

Cell Trap

The Cell Trap is a micro-filtration device that dramatically reduces the time it takes to identify types of micro-organisms.

On this particular project the customer came to MG Stuma with two problems:

- The current supplier had been providing components that failed performance testing.
- The tooling was not in a condition conducive to the repeatable production of quality components.

We sat down with the customer immediately after the initial contact and very quickly identified that material type and feed position were the cause of the concerns.

Through discussion we also learned that the end connector was bespoke, therefore requiring that a bespoke sealing cap be made. The MG Stuma design team recommended that the connector be changed for a standard luer port for which off the shelf sealing caps could be bought, thus saving the customer time and money.

New tooling was designed and built in-house at MG Stuma for the T-piece and the End Ports, with interchangeable inserts in the Ports tool to reduce the overall cost. Trials were conducted in a grade of polycarbonate that we had identified as suitable for the application, and the components produced were then performance tested by the customer, passing with flying colours. The Cell Traps are now being rolled out to the market place.

Key aspects of the Cell Trap are:

- The unique design of this patented filtration device enables accurate samples of biomaterials to be taken far faster than is possible using traditional flatbed methods. Time to result using ATP-bioluminescence detection is less than five minutes.
- There is virtually no limit to volume: the filter device can be designed and manufactured to accommodate virtually any volume of test fluid, well in excess of flatbed membranes.
- The filtration devices are completely self-contained; there is therefore no danger of contamination from external sources (e.g. manual handling). Antibody coated membrane systems are available for selective antigen filtration.
- The use of hollow fibre membranes means that build up of material (i.e. fouling) takes far longer than it would on a flat bed filter.

The answer is yes
...Now what's the question?



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