



Haemolymph field collection kit and traceability tool

Summary of confidential Deliverable D9.1

Dalel Askri, Karim Arafah, Sébastien Voisin and Philippe Bulet
CNRS, Biopark

PoshBee

**Pan-european assessment, monitoring, and mitigation
of stressors on the health of bees**



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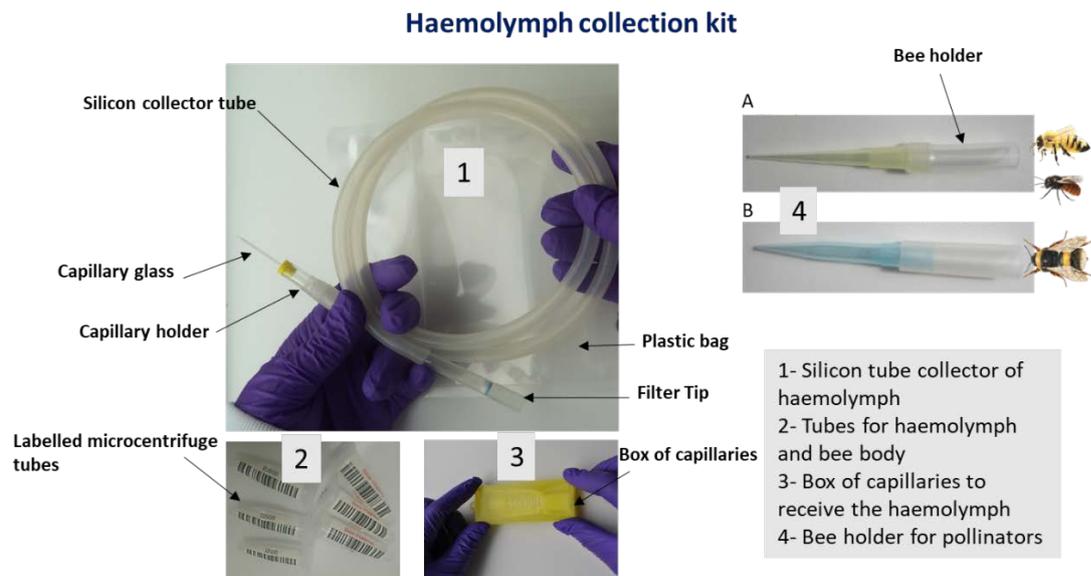
D9.1 Haemolymph field collection kit and sample traceability

In brief

This deliverable describes the collection kit used to collect bee haemolymph from laboratory, semi-field and field experiments and sample traceability through barcoding. The kit was developed by CNRS and BIOPARK partners to fulfil the requirements for the omics work within PoshBee Work Package 9. Initially, the kit was designed to collect haemolymph from honey bees. It was then adapted for bumble bee, solitary bee and new models of pollinators.

Kit content

The kit contains of a bee holder of a size adapted to the targeted pollinator (see figure below), a small one (A) for honey bee and solitary bees, or a larger one to constrain bumble bees (B), and a set of identical items usable for any type of pollinator.



Sample traceability

To manage sample traceability, we use the same strategy for all pollinators, meaning a barcoding of tubes; red codes for haemolymph and black codes for bodies. For haemolymph stability, before labelling, the tubes destined to receive haemolymph were coated with appropriate chemicals compatible for Omics analyses. This procedure of traceability allows us to follow the samples from their collection, through data acquisition and processing, the generation of the sample databases, and the integration of the samples in reports and publications.



Take home message

The haemolymph collection kit designed by CNRS and BIOPARK within PoshBee could be used to collect blood from different pollinators in a standardised way.



Our technique takes part of the MALDI BeeTyping® approach to analyse bee blood. For complementary information, a video describing this approach is published on the PoshBee Youtube channel: "[PoshBee research: Analysis of haemolymph with MALDI BeeTyping®](#)"