

Finn Chambers on Scanpor





Patch Testing

- Patch testing usually involves the use of standardized chemical allergens in an aqueous (e.g. formaldehyde) or petrolatum base (e.g., fragrance mix). A patient's own products may also be used.
- Supplemental food allergy and atopy test protocols may involve the use of glycerinated allergen extracts (e.g., dust mites) or fresh food preparations (e.g., cow's milk).



Finn Chamber

- A patch test device which provides good occlusion because of the chamber design
- Made of aluminium. Larger chambers (12 mm inner diameter) and chambers with polypropylene coating (8, 12, 18 mm) are available for special purposes.
- The 8 mm inner diameter provides a 50 mm² area and about 20 microlitre volume
- Mounted on Scanpor® tape with protective paper backing which is easily peeled away.



Indications For Finn Chambers

- Diagnosis of
 - contact sensitivity
 - photocontact sensitivity
- Experimental dermatology

Finn Chamber Accesories

- Finn Chamber Reading Plates help locate test sites and identify reactions.
- Finn Chamber trays keep strips organized and protected and stack to save workspace. Washable and reusable.
- Clear plastic covers reduce potential contamination and evaporation when preparing patch tests in advance. Washable and reusable.





Selecting Finn Chambers

- Available in strips of 10 (2x5), 5 (1x5) and 1 chambers.
- Strips of 10 chambers are practical when testing with a large number of substances, e.g. with routine tests.
- Smaller strips are suitable for small test series and individual tests.
- The strips should not be cut between the chambers, as the remaining adhesive area may be too small.



Allergic Reactions

- Allergic reactions to aluminium and Scanpor tape are rare.
- Occasional cases of contact sensitivity to aluminium e.g. due to vaccination or hyposensitization of hay fever patients with aluminium precipitated antigens have been reported.



Test Substances

- The concentrations of allergens in most standard series are suitable for Finn Chambers.
- It is advisable to use low concentrations with irritating test substances due to tight occlusion provided by the chamber.
- Due to the incompatibility of aqueous mercuric solutions with aluminium, polypropylene coated Finn Chambers should be used when testing mercuric compounds.
- Aluminium may enhance the polymerization of acrylate monomers and false negative reactions have been noticed with acetone solutions of ethyl cyanoacrylate glue.

Preparing Finn Chambers

- Semisolids - applied directly into the chamber, filling more than half the chamber volume (a bar of about 5-6 mm if the diameter is 2 mm). Do not use filter paper discs with semisolids.
- Liquids place a filter paper disc in the chamber. Moisten the disc thoroughly without surplus. Excess liquid should be removed e.g. with porous paper. Place the test onto the skin within a few minutes. Do not let the filter paper disc dry-may result in weak or false negative reactions and the disc tends to slip out during application onto the back.



Placing Of Tests On Skin

- Skin should be clean, healthy, and free of ointments, lotions, powders, acne, dermatitis, scars, hair or any other condition that might interfere. It is recommended that the patient takes a shower or bath in the morning before testing. If necessary, the skin can be cleaned e.g. by alcohol.
- The patient should stand or sit in a relaxed position with the back bent slightly forward. Apply prepared patches to the upper back adjacent to the vertebrae. An alternative application site is the outer surface of the upper arm.



- Affix tape to the skin at the lower end and slowly roll patches up the back, pushing out air. Gently press chambers to skin to ensure an even distribution of allergens. Rub Scanpor tape gently but firmly to ensure good adherence. Check test site numbering.
- Patients should refrain from exposing patch tests to excess moisture or sweat and should return for patch test removal in 48 hours.



Removing Finn Chambers

- Mark the strip or chamber location prior to removal.
- Remove Finn Chambers from skin contact and verify occlusion (the ring-shaped depression around each test). Read skin reactions not less than 20 minutes after removal.



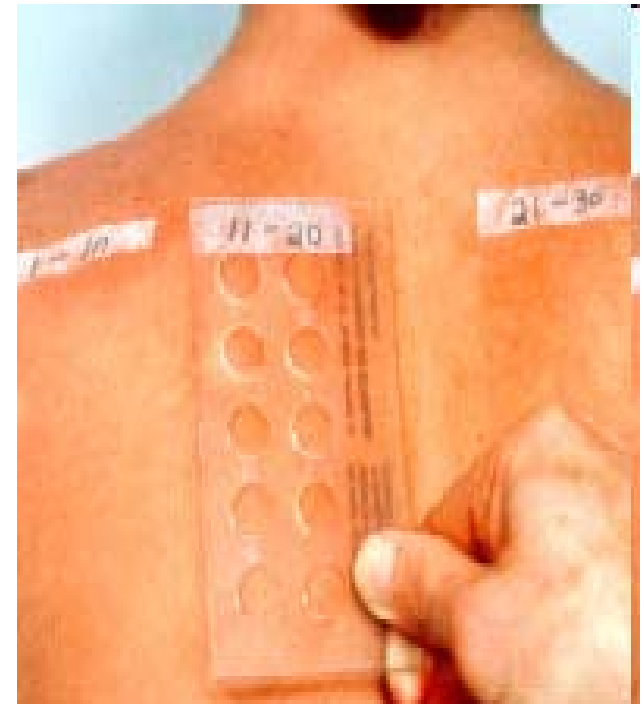
Reading Plate

- The serrated edge of the **Reading Plate** can be used to carefully cut the tape. Press the Reading Plate against the tape at about a 45° angle with the serrated end overlapping the top 1 cm of the tape
- Tear off the chambers, starting from below and leaving the top of the tape with the identification marking on the skin. The serrated edge of the Reading Plate is asymmetrical



Reading Test Reactions

- A second and third skin reaction reading is advised at 72 and/or 96 hours after patch test placement. Observing changes in skin reactions may help differentiate allergic from irritant reactions.
- To locate and identify the reactions align the top left corner of the Reading Plate (narrow side to the left) either with the ink mark on the skin or the remaining strip of the tape (Fig. 3). The Reading Plate serves as a template with the holes indicating the test sites.



Method

- Two patients with allergic contact dermatitis related to shoes manufactured in China that were contaminated by dimethylfumarate found in sachets placed inside the shoeboxes were evaluated.
- Epicutaneous tests were applied on the upper back using FinnTM Chambers on Scanpor tape[®] (Epitest Ltd Oy) during 2 days using allergens from ChemotechniqueTM (Malmö, Sweden) or Bial-AristeguiTM (Oporto, Portugal). Readings were done on day2 (D2) and day3 (D3) according to ICDRGC guidelines.



Result

- Patch tests with DMF extracted from the sachets inside the shoeboxes showed positive reactions. Postitive reactions were also obtained using small fragments of the shoes and tissue of the “MouldProof” sachet. The patients were instructed to avoid the suspected shoes and were treated with topical corticosteroids.





Conclusion

- Contact dermatitis induced by dimethylfumarate should be suspected in appropriate cases. It is important to remember that this allergen is not included in most series for patch testing.