

When every drop counts...

The Biology Team in SSERC has recently published a number of experimental ideas involving “immobilised” beads of enzymes, yeast, algae etc.

Classically, the immobilisation technique involves dropping a sodium alginate mixture from a syringe barrel into calcium chloride solution (see Figure 1). We have traditionally recommended a “Gilson syringe barrel” for this practical, but over the past couple of months we have received



Figure 2 - “Gilson” 12.5 ml syringe barrel (left) and a suggested alternative (right).

enquiries asking where these can be purchased and whether suitable alternative systems are available.

The Gilson syringe barrels can be purchased from Fisher Scientific (catalogue code 12590316, £73.86 for a pack of 100) and Scientific and Chemical (code \$F164120 £46.58 for a pack of 50). A non-branded but identical syringe barrel can be sourced at Griffin Education (catalogue code 10292261, £62.74 for a pack of 100).

We have tested alternative syringe systems and found that the following works well.

The alternative syringe apparatus (right hand side of Figure 2) consists of a 200 µl automatic pipette tip, which screws neatly into a Luer lock 10 cm³ syringe barrel.



Figure 1 - Preparing immobilised yeast.

The 10 cm³ Luer lock syringes can be sourced from Scientific and Chemical (catalogue code \$BD300 912, £22.85 for a pack of 100). They can also be purchased from Griffin Education (catalogue code 12921031, £36.35 for a pack of 100). We used a 200 µl automatic pipette tip from Timstar (product code P195032 (described as 5-200 µl yellow tips, pack of 1000 for £14.92). Most suppliers stock similar tips.

One distinct advantage of the suggested alternative is that the tips can be cut to any desired aperture to suit the viscosity of the alginate mixture and the desired diameter of alginate bead. Both versions work in all suggested SSERC practicals. ◀

Borrowing equipment from SSERC

Between October and March, we often receive a high number of requests from schools wishing to borrow equipment for use in pupil investigations.

In order that we can meet as many requests as possible we generally set a loan period for a maximum

of 4 weeks. In some cases, an extension for a further period may be possible but please contact us prior to the due return date to establish whether this is possible. We appreciate prompt return of the items as with some of the items a safety check is required before they can be loaned to another school. We ask that schools contact us before the return date so that we can agree the arrangements for the return particularly for those items which cannot be sent by mail. ◀

