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SIMPLE PLASTIC SIEVES, AND HAIR LOOPS, FOR HANDLING NEMATODES, CYSTS, EGG MASSES AND EGGS

by
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To facilitate large-scale hatching experiments with *Meloidogyne naasi* (Franklin, 1965) a simple means of handling individual egg masses was needed. Buecher *et al.* (1973) described sieves, of 13 mm outside diameter, of metal mesh cemented to glass tubing. I have adapted the heat welding principle (Pitcher and Flegg, 1968) to make miniature sieves by cutting the barrel of a disposable plastic syringe (7 mm diam) into 3 mm long sections using a heated scalpel blade. Nylon mesh¹ (mesh size according to need) was cut into 1 cm² pieces and placed onto an electric hot plate (180°C) with a syringe section on top. A few seconds pressure on the ring shaped section was sufficient to weld the nylon mesh firmly on to the softened base of the ring. The nylon mesh has a melting point of 250°C and remains undamaged at 180°C. The sieves were washed well in running tap water before being ready for use. Such sieves float in most aqueous solutions and need no supporting legs.

For hatching experiments, a 45 µm aperture nylon mesh was used. To extract larger nematodes (e.g. males from gall tissue), 90 µm aperture sieves were constructed. For washing egg masses, cysts, eggs or nematodes in water or chemicals, 5 µm nylon sieves can be used, with the aid of suction pressure to draw the chemical and washing water from the mesh. These sieves avoid exposure to metal and possibly-toxic adhesives. Being cheap and easily made, they can be discarded and replaced rather than risk contamination by carryover if used for chemical treatments.

¹ Henry Simon Limited Nylon Data Book, P.O. Box 31, Stockport, Cheshire, U.K.

Delicate material such as long nematodes, egg masses or eggs, may be damaged when handled with the usual «pickers» such as bristles or fine tweezers. Hair loops, mentioned only in passing by Cairns (1960), offer several advantages over metal loops mainly in providing a pliable but resilient shape.

The meniscus formed when a loop is withdrawn from a water suspension safely traps the individual being handled. Additionally hair loops can help tease eggs from gelatinous matrices without damage.

A loop can be made by inserting the two ends of a human hair into the drawn end of a Pasteur pipette and its size adjusted as desired. Melted wax is used to secure the loop in place. According to the intended use, hair of different flexibility can be used.

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