



# Service information: PCR for the Detection of Dermatophyte Fungal Infection from Nail, Skin and Hair

## Introduction

The detection of Dermatophytes from nail, skin and hair specimens is performed using high Sensitivity PCR testing, replacing agar plate culture. This reduces the overall turnaround time by 2-3 weeks (complete report within 8 days of specimen receipt), as well as increasing the detection of fungal infection compared to microscopy and culture (36.4% PCR v's 33.6% Microscopy and culture). Furthermore, the specific targeting of pathogens associated with superficial fungal infection prevents over reporting of insignificant fungal contaminants.

The implementation of this service change was overseen by our Principal Clinical Scientist Dr. Rebecca Gorton, a clinical mycologist with over 20 years' experience and who leads the UK clinical mycology network laboratory at HSL. For further information please contact [mycology@hslpathology.com](mailto:mycology@hslpathology.com).

Overview of Method		
<b>Test name</b>	Dermatophyte PCR, 7-day culture and microscopy (skin/hair specimens only)	
<b>Supplier</b>	Pathonostics Dermagenius PCR 3.0 Nail and 2.0 Skin kits	
<b>Specimen containers</b>	DermaPak (please use a sterile universal container as alternative only). <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;">   </div>	
<b>Specimen</b>	<b>Nail</b>	<b>Skin / Hair</b>
<b>Method outline</b>	<p><b>Microscopy:</b> not performed, PCR is more sensitive.</p> <p><b>Culture:</b> Sabouraud's plate 7-days (yeasts and non-dermatophyte moulds).</p> <p><b>Dermatophyte PCR:</b> DermaGenius® Nail</p> <ul style="list-style-type: none"> <li>• <i>Trichophyton rubrum</i></li> <li>• <i>Trichophyton interdigitale</i></li> <li>• <i>Scopulariopsis brevicaulis</i></li> </ul>	<p><b>Microscopy:</b> Potassium hydroxide wet prep with calcafluor.</p> <p><b>Culture:</b> Sabouraud's plate 7-days (yeasts and non-dermatophyte moulds).</p> <p><b>Dermatophyte PCR:</b> Dermagenius Skin / Hair</p> <ul style="list-style-type: none"> <li>• <i>Trichophyton rubrum</i> /</li> <li>• <i>Trichophyton soudanense</i></li> <li>• <i>Trichophyton interdigitale</i> / <i>mentagrophytes</i></li> <li>• <i>Trichophyton tonsurans</i></li> <li>• <i>Trichophyton violaceum</i></li> <li>• <i>Trichophyton benhamiae</i></li> <li>• <i>Trichophyton verrucosum</i></li> <li>• <i>Microsporum canis</i></li> <li>• <i>Microsporum audouinii</i></li> <li>• <i>Epidermophyton floccosum</i></li> </ul>