

# International Conference and Exhibition on **Tissue Preservation & Bio-banking**

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## **Preservation of microbial pure cultures and mixed communities**

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**M**icroorganisms are a valuable and irreplaceable resources for scientific research and biotechnological innovation and should be safeguarded. Therefore, systematic preservation of isolated pure cultures, enriched mixed cultures or environmental samples should become an integral part of good research practice. Cryopreservation of biological material is a low-tech, widely applicable way of long-term and stable storage. Its success is mostly dependent on the cryoprotective agent, used to protect cells from mechanical injuries due to ice formation, the stability of the freezing temperature, and the correct manipulations before and after storage. Although cryopreservation success can be organism-dependent, the protocol distilled from our work (freezing at  $-80^{\circ}\text{C}$  using 5% (v/v) dimethyl sulfoxide as cryoprotective agent) proved successful for the preservation of various fastidious pure and mixed cultures. Numerous parameters of the protocol can be changed or optimized to develop a custom-made cryopreservation protocol.

### **Biography**

Bram Vekeman, MSc, is a PhD student working in the laboratory of microbiology (LM-UGent) at the Ghent University. His main focus has been the isolation of novel fastidious bacteria from marine environments and subsequently the successful preservation and safeguarding of these fragile bacteria. From this work he was able to develop a generic preservation protocol for the preservation of microbial pure cultures and mixed communities.

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### **Notes:**