



## Honey sample preparation



Tube H: 10 pieces



Pasteur dropper or pipette:  
10 pcs



Zantox spoons: 15 pcs

## To perform the FCR (Folin Ciocalto) test: T<sub>1</sub> (labeled by green color)



Reagent R1 FCR test:  
Folin Ciocalto (a 15  
ml dropper)



FCR test R2 reagent:  
(a 10 ml dropper)



T<sub>1</sub> tube: 10 pieces  
(for FCR test)

**To perform the DPPH test:  
T<sub>2</sub> (Labeled by violet color)**



DPPH test reagent R1:  
(10 capsules containing in  
dry powder form)



DPPH test reagent  
R2: alcoholic solution  
(a 15 ml dropper)



T<sub>2</sub> tube: 10 pieces  
(for the DPPH test)

**To perform the Diastase test:  
T<sub>3</sub> (Labeled by blue color)**



DW (double distilled water): 25 ml with a 5 ml dropper



Diastase test reagent R: iodine iodide (a 5 ml dropper)

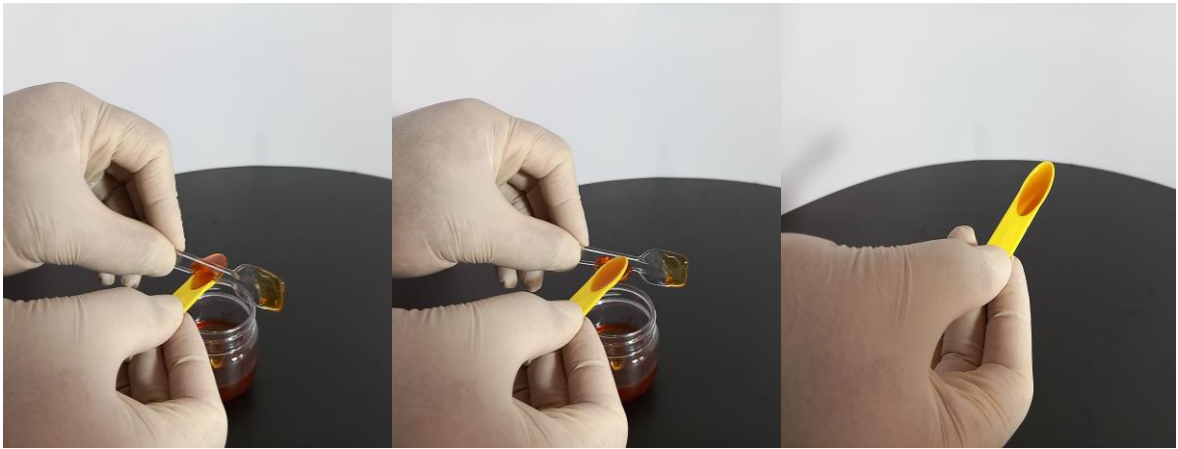


T<sub>3</sub> tube: 10 pieces (for diastase test)

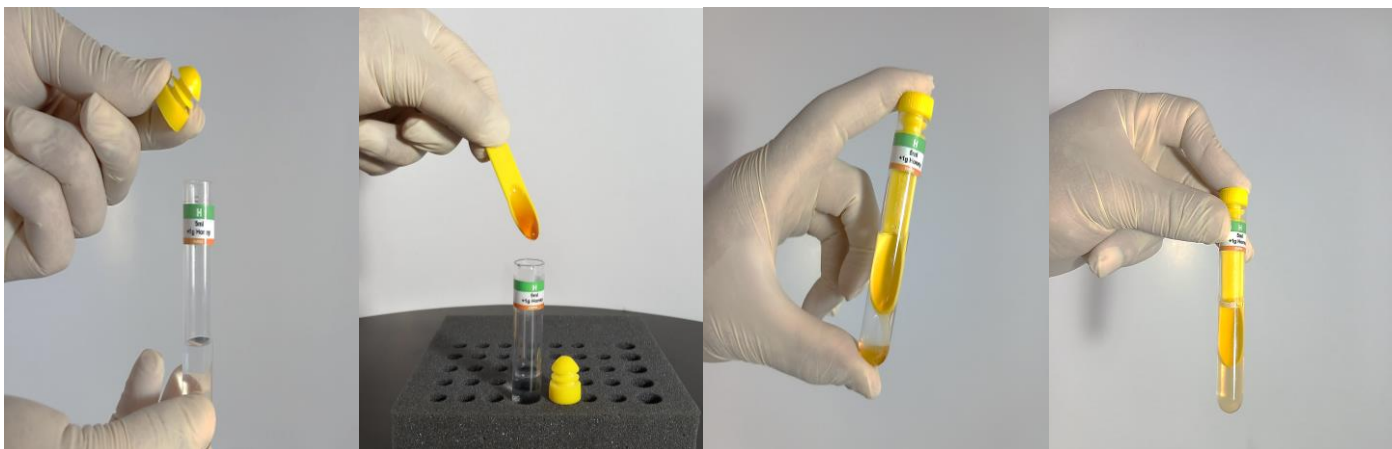
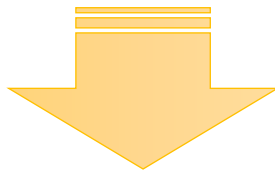
## Step 1: Preparation of honey samples



First, using a disposable spoon, take the desired honey samples (without wax particles, etc.), and add it into the cavity of the Zantox spoon so that it is completely filled.



Remove the excess honey by dragging the edge of the disposable spatula on the surface of the honey in the spoon. This spoon now contains one gram of desired honey.

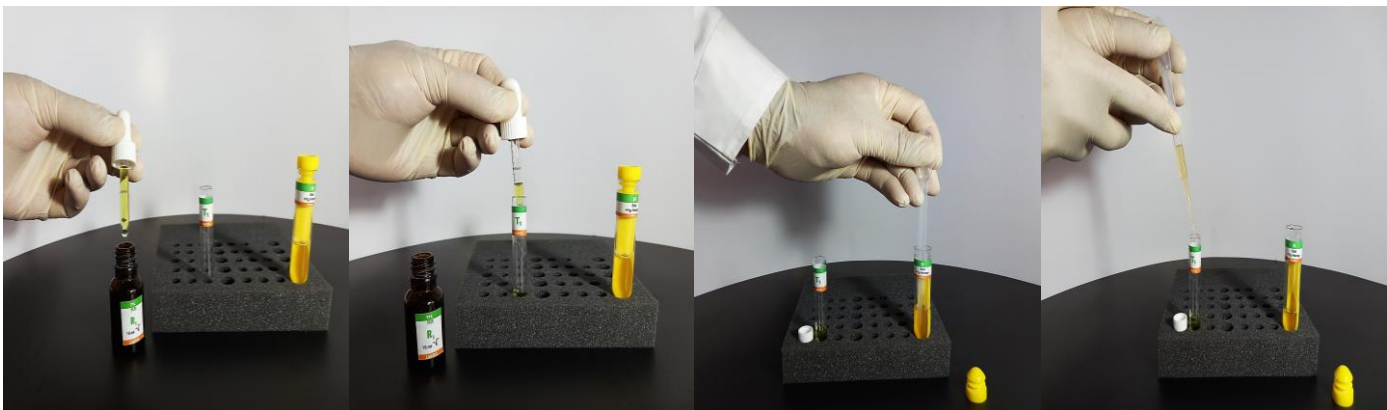
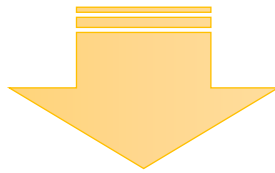


Then insert this spoon containing one gram of honey into the tube (H) and shake well until the honey sample dissolves in the water. You can pull the spoon out of the tube or take the sample from its side.

## Step 2: FCR test to measure the amount of phenolic compounds (T1)



T1 tubes, reagent R1 (FCR), and also a vial containing reagent R2 are present in the kit.



To perform this test, first, add 1 ml of reagent R1 (FCR) to the tube T1; then with the help of a dropper or Pasteur pipette, add 3 drops of diluted honey sample to tube T1



After 5 minute

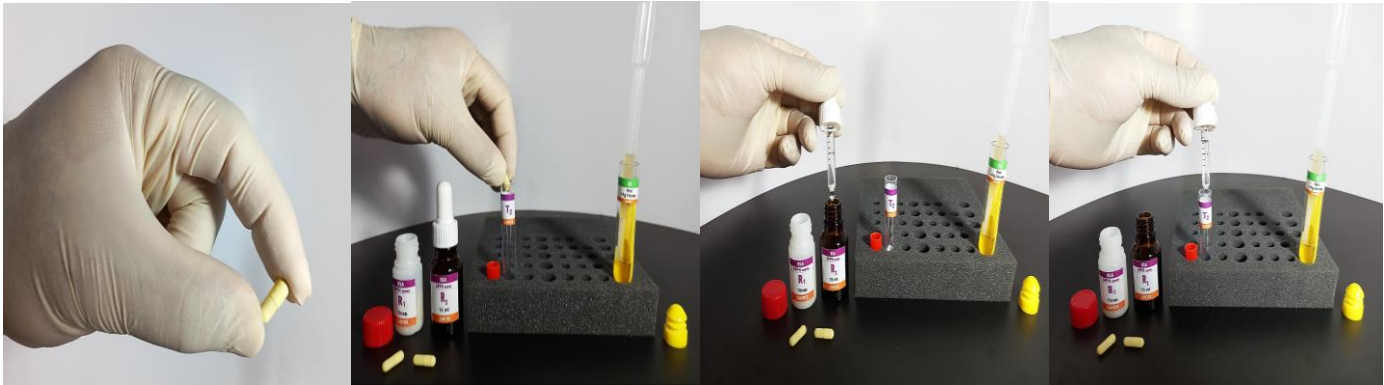
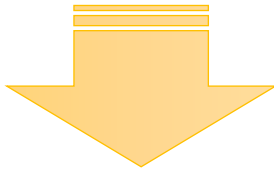


after 5 minutes, add half a milliliter of R2 reagent to it. After passing 10 minutes, the color created in the tube should be compared with the standard T1 color strip spectrum of the kit attached to its interlar lid (related to the FCR test) and the score obtained should be recorded.

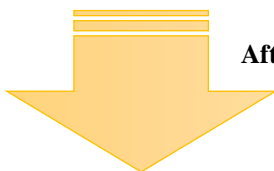
### Step 3: DPPH test to measure antioxidant capacity and neutralization of free radicals (T<sub>2</sub>)



T2 tubes, R1 Vial for DPPH test which has 10 capsules and each one contains 30 mg of DPPH reagent powder and reagent R2 (DPPH) are present in the kit.



To prepare the DPPH reagent for each honey sample, you should add one milliliter of the DPPH test reagent R2 into the T2 tube and carefully and slowly pour the contents of one capsule into the T2 tube and dissolve it well.



After 10 minute



After passing 10 minutes, the DPPH reagent is ready to use. to perform this test, add 3 drops of diluted honey sample to the T2 tube using a dropper or Pasteur pipette and after 5 minutes, compare the color to standard color spectrum of the kit (related to the DPPH test) The obtained score should be recorded on data sheet.

## Step 4: Diastase test to determine diastase enzyme activity (T3)



T3 tubes, R Vial for Diastase test and DW vial (double distilled water) are present in the kit.



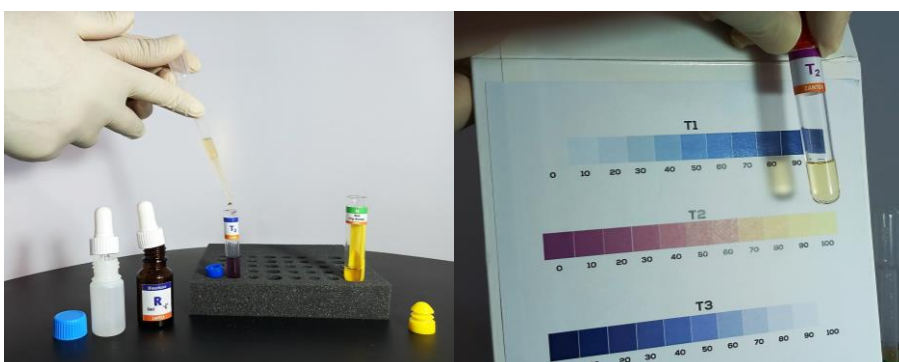
First, pour 2 milliliter of distilled water into T3 tube and shake to make the powder in tube dissolved.



Subsequently add 5 drops of Diastase test reagent R1 to the T3 tube



After 10  
minute



after 5 minutes, add 3 drops of diluted honey sample to the T3 tube using a dropper or Pasteur pipette. After 5 minutes, a color will develop and compare the color to standard color spectrum of the kit (related to the Diastase test). The obtained score should be recorded on data sheet.