

## APPLICATION NOTE

### Streamlining cell culture liquid handling

Successful manipulation of cell cultures relies on the ability to maintain sterility and to avoid cross-contamination between cell lines. Proficiency in cell culturing can be greatly enhanced by a highly controlled workflow and a well-organised work area. This application note describes the implementation, within a life science organisation, of a new Liquid Handling Set (Figure 1) developed to support safe, streamlined and organised working when pipetting and aspirating cell culture media.



Figure 1: Cell Culture Liquid Handling Set

INTEGRA Biosciences has developed a Liquid Handling Set that significantly aids scientists in keeping their cell culture work streamlined and organised when pipetting and aspirating liquids. The new Liquid Handling Set includes a holding stand, a PIPETBOY pipetting aid for accurately transferring media and buffers with serological pipettes, a VACUBOY hand operator for efficient vacuum removal of media and cell culture supernatants and a VACUSAFE comfort all-in-one aspiration system that ensures safe handling and containment of liquids.

#### Field testing the liquid handling set...

Development of micro-sensors which allow reliable testing of substance toxicity on in-vitro cellular models is an important R&D project at the Landquart Nanomedicine division\*\* of the CSEM (Swiss Centre for Electronics and Microtechnology, Inc.

Looking to improve their cell culture workflow within the sterile environment of a biological safety cabinet – CSEM agreed to test the new INTEGRA Biosciences Liquid Handling Set.

After extensive testing CSEM concluded that the Liquid Handling Set has proven to provide real help in their daily work with cell cultures.

CSEM Cell Works project manager – Dr Laurent Barbe commented ‘We particularly liked how the Liquid Handling Set Stand ensured efficient use of the sterile area in our biological safety cabinets’. ‘The liquid handling set stand maintains the PIPETBOY and VACUBOY organised in the optimum ergonomic position within easy reach for fast, safe and effortless handling of our cell cultures for right as well as left handed users’. Novice users working with cell cultures especially profit from this defined setup as it helps them avoid mishandling or contaminating valuable cell lines. ‘Finally the VACUBOY, which was unknown to me, has proven itself to be a convenient tool for controlled aspiration operated by just pressing a single knob`



Figure 2: PIPETBOY in use, VACUBOY in stand ready for use.

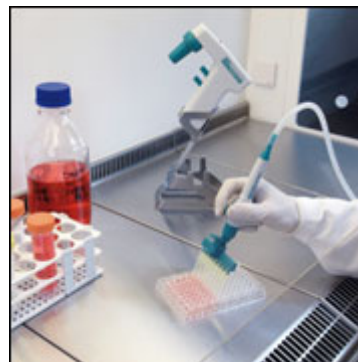


Figure 3: VACUBOY aspirator ‘in use’ while PIPETBOY held in liquid handling stand

## Conclusion

The INTEGRA Biosciences Liquid Handling Set has been proven in independent field trials to significantly aid scientists in keeping their cell culture work streamlined and organised when pipetting and aspirating liquids.

## Further Information

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\*\* The Landquart Nanomedicine division is part of the CSEM (Swiss Centre for Electronics and Microtechnology, Inc. - a privately held R&D institution active in the fields of micro- and nanotechnologies. Further information on the organisation may be found at [www.csem.ch](http://www.csem.ch)