



EUROArray Dermatomycosis

The new diagnostic standard in fungal skin and nail infections



FAST



SIMPLE



RELIABLE



SPECIFIC



EXTENSIVE



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At a glance: Advantages of the EUROArray Dermatomycosis

- Worldwide broadest multiplex test for diagnostics of fungal infections of skin and nails
- No more long waiting times: Results available in less than 24 hours
- Use of different sample materials possible
- Usable even after start of therapy and especially for therapy control
- Easy-to-perform procedure, no expert knowledge required
- Fully automated evaluation and archiving of results
- Reliable, objective results without the risk of misinterpretation
- Indication of the infection source
- Establishable in both lab and practice due to the small footprint for processing
- CE-marked in vitro diagnostic product



The best basis for prompt therapy success

Determination of 23 dermatophyte species and 6 yeasts/moulds in one test

DETECTION AND IDENTIFICATION OF DERMATOPHYTES				DETECTION & IDENTIFICATION OF YEASTS/MOULDS
<i>E. floccosum</i>	<i>T. schoenleinii</i>	<i>T. bullosum</i>	<i>T. simii</i>	<i>C. albicans</i>
<i>M. audouinii</i>	<i>T. tonsurans</i>	<i>T. equinum</i>	<i>T. verrucosum</i>	<i>C. guilliermondii</i>
<i>M. ferrugineum</i>	<i>T. violaceum</i>	<i>T. erinacei</i>	<i>N. fulva</i> * (<i>M. fulvum</i>)	<i>C. parapsilosis</i>
<i>T. concentricum</i>	<i>M. canis</i>	<i>T. eriotrephon</i>	<i>N. gypsea</i> * (<i>M. gypseum</i>)	<i>F. oxysporum</i>
<i>T. interdigitale</i>	<i>N. persicolor</i> * (<i>M. persicolor</i>)	<i>T. mentagrophytes</i> * (<i>T. interdigitale</i>)	<i>N. incurvata</i> * (<i>M. incurvatum</i>)	<i>F. solani</i>
<i>T. rubrum</i>	<i>T. benhamiae</i> * (<i>A. benhamiae</i>)	<i>T. quinckeanum</i> * (<i>T. mentagrophytes</i>)	■ anthropophilic ■ zoophilic ■ geophilic	<i>Sc. brevicaulis</i>

Plus integrated universal detection of 27 further dermatomycosis pathogens!

* New nomenclature (De Hoog et al, Mycopathologia 182(1-2):5-31 (2017))

- Accuracy of results also with mixed infections, differentiation possible even of closely related species
- Worldwide only test providing secure differentiation between *T. interdigitale* and *T. mentagrophytes*
- Route of transmission exactly determinable (zoonotic transmission, occupational dermatosis etc.) enabling prevention of relapses
- For targeted treatment as well as preventative measures

Reliable identification of the pathogen – for optimal therapy choices

Only a few steps to the result

1. SAMPLE MATERIAL

Nail shavings
(min. 20 pieces)



Skin scales
(min. 20 pieces)



Hair stubs
(min. 10 pieces)



Culture material
(approx. 2–3mm²)



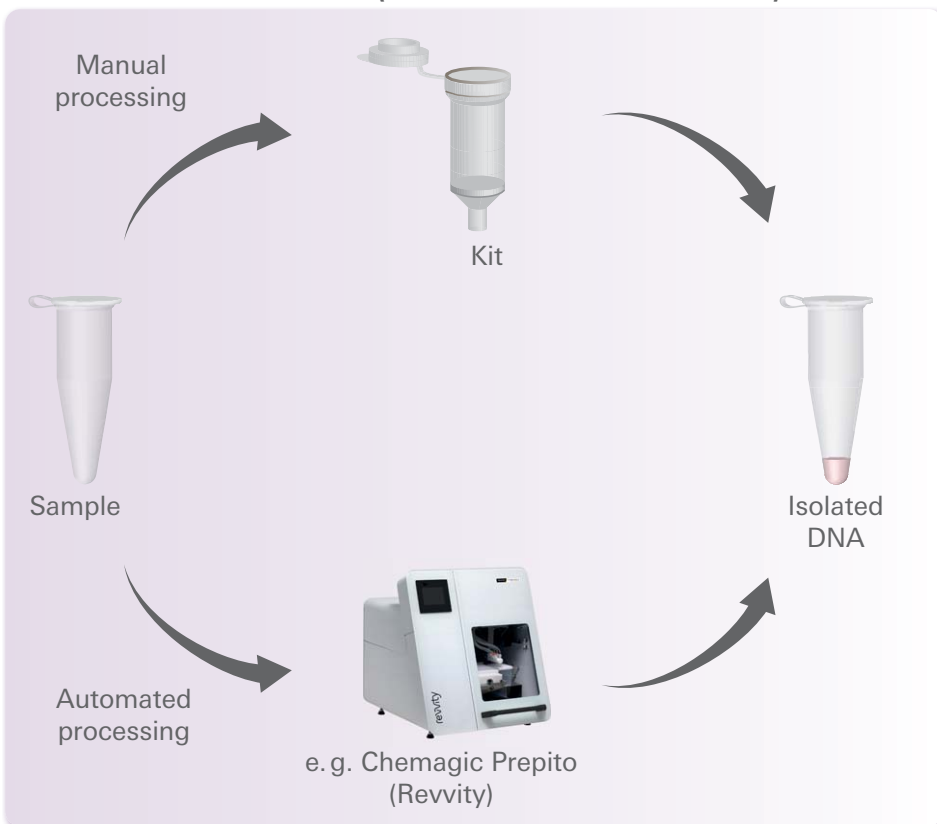
Histological
material/tissue
sections (e.g.
3 sections of 10 µm each)



We are happy to provide
detailed instructions for the
collection of samples!

Sample collection:
individual duration

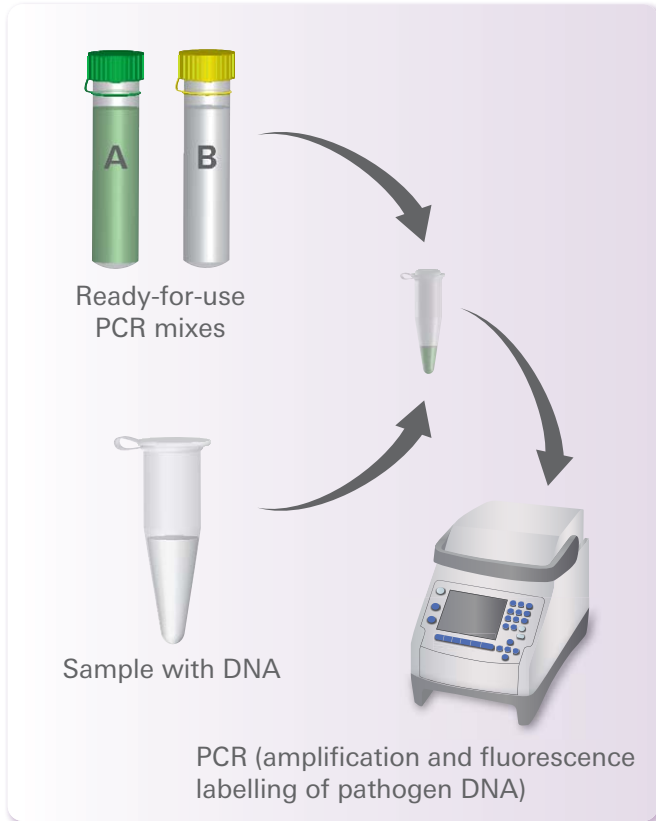
2. SAMPLE PREPARATION (LYSIS AND DNA ISOLATION)



Lysis:	overnight (> 12 h)	(manual)
DNA isolation:	1 h	(manual)
DNA isolation:	< 1 h	(automated)

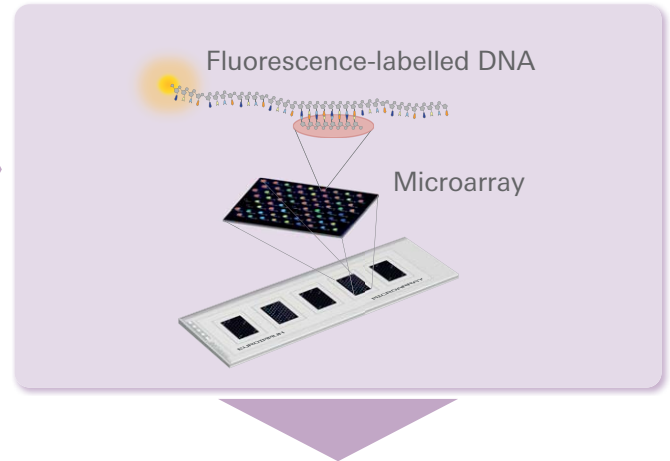
**From DNA isolation to result in approx. 4 hours –
with a net hands-on time of approx. 1.5 hours**

3. MULTIPLEX PCR



Preparation of PCR: 10 min
 PCR: 90 min

4. HYBRIDISATION (DETECTION)



5. FULLY AUTOMATED EVALUATION



Preparation of hybridisation: 10 min
 Hybridisation: 1 h
 Washing/drying of the arrays: 10 min
 Scanning and evaluation: <10 min

Convenient result output due to the EUROArrayScan software

- High reliability of results owing to various integrated controls
- Fully automated evaluation and interpretation of results
- Clear summary of results displayed in tables
- One file per patient (PDF file or print-out)
- Flexible adjustments possible. e. g. addition of your own practice logo, optional display of controls
- Input of your own comments
- Automated electronic data archiving
- LIMS connection prepared



The dermatomycosis pathogen must only be read out.

EUROIMMUN

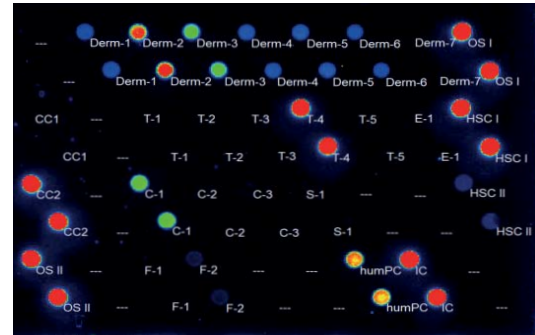


Automated evaluation with the EUROArrayScan software

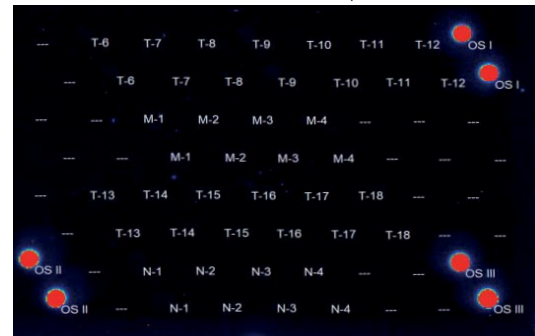
Overview: integrated controls

Partial result	Result
Cross contamination control	valid
Internal control	valid
DNA positive control	DETECTED
Hybridisation specificity control	valid
Dermatophyte (universal)	DETECTED
Trichophyton equinum	not detected
Trichophyton tonsurans	not detected
Trichophyton interdigitale	not detected
Trichophyton mentagrophytes	not detected
T. interdigitale/mentagrophytes	not detected
Trichophyton quinckeanum	not detected
Trichophyton schoenleinii	not detected
Trichophyton simii	not detected
T. quinckeanum/schoenleinii/simii	not detected
Trichophyton benhamiae (white/afr.)	not detected
Trichophyton benhamiae (yellow)	not detected
T. bulbosum/benhamiae (afr.)	not detected
T. concentricum/erinacei	not detected
Trichophyton erinacei	not detected
T. verrucosum/eriotrephon	not detected
Trichophyton rubrum	DETECTED
Trichophyton violaceum	not detected
Epidermophyton floccosum	not detected
Nannizzia fulva	not detected
Nannizzia gypsea	not detected
Nannizzia incurvata	not detected
Nannizzia persicolor	not detected
Microsporium canis	not detected
Microsporium ferrugineum	not detected
Microsporium audouinii	not detected
M. canis/audouinii	not detected
Candida parapsilosis	not detected
Candida guilliermondii	not detected
Candida albicans	DETECTED
Fusarium solani	not detected
Fusarium oxysporum	not detected
Scopulariopsis brevicaulis	not detected
Test result	Result
Dermatophyte	Trichophyton rubrum
Yeast/mould	Candida albicans

Slide 1 Field A Chip 1



Slide 1 Field A Chip 2



All undetected pathogens can be optionally hidden

Test results at one glance: Summary of detected dermatomycosis pathogens

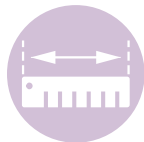
An overall sleek solution

INSTRUMENTS REQUIRED FOR SAMPLE PREPARATION:

- Tabletop centrifuge
- Heating block
- Pipettes
- Mini centrifuge
- Small laboratory shaker



Sample preparation (lysis, DNA isolation)



Total space requirement:
approx. 1.0 m × 0.5 m (W × D)

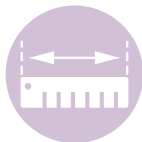
Fits perfectly – even with little space

INSTRUMENTS REQUIRED IN PCR AND POST-PCR AREA:

- PCR thermocycler
- Hybridisation station
- Wash cuvettes
- EUROArrayScanner
- PC with EUROArrayScan software



PCR and post-PCR area (DNA amplification, hybridisation and evaluation)



Total space requirement:
approx. 1.5 m × 0.5 m (W × D)

EUROArray Dermatomycosis



... **saves valuable time** compared to other methods such as fungus culture, microscopy and histology: Results are available in only 24 hours.



... **is performed easily and conveniently**: Ready-for-use reagents and fully automated processes in a one-step test procedure reduce the number of manual work steps to a minimum.



... **provides reliable and precise results**: The identification of the pathogen excludes misinterpretations. In this way, the risk of false positive results (e. g. due to mixed infections) and false negative results (e. g. due to initiated treatment) is significantly reduced.



Fast. Simple. Reliable. Specific. Extensive.



... **creates a basis for targeted and efficient treatment**, foregoing the application of different antimycotics with poor efficacy. Moreover, the test results allow to draw conclusions on the indicated time point to finish the treatment and also on preventative measures.



... **is applicable in a multitude of dermatomycoses**, not only fungal infections of skin and nails. The assay enables differentiation from skin conditions which are not caused by dermatomycosis pathogens.



... **provides diagnostic solutions and services from one source**: You can count on the professional support by our colleagues worldwide. Besides the EUROArray Dermatomycosis, there are many other EUROArray tests available.

Related products from the EUROArray family

EUROArray STI:

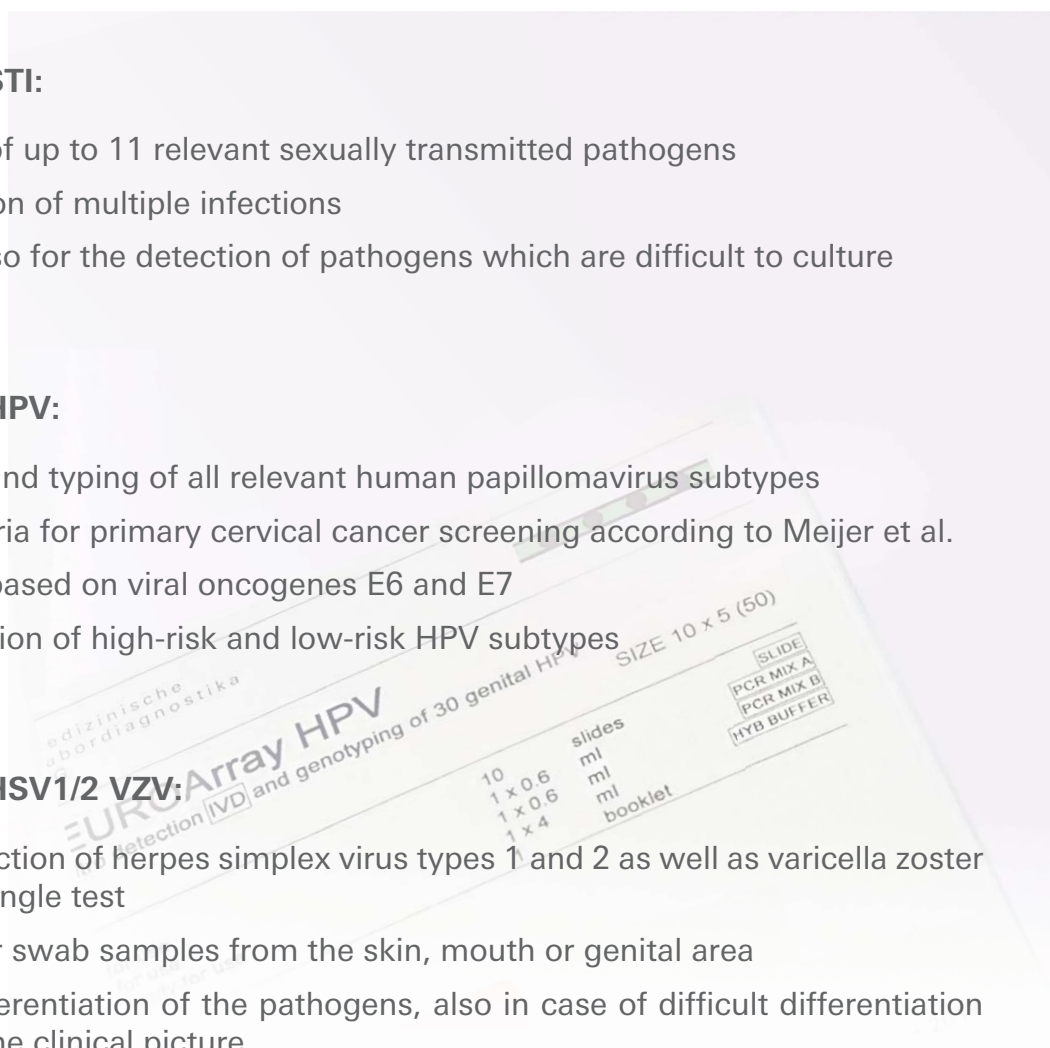
- Detection of up to 11 relevant sexually transmitted pathogens
- Identification of multiple infections
- Suitable also for the detection of pathogens which are difficult to culture

EUROArray HPV:

- Detection and typing of all relevant human papillomavirus subtypes
- Fulfils criteria for primary cervical cancer screening according to Meijer et al.
- Detection based on viral oncogenes E6 and E7
- Differentiation of high-risk and low-risk HPV subtypes

EUROArray HSV1/2 VZV:

- Direct detection of herpes simplex virus types 1 and 2 as well as varicella zoster virus in a single test
- Suitable for swab samples from the skin, mouth or genital area
- Simple differentiation of the pathogens, also in case of difficult differentiation based on the clinical picture







What we offer you

- More than 30 years of expertise in the development and production of medical diagnostic products
- Innovations and highest quality “Made in Germany”
- All from one source: comprehensive range of test systems, automation solutions, software and service

EUROIMMUN AG produces test systems and instruments for medical laboratory diagnostics. The company was founded in 1987 with headquarters in Lübeck and holds several branches in Germany as well as 16 international subsidiaries. EUROIMMUN – with more than 3100 employees worldwide – sells products in over 140 countries around the globe. For production, the company benefits from sophisticated patented procedures and is one of the leading manufacturers of medical laboratory diagnostics worldwide.

EUROIMMUN – Your competent partner for state-of-the-art diagnostic products •