plus are CE IVD-marked in EU and not for diagnostic use in the USA. UMD Tubes are for Research Use Only [RUO] and not for use in diagnostic procedures.

DNA-Free PCR Reagents

DNA-Free PCR Reagents

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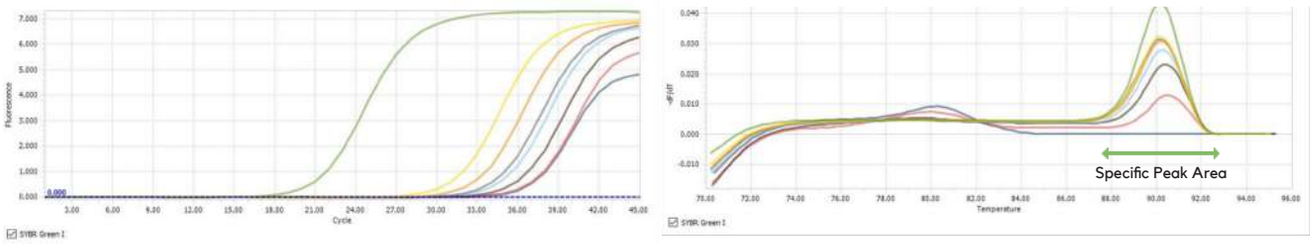
ULTRA-SENSITIVE DETECTION OF BACTERIAL AND FUNGAL DNA

A major challenge in PCR analysis of microbial targets are reagent-borne DNA contaminations, which can lead to false-positive results and are often associated with a loss of analytical sensitivity. Molzym's PCR reagents and 16S/18S assays are quality controlled and free of contaminating bacterial and fungal DNA while maintaining high amplification activity.
Our **Mastermix 16S/18S** products provide accurate results and guarantee high sensitivity in the detection of bacterial and fungal DNA, especially at low target loads. All 16S/18S Mastermixes and assays can be used with the most common commercial PCR and Real-Time PCR systems.

PRODUCT FEATURES



● 1 ng/µl, ● 2 pg/µl, ● 1 pg/µl, ● 500 fg/µl, ● 250 fg/µl, ● 125 fg/µl and ● 62 fg/µl
Negative control: ● DNA-free water, template DNA: 5 µl, final volume of PCR reaction: 25 µl

Detection sensitivity of Mastermix 16S Complete SYBR® Green I Real-Time PCR and melting curve analysis for Bacillus subtilis DNA

- Highly active Taq DNA polymerases
- All reagents are free of microbial DNA
- Ready-to-use assays for the detection of bacterial and fungal DNA targets
- PCR amplification up to 40 cycles without background
- High sensitivity down to femtogram level
- Suitable for PCR and Real-Time PCR

APPLICATIONS OVERVIEW

The **DNA-free PCR Reagents** are suitable for a wide range of applications and offer the flexibility you need for your experiments. From broad-range detection of microorganisms to custom assay development, incoming goods inspection, contamination testing, or internal quality control, our 16S/18S assays and mastermixes are perfect for detecting minute amounts of microbial DNA.

DETECTION OF BACTERIA & FUNGI

CUSTOM ASSAY DEVELOPMENT

CONTAMINATION TESTING

QUALITY CONTROL

Request a quote at info.molzym@bruker.com

BROAD-RANGE 16S & 18S MASTERMIX ASSAYS

Mastermix 16S Complete is the perfect assay for the detection of any bacterial DNA in samples. It contains universal primers covering the V3/V4 variable region of the 16S rRNA gene. With **Mastermix 18S Complete**, the variable region V8/V9 of the 18S rRNA gene is addressed, allowing the sensitive detection of fungal DNA.

Mastermix 16S Complete *Sensitive detection of bacterial DNA*	
100 reactions	S-020-0100
250 reactions	S-020-0250
1000 reactions	S-020-1000
Set of Eubacterial Sequencing Primers	
100 reactions	S-775-0100

Mastermix 18S Complete *Sensitive detection of fungal DNA*	
100 reactions	S-070-0100
250 reactions	S-070-0250
1000 reactions	S-070-1000
Panfungal Sequencing Primers	
100 reactions	S-785-0100

MASTERMIXES FOR USE WITH CUSTOM PRIMERS

Highest flexibility is offered by the Dye and Basic Mastermixes, as they are designed for the use with your customized primer sets. **Mastermix 16S/18S Basic** works with any primers with or without probes. **Mastermix 16S/18S Dye** already contains a fluorescent dye and is ideally suited for Real-Time PCR and melting curve analysis.

Mastermix 16S/18S Dye *Includes SYBR Green I for Real-Time PCR*	
100 reactions	S-030-0100
250 reactions	S-030-0250
1000 reactions	S-030-1000

Mastermix 16S/18S Basic *Mastermix for use with custom primers*	
100 reactions	S-040-0100
250 reactions	S-040-0250
1000 reactions	S-040-1000

DNA-FREE TAQ DNA POLYMERASES

Our **DNA-free Taq DNA polymerases** are highly active and the ideal choice for the ultra-sensitive analysis of bacterial and fungal DNA - down to the femtogram level.

MolTaq 16S/18S *DNA-free Taq DNA polymerase*	
100 units	P-019-0100
500 units	P-019-0500

Hot MolTaq 16S/18S *Aptamer stabilized DNA-free Taq DNA polymerase*	
100 units	P-080-0100
500 units	P-080-0500

DNA-FREE WATER

Our **DNA-free Water** is a PCR-grade microbial DNA-free water and therefore particularly suited for molecular microbiology applications demanding highest sensitivity and accuracy of analysis.

DNA-Free Water	
10 x 1,7 ml	P-020-0003

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All DNA-free PCR Reagents are for Research Use Only [RUO] and not for use in diagnostic procedures.

MolYsis-SN*plus*™ IVD – Automated Host DNA Depletion

MolYsis-SN*plus*™ IVD

CE IVD

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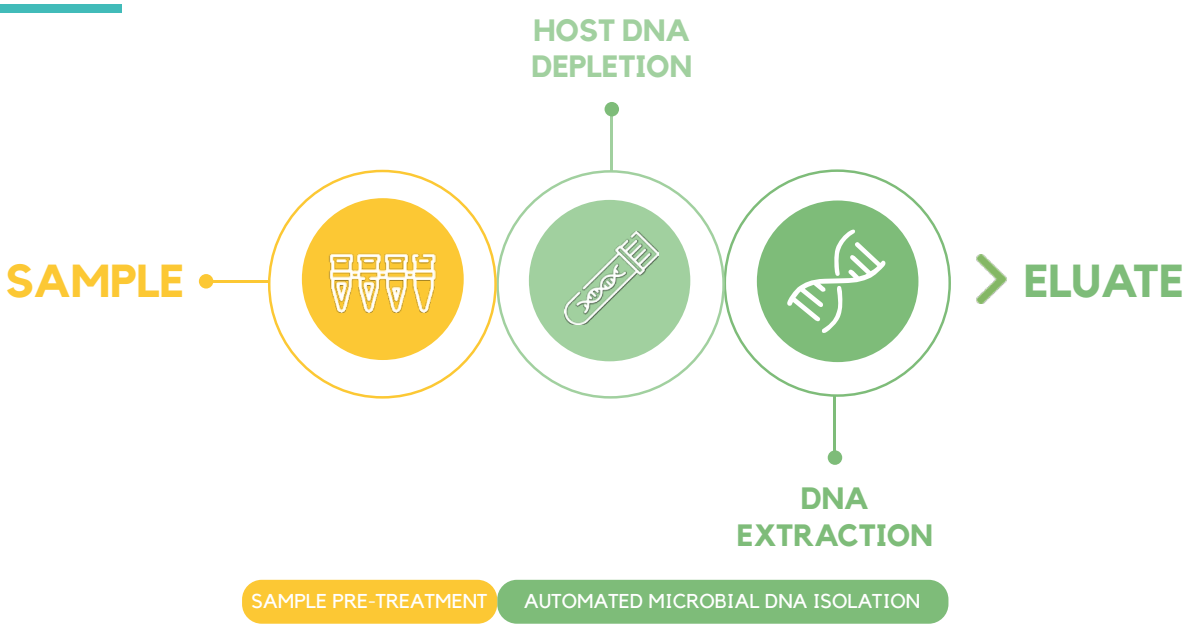
INTRO MolYsis-SN*plus*™ IVD

The **MolYsis-SN*plus*™ IVD** kit has been developed with the objective of providing laboratory professionals with a tool that facilitates the automated extraction of bacterial and fungal DNA from human samples, while simultaneously depleting the human DNA background. The presence of large amounts of human DNA can introduce "background noise" when using molecular techniques such as PCR or Next Generation Sequencing (NGS). The combination of human DNA depletion with contamination-free reagents and plastics maximizes the chances of detecting microbial DNA directly from human samples even at low levels, ensuring that even trace amounts can be captured and analysed. The method has been validated for a wide range of samples, including body fluids, swabs, and tissues.

PRODUCT FEATURES

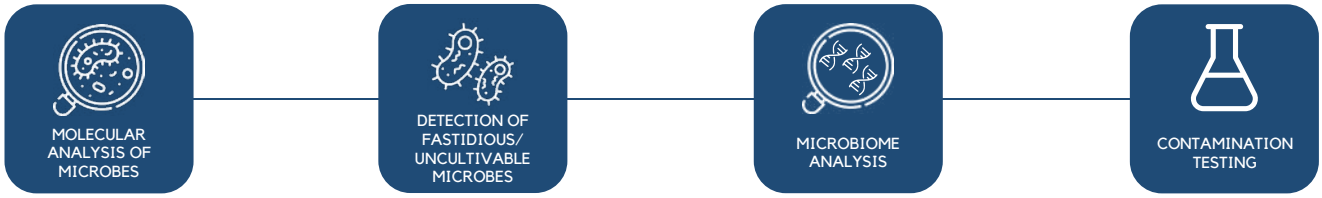
- Fully automated process on the **SelectNA™*plus*** device with flexible capacity of 1-12 samples per run
- Depletion of human DNA & isolation of bacterial and fungal DNA
- One process for body fluids, swabs & tissues
- All reagents are free of microbial DNA, no false-positive results from „kitome"

DIAGNOSTIC WORKFLOW



APPLICATIONS OVERVIEW

Human DNA depletion is a powerful tool used for increasing the efficiency and accuracy of microbial DNA analysis in a wide variety of fields, from clinical diagnostics to quality control and research.



Request a quote at info.molzym@bruker.com

DIAGNOSTIC ADDED VALUE

Detecting bacteria or fungi in human samples can be challenging, particularly when pathogens are present in minimal amounts. The removal of human DNA from samples greatly enhances the ability to detect these microorganisms, enabling the identification and analysis of even trace levels of microbial DNA. This method, in combination with ultrapure reagents, is critical for the accurate extraction of microbial DNA and plays a crucial role in the molecular-based diagnosis of infectious agents directly from patient samples.

Reduces Background Noise
MolYsis-SN*plus*™ IVD removes the overwhelming amount of host DNA that can interfere with the microbial analysis.

Improves Sequencing Efficiency
Host DNA depletion allows deeper sequencing coverage for microbial targets in human samples.

Contamination-free Workflows
Clean reagents and consumables reduce the risk of reagent-borne DNA contamination, which can lead to false-positive results, especially in highly sensitive applications like PCR or NGS.

Specificity in Sequencing
In NGS or Sanger sequencing, even trace amounts of contaminating DNA can affect the analysis. The use of DNA-free reagents ensures higher specificity, as the sequencing focus lies on the target DNA.

ORDER INFORMATION

MolYsis-SN*plus*™ IVD CE IVD *Automated human DNA depletion and pathogen DNA extraction directly from body fluids, swabs and tissues; Extraction control DNA included*	48 reactions	U-300-048

Complementary Products for MolYsis-SN*plus*™ IVD

SelectNA™*plus* CE IVD *Benchtop instrument for host DNA depletion and pathogen DNA extraction*	1 unit	D-400-001
Pipette Tips *DNA-free pipette tips for use with SelectNA™plus instrument*	2x [2x 96] tips	D-925-024
	4x [2x 96] tips	D-925-048
	8x [2x 96] tips	D-925-096
Control PCR *(for research use only)* *Only for use with* **MolYsis-SN*plus*™ IVD**. *Internal extraction control assay for monitoring the correct function of the DNA extraction and purification process of MolYsis-SNplus™ IVD*	48 reactions	S-080-0048

MolYsis-SN*plus*™ IVD complies with the following European regulations:
Regulation (EU) 2017/746 on In Vitro Diagnostic Medical Devices (**IVDR**) (Risk Class A)
SelectNA™*plus* device complies with the following European directives and standards:
Directive 98/79/EC on In Vitro Diagnostic Medical Devices (**IVDD**); Regulation (EU) 2017/746 on In Vitro Diagnostic Medical Device Regulation (**IVDR**) (Risk Class A); 2014/35/EU Low Voltage Directive; 2014/30/EU Electromagnetic Compatibility (**EMC**) Directive

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MolYsis-SN*plus*™ IVD and SelectNA™*plus* are not for diagnostic use in the USA.

SelectNA™ *plus* — Technical Specifications

SelectNA™*plus*

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INSTRUMENT FOR AUTOMATED HOST DNA DEPLETION & MICROBIAL DNA ISOLATION

The **SelectNA™*plus*** is the first automated benchtop instrument that fully combines **MolYsis™** host DNA depletion and microbial DNA isolation. The device is compatible with MolYsis™-based DNA extraction kits and validated for body fluids, swabs and tissue samples. The process utilizes an innovative vacuum-controlled technology for the depletion of host DNA and enrichment of pathogens followed by isolation of microbial DNA; an optimal solution for low load samples with only small amounts of microbial DNA. The controlled environment within the device is ideal for minimizing the risk of contamination from airborne sources and handling errors. The isolated DNA can be used for subsequent molecular analysis such as PCR, NGS or other methods.

KEY FEATURES

- Walk-away benchtop instrument
- Automated host DNA depletion (**MolYsis™** technology)
- Isolation of bacterial & fungal DNA
- Vacuum-driven DNA purification system
- Contamination-free reagents & plastics
- Ideally suited for culture-independent molecular analysis

TECHNICAL INFORMATION

Capacity	Flexible: up to 12 samples per run
Samples	Body fluids up to 1 ml, swabs, tissues
Dimensions	(H) 600 x (D) 690 x (W) 650 mm; with open door (H) 1000 mm
Power & Frequency	100-240 V, VAC 5A, 50-60 Hz
Weight	60 kg
Software	Embedded
Peristaltic Pump	4 lines; dispensing mode and accuracy +0%/-10%
Liquid Level Detection	Pressure monitoring system
DNA Purification	Column-based, vacuum-driven
Operator Interface	Control panel with display and control button
Decontamination	Integrated UV light
Consumables & Reagents	Free of microbial DNA contaminations
Manufacturer	Bee Robotics Ltd, UK

Request a quote at info.molzym@bruker.com

APPLICATION OVERVIEW

The analysis of microorganisms using molecular methods directly from clinical samples can be challenging. Host DNA often overwhelms the small amount of microbial DNA, which reduces the sensitivity of molecular detection methods such as PCR or NGS. With MolYsis™, host DNA is depleted in samples before DNA from intact microorganisms is extracted and purified. The efficient depletion of host DNA and the use of high pure reagents lead to increased detection of microorganisms even at very low loads. The use of the SelectNA™*plus* instrument in combination with MolYsis™ based DNA extraction kits is ideal for, but not limited to, the following applications:

ORDER INFORMATION

SelectNA™*plus* CE IVD *Benchtop instrument for host DNA depletion and pathogen DNA extraction*	1 unit	D-400-001

Kits to be used with the SelectNA™*plus* instrument:

Micro-Dx™ CE IVD *Automated host DNA depletion and pathogen DNA extraction combined with broad-range PCR analysis directly from body fluids, swabs and tissues; Extraction control DNA included*	24 reactions	U-200-024
	48 reactions	U-200-048
MolYsis-SN*plus*™ IVD CE IVD *Automated host DNA depletion and pathogen DNA extraction directly from body fluids, swabs and tissues; Extraction control DNA included*	48 reactions	U-300-048
MolYsis-SelectNA™*plus* RUO *Automated host DNA depletion and pathogen DNA extraction directly from body fluids, swabs and tissues*	48 reactions	D-450-048
Pipette Tips *DNA-free pipette tips for use with SelectNA™plus instrument*	2x [2x 96] tips	D-925-024
	4x [2x 96] tips	D-925-048
	8x [2x 96] tips	D-925-096

The SelectNA™plus device and CE IVD kits comply with the following European directives and standards:

SelectNA™plus device: *98/79/EC In Vitro Diagnostic Medical Device Directive; EU 2017/746 In Vitro Diagnostic Medical Device Regulation (Risk Class A); 2014/35/EU Low Voltage Directive; 2014/30/EU Electromagnetic Compatibility (EMC) Directive;*
Micro-Dx™: *98/79/EC In Vitro Diagnostic Medical Device Directive*
MolYsis-SNplus™ IVD: *EU 2017/746 In Vitro Diagnostic Medical Device Regulation (Risk Class A)*
The SelectNA™plus device and CE IVD kits are intended for professional use.

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SelectNA™plus, Micro-Dx™ and MolYsis-SNplus™ IVD are CE IVD-marked in EU and not for diagnostic use in the USA. MolYsis-SelectNA™plus is for Research Use Only [RUO] and not for use in diagnostic procedures.