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# Standard Procedure SP 0002-1:2005

## Methods of preparing slides for microscopy – Part 1: Mounting a hair or other fibre

### 1 Scope

This Standard Procedure can be used to prepare a temporary slide of a hair, or other thin fibre, for the purpose of microscopic examination. Such slides enable comparison of human hair (e.g. different races), animal hair or fur (from different species), and natural or synthetic fibres (e.g. from clothing or carpets).

### 2 Definitions

*microscope slide*

a small rectangular sheet of glass about 1 mm thick, on which a specimen is to be mounted

*cover slip*

a smaller square or circle of very thin glass, used to cover the specimen on the slide

*mountant*

a thin layer of liquid placed around the specimen between the slide and cover slip. It holds the specimen and cover slip in place. To help more light to pass through the slide, the mountant should have a refractive index similar to that of the glass.

### 3 Principle

The slide is prepared by sandwiching the hair or fibre between the two layers of glass. The cover slip must be lowered onto the hair and liquid mountant carefully, so as to avoid trapping any air bubbles in the slide.

### 4 Apparatus

- specimen (hair or other thin fibre)
- microscope slide and cover slip
- disposable dropper
- forceps
- mounted needle Caution: sharp
- mountant (e.g. DPX Caution: contains xylene [dimethylbenzene] – harmful, irritant, flammable)

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### 5 Specimens

For a full examination of the features of the hair, it must have its root attached. This is not necessary for comparison of hairs and/or other fibres.

### 6 Procedure

- To avoid fingermarks, handle the slide and cover slip only by their edges.
- Using a disposable dropper, put one drop of mountant in the middle of the slide.
- With forceps, place the hair onto the slide, so that it is held in place by the mountant. Position the hair so that it will all be under the cover slip. (If the hair is long, fold it in a figure-of-eight, with drops of mountant at each end and the centre.)
- Add 2 more drops of mountant along the length of the hair (or in the 'holes' in the figure of 8).
- Quickly position the cover slip at one end of the hair, holding it upwards at an angle with a mounted needle, as shown in figure 1. Carefully lower the cover slip onto the slide. Press it down gently with the needle so that no air bubbles remain trapped under it.
- If necessary, add a little more mountant along the edge(s) of the cover slip. It should flow under the glass to fill the gap.

**figure 1**

