

**REFRACTÓMETRO PARA MIEL  
FOR HONEY REFRACTOMETER  
REFRACTOMÈTRE POUR MIEL**

REF. - CODE - RÉF. HPD016, HPD017, HPD018

**Zuzi**



Este manual es parte inseparable del aparato por lo que debe estar disponible a todos los usuarios del equipo. Le recomendamos leer atentamente el presente manual y seguir rigurosamente los procedimientos de uso para obtener las máximas prestaciones y una mayor duración del mismo.

*This manual should be available for all users of these equipments. To get the best results and a higher duration of this equipment it is advisable to read carefully this manual and follow the processes of use.*

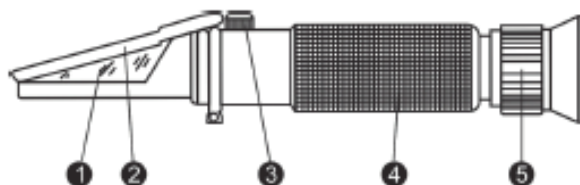
*Ce manuel est une partie indissociable de l'appareil et doit être mis à la disposition de tous les utilisateurs de l'équipement. Nous vous recommandons de lire attentivement ce manuel et de suivre scrupuleusement les procédures d'utilisation afin d'obtenir des performances maximales et une plus longue durée de vie de l'appareil.*

**LANGUAGE INDEX**

Spanish .....	1-4
English .....	5-7
French .....	8-10

**TABLE OF CONTENTS**

1. Description.....	5
2. Features.....	6
3. Calibration Procedure .....	6
4. Usage Instructions .....	7
5. Package List.....	7
6. Warnings .....	7

**1. DESCRIPTION**

1. Prism
2. Cover plate
3. Calibration screw
4. Rubber grip
5. Eyepiece with focus adjustment

## 2. FEATURES

1. Easy to focus and calibrate.
2. High quality body construction
3. Uses ambient light only which means battery or power source is not required.
4. Cushioned with soft & comfortable non-slip rubber.
5. With ATC function (ATC Compensation Range: 10°C~30°C (50°F~86°F)).
6. Durable and built to last long.

## 3. CALIBRATION PROCEDURE

Note: Honey refractometer calibrate needs special calibration with oil and stone. All refractometers are calibrated before send out, so usually no need to calibrate it.

1. Firstly, the dioptric oil can attack the cover plate (all plastic and rubber), please keep it away from the cover plate. With repeated contact, the dioptric oil can cause cracking and fogging of the cover plate. When you do the calibration, the calibration stone (reference block) must be used, and it will act as cover plate.

2. Drop one drop of dioptric oil on the long-sided surface of calibration stone (reference block). Open the daylight plate, stick the calibration stone (oily side down) on the surface of the prism, and press it lightly with your hand, so that it can not slide down. Rotate and adjust the calibration screw to make the white and blue boundary coincide with the reference reading 78.8% Brix.

	Code	Measuring range	Calibration point
Refractometer	HPD016	45-82% Brix	78,8% Brix
	HPD017	58-92% Brix	78,8% Brix
	HPD018	58-92%Brix, 38-43 °Be (Baume), 12-27% Water	78,8% Brix

3. You're done! The unit is now ready to accurately test whatever you need!



## 4. USAGE INSTRUCTIONS

1. Hold refractometer in the direction of a light source, look into the eyepiece and focus the eyepiece to see the graduations clearly.
2. Open cover plate, clean the instrument using a soft, damp cloth.
3. Place 2-3 drops of sample water on the main prism, close the cover late and press gently so that it spreads across the entire surface of the prism without air bubbles.
4. Hold device horizontally in the direction of a light source. Look into the eyepiece and read out the value where the blue and white cross the graduated scale.
5. Wipe off and dry the prism.

## 5. PACKAGE LIST



1. 1x Protective carrying case
2. 1x Pipette
3. 1x ATC refractometer
4. 1x Mini-screw driver
5. 1x Cleaning cloth

## 6. WARNINGS

1. Accurate measurement depends on careful calibration. The prism and sample must be at the same temperature for accurate results.
2. Do not expose the instrument to damp working conditions, and do not immerse the instrument in water. If the instrument becomes foggy, water has entered the body. Call a qualified service technician or contact your dealer.
3. Do not measure abrasive or corrosive chemicals with this instrument.
4. Clean the instrument between each measurement using a soft, damp cloth. Failure to clean the prism on a regular basis will lead to inaccurate results and damage to the prism's coating.
5. This is an optical instrument. It requires careful handling and storage. Failure to do so can result in damage to the optical components and its basic structure.