

Division of Laboratory Medicine

Bacteriology

Corneal Scrape

Keratitis is an inflammation of the cornea, which is a serious condition requiring prompt and meticulous investigation, and may progress to perforation and blindness if treatment is unsuccessful. Predisposing factors include prior ocular disease, wearing contact lenses and use of topical corticosteroids. The condition may be caused by a wide range of bacteria, fungi and parasites.

Agar plates for bacterial, fungal or acanthamoebal culture, which are inoculated directly at the patient's side, are incubated immediately on receipt in the laboratory.

General information

Collection container (including preservatives): Kits are available 24 hours a day from the stock fridge within Autolab reception MRI; should infection with fungi or Acanthamoeba be suspected additional kits are available from the Autolab reception.

The Scrape kit contains 3 culture plates and a glass slide within slide carrier and an instruction sheet

The kit label indicates when the kit expires; kits should not be used after the expiry date and unused kits should be returned to microbiology.

Specimen type: Aqueous and vitreous humour, corneal scrapings

Collection: Use aseptic technique. For each scrape of the eye a fresh needle must be used.

1. Preparing the Gram Stain:

Clear/wipe the infected area by removing as much cellular material as possible using a syringe needle and spread this evenly over the scribed area of the glass slide.

2. Inoculating the Culture plates:

Scrape the infected area using a fresh needle and inoculate the surface of the agar with a large "C" streak. (if the syringe needle is dug deep into the agar this will delay signs of bacterial growth)

Acanthameoba plates should be labelled on the lid of the plate as labelling the agar side obstructs the visualisation of the plate down the microscope.

Specimen transport: Specimens should be transported and processed as soon as possible.

Minimum volume of sample: Corneal scrapings should be of sufficient quantity to make a visible deposit on a microscope slide and to inoculate culture plates.

If insufficient specimen to make an impression smear and inoculate plates, cultures should be the priority.

Special precautions: Collect specimens before antimicrobial therapy where possible.

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Laboratory information

Turnaround time: 2-3 working days for culture
30 – 60 mins for microscopy if telephoned in advance

Clinical information

Factors known to significantly affect the results: Where media and smears are inoculated at the patient's side they must be transported immediately to the laboratory for processing.

(Last updated October 2017)