

The Agrosta® Needle Version 2 has been designed in 2015  
In order to measure the hardness / firmness of Cauliflower and Cabbage  
It is a statistic instrument

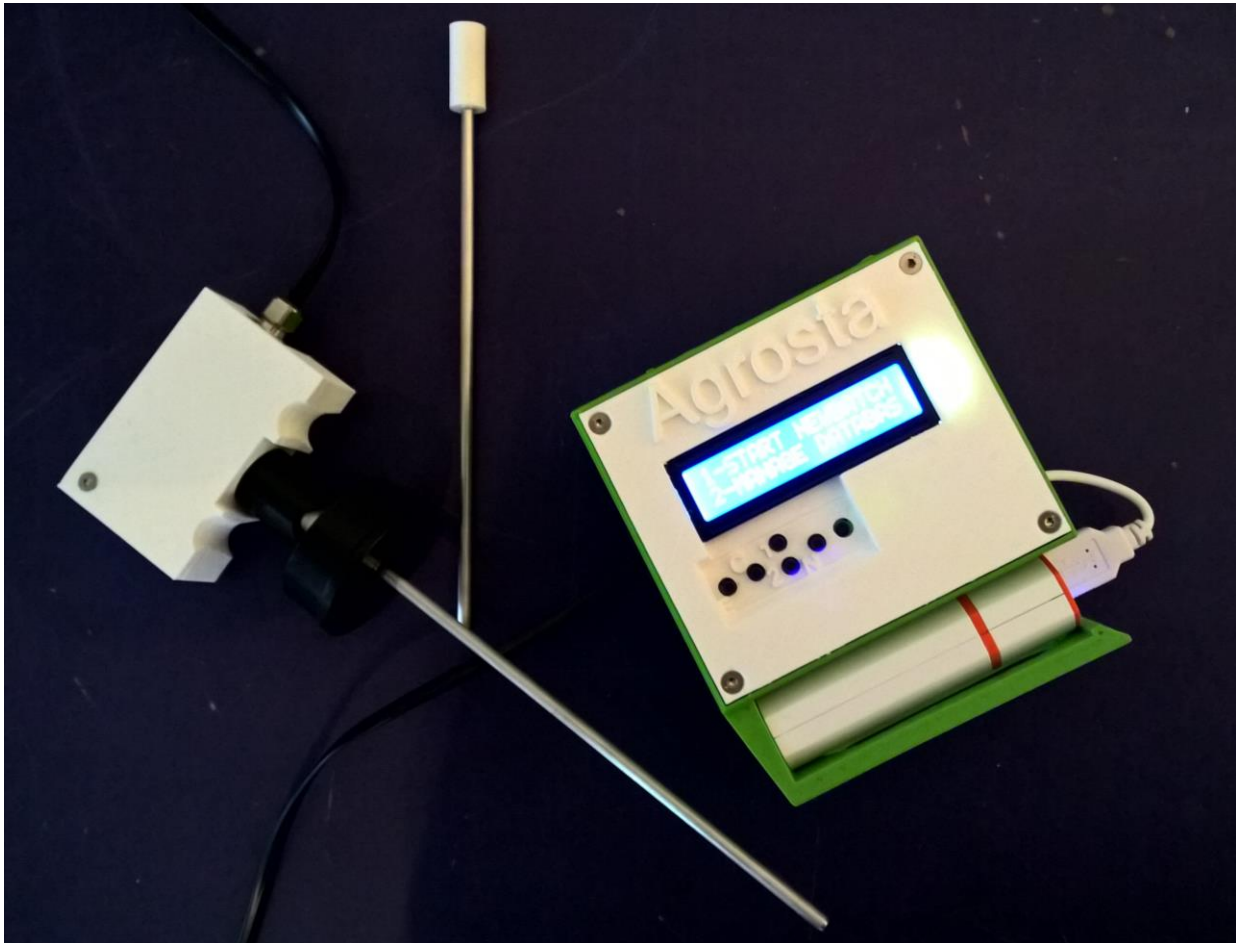


Many thanks for having acquired an Agrosta instrument

Your package contains :

- A Box with the instrument itself
- A sensor connected to the instrument
- A SD card already inserted in the instrument
- A micro SD to SD adaptor
- A charger
- A certificate of conformity
- A manual
- 2 Needle probes to be screwed on instrument

- First step :  
Screw the needle on the probe :



The AGROSTA®Needle is entirely designed and assembled in France. The motherboard comes from Italy, and the shield boards are made by DF Robot. The battery comes from DURACELL in the UK.

The AGROSTA®Needle is not waterproof! It is a precision instrument; please take care to avoid dropping or knocking it.

The AGROSTA®Needle has a two year guarantee from its date of shipment (Except on SD card, no guarantee on SD card).

- Minimum grams: 800 (operation threshold),
- Maximum grams : 13 000,
- Resolution: +/- 1 gram
- Precision 1.5 grams (24 Bits)
- Charging time: 1 day for one week work
- Maximum memory capacity: Huge – Limited only by SD.
- Maximum number of pieces of vegetables per batch: 450

## 1) HOW TO USE THE BATTERY

- Press a few seconds on the button of the battery, a strong light is switched on
- Press again, 4 blue leds appear, they indicate the charging level

## 2) HOW TO START THE INSTRUMENT

- TAKE CARE TO TAKE THE SENSOR IN THE RIGHT POSITION when you start the device (Tip free and looking at the floor..) :



The device takes the origin when you switch it on. If the sensor is not in the right position when you start the device, you can have a mistake in the measurements that can reach up to 60 grams



While keeping the sensor in the right position, start the device with the switch on the side

### 3) HOW TO USE THE INSTRUMENT

1<sup>st</sup> Menu :



Press 1 to start a new batch, 2 to consult or delete previous batches

2<sup>nd</sup> Menu after choice 1 :



You can measure your fruits one after each other  
Press C to cancel last measurement  
Press N to record and obtain statistics  
Press E to go back to Home menu without recording

Apply a pressure on the needle till the plastic abutment is in contact with the cabbage / cauliflower  
The instrument records the maximum pressure during cycle (starting when more than 800 grams, recording the max when lower than 800 grams)



If choice N :



The statistics of the batch are displayed, Press E to go back to Home menu

Menu "Manage Database"



Press N for batched consultation – Each batch statistics is displayed during 3.5 seconds – “A” corresponds to the average, “St” is the standard deviation of the batch, “Hi” corresponds to the homogeneity index of the batch (shall be less than 10% for good homogeneity)



Press C to erase Data, and go back to Batch 1, the data is deleted on SD card (Confirmation is asked by pressing 1)



#### 4) ON SD CARD

The SD card is located on the right side of the instrument. In order to remove it, apply a light pressure on it till it “clicks”



2 Files are available on the SD card :

- ALL.txt is used by the machine, and shall no be deleted nor modified (If deleted, it is re-created by the instrument, but the memory is erased)
- BATCHES.csv can be opened by Excel (choose “;” separator when Excel tries to open the file) – All measurements and statistics are stored on this file – We recommend to copy it on your computer, and not to modify the file on the SD card