

**M**POB motorised vessel (5-10 litres capacity) for multiplication of oil palm tissue cultures has been developed (Tarmizi *et al.*, 2009) and is being used routinely. It is an economical and practical method for culturing cell aggregates in larger working volumes of liquid media for increased production. However, there is still a need for the vessel to be transported to a laminar flow cabinet for media replenishment in a sterile manner. This is impractical as the vessel is bulky and heavy, making handling of the vessel a hassle to the laboratory operators. This will also increase the risk of contamination. To overcome these problems, a mechanism has been developed to simplify the whole process of media replenishment. The new system is called motorised vessel with fast media transfer or MoVeFast.

## NOVELTY OF THE TECHNOLOGY

- Reduced manual handling during subculture.
- No movement of cultures required from culture room to laminar flow cabinet.
- On-site replenishment of culture media at any time.

## DESCRIPTION

A stainless steel scaffold with a raised platform that holds a bottle containing at least 5 litres of fresh media (Figure 1a) is connected to a motorised vessel (Figure 1b). To ensure efficient media replenishment, the top of the bottles are equipped with top plates attached to vent devices (Figure 1c). Clamps attached to tubings are used for controlling the flow of media during media replenishment (Figure 1d). On the other end of the motorised vessel, an empty pre-sterilised

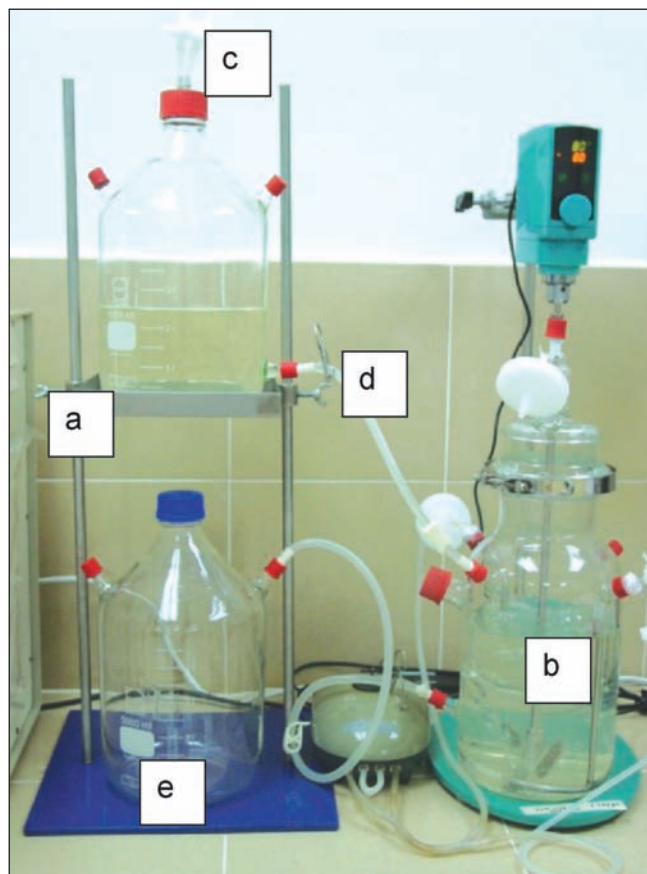


Figure 1. Motorised vessel with fast media transfer (MoVeFast). See text for explanation of labelled components.

modified bottle of preferred size, placed on the lower level of the scaffold, is connected for the purpose of discarding spent media (Figure 1e). This new system allows media replenishment to be done on site.

## PERFORMANCE

Fresh weight increment of about five-fold was obtained for cultures from selected oil palm clones after about 40 days in the MoVeFast system.

\*Patent application, PI 20070979.

## **BENEFITS**

Benefits of the MoVeFast system are:

- no movement of cultures from the culture room to the laminar flow cabinet;
- replenishment of media can be done in the culture room at any time;
- reduced risk of contamination; and
- can be easily adopted for other fluidic culture systems.

## **REFERENCE**

TARMIZI, A H; ZAITON, R and ROSLI, M Y (2009). MPOB Motorised Vessel (MPOB-MotoVess) for liquid tissue culture system. *MPOB Information Series No. 454*.

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