How to make fluorescein strips

Fluorescein strips are an essential diagnostic tool in eye care. They are useful for performing a number of procedures, such as measuring intraocular pressure, assessing dry eye and detecting corneal abrasions. Unfortunately, this basic item is not commonly available in many resource-limited settings. Here we describe how we make fluorescein strips at Mbarara University and Regional Referral Hospital Eye Centre.

What you will need
- Sterile filter paper (e.g., Whatman no. 1)
- A sterile bowl, such as a kidney dish
- Fluorescein sodium powder (20g)
- Distilled sterile water (100ml)
- A pair of scissors
- Empty injectable vials or any other small, sealed containers
- A sterile surface
- Sterile gloves, mask and apron.

Procedure
- Assemble all the materials on a clean tray
- Put on sterile gloves, mask and apron
- Prepare a 20% fluorescein solution by dissolving 20g of fluorescein sodium powder in 100ml distilled, sterile water
- Cut the filter paper into rectangles of approximately 5cm wide and 8–10cm long
- Pour a small amount of fluorescein solution into the bowl. Be careful not to spill, as fluorescein leaves stains
- Dip the long edge of the filter paper in the fluorescein solution and immediately remove it, as the solution spreads very quickly through the paper (Figure 1)
- Place the dipped filter papers onto a sterile surface to dry
- Once they are dry, use a pair of scissors to cut the paper into strips, with the dipped edge at one end (Figure 2)
- Store the strips in a sterile, sealed container (Figure 3).

How you can be prepared
- Equip your health facility with a torch, fluorescein strips and broad-spectrum antibiotics
- Ensure that the details of the nearest referral centre are clearly written down, where everyone can see it
- Ensure that everyone in the team knows how to prepare broad-spectrum antibiotics and has access to printed instructions for doing so
- Print out a decision-making guide and referral checklist and display these in your clinic.

Referral checklist
- Baseline examination, including visual acuity, done and recorded
- Initial treatment started and documented in detail
- Reason for referral documented clearly and communicated to the patient
- Patient understands the expected healing prognosis and timeframe
- Referral centre contacted
- Patient knows when the referral centre is open and is given clear directions
- Patient is given the phone number of the coordinator at the referral centre to call once they arrive so that they are seen urgently.

References