

TENDER TECHNICAL SPECIFICATIONS

FOR THE ZIMBEE PROJECT

SUPPLY AND INSTALLATION HONEY QUALITY AND ORIGIN TESTING EQUIPMENT IN HARARE, ZIMBABWE

23rd July 2025

# **About Expertise France**

Expertise France is the French agency for international technical cooperation and it’s a member of the AFD Group (French Development Agency). EF offers program engineering and technical assistance by developing and implementing international cooperation actions worldwide. EF operates in various fields of development and institutional cooperation including safety and security reform, public health, human rights, strengthening of institutions and NGOs and governance. Carrying out large-scale, multi-stakeholder programs, EF can ensure cooperation between individuals, teams and institutions with very different statuses, cultures, and specialties. Besides, EF has acquired sound experience in administrative and financial management of large-scale international programs.

# **Background information**

Expertise France in close collaboration with ZimTrade have partnered to improve the honey sector in Zimbabwe by building capacity and installation of a honey quality and origin testing machine as the first steps toward exporting the homey to the external markets and more specifically within the European Union.The equipment will serve both research and certification purposes in line with international standards (e.g. Codex Alimentarius, ISO 22036:2020).

According to the Zimbabwe Ministry of Agriculture, the number of beehives exploited by beekeepers is between 15,000 and 20,000, although this estimate seems insufficient to represent the entire sector. Some farms belonging to agri-food groups have up to 700 or 1,000 hives, usually located in their areas of activity, such as orchards or cultivated fields. Honey produced under these conditions is often of low quality and rarely certifiable organic, unlike honey from high altitude areas, more wooded regions or small village farms. The bulk of production, in volume, comes from villages, either through individual family hives or through clusters with varying densities.

1. **Objectives**

To procure, install, and train personnel on analytical equipment suitable for identifying floral origin (via melissopalynology and chemical profiling), assessing honey quality, and detecting adulteration.

# **Technical Specifications**

The machine should have the capacities to test honey quality and origin based on the following parameters:

**Melissopalynology (Pollen Analysis)**

1. 1x Optical Microscope (High-resolution, trinocular, LED illumination)

* Magnification: 40x – 1000x
* Digital camera with image acquisition software

1. Accessories: Slides, sample prep kits
2. Training: 2 days on melissopalynology protocols

**Physiochemical Analysis**

1. 1x FTIR or NIR Spectrometer

* Bench-top model with honey analysis capability
* Pre-installed calibration models for sugar content, moisture, ash
* Software for chemometric modeling and future calibration

1. 1x HPLC System with UV Detector

* For sugar profiling and possible phenolic compounds
* Autosampler, data acquisition software

1. 1x Refractometer (digital)
2. 1x Conductivity meter
3. 1x Pfund Colorimeter or equivalent
4. Accessories & reagents for 500 sample analyses minimum
5. 1x Gas Chromatograph with FID

* For aroma profile and advanced floral origin fingerprinting

1. Training: 2 days on Physicochemical Analysis

# **General Information**

* Delivery location: Harare, Zimbabwe
* Installation and on-site calibration required
* Training: On-site training for at least 3 laboratory staff
* Warranty: Minimum 24 months for all major equipment
* After-sales service: Local or regional representative preferred
* Language: All software and manuals must be in English

1. **Submission Deadline**

* 30 days from the day of publication

1. **Contact for Clarifications**

In case of any clarifications, please reach out to:

* Vincent Paul Bwire

Email: [Vincent.bwire@expertisefrance.fr](mailto:Vincent.bwire@expertisefrance.fr) (between 0800hrs-1600hrs)