

The Agrosta® Winterwood has been designed in July 2015 in order to provide a top accurate machine for testing automatically Cherries, Blueberries, and Grapes



Many thanks for having acquired an Agrosta instrument

Your package contains :

- The machine itself
- A SD card already inserted in the instrument
- A micro SD to SD adaptor
- 2 turntables (1 with 20 standard size cups, one with 5 bigger and 5 smaller cups)
- A manual with certificate of conformity
- A 110V / 220 V power supply

3 Route de la Fontaine – 76440 COMPAINVILLE - FRANCE
lak@agrosta.org - www.agro-technology.co.uk – Tel +33 689494340

The Agrosta®Winterwood is entirely designed and assembled in France. The motherboard comes from Italy, and the shield boards are made by DF Robot.

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

Never measure blueberries without the tips protections provided (Blueberry juice can destroy the sensor)

If blueberries are sticking on the tip protection, put some vegetal oil on tip protection.

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

- Minimum %: 6% (operation threshold), corresponding to a pressure of 40 grams approx
- Maximum %: 100%, when fully depressed, corresponding to a pressure of 806 grams
- Resolution: +/- 1%
- Maximum memory capacity: Huge – Limited only by SD.
- Maximum number of pieces of fruit per batch: 200

1) STARTING

- Connect the power supply to the instrument



Please note that when connecting the instruments to power supply, the stepper motors are immediately active – In order to increase the life time of motors, it is recommended to disable the stepper motors when the instrument is not used by disconnecting the power supply

- Place the turntable on the motor (First find the flat area on the axis of the motor, and take care that the table inserts correctly without forcing) – There is a flat zone in the axis of the turntable as well

- Turn the turntable (while power supply is connected) till it is parallel to the maroon line (see photo)



- Place your berries on the tables before inserting the table in the motor (Or if you put them after, take care not to force too much on the turntable)

2) MEASURE A BATCH

1st Menu :



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

If you start the turntable (see hereafter) without pressing menu 1, no data will be measured nor stored

2nd operation :

- Once the turntable is in the correct position (parallel to the maroon line) :
- Touch the touch sensor, the machine starts to measure the 20 fruits :



2nd Menu after choice 1 :



The fruits are measured 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

You can measure several series of 20 fruits

If there is no fruit in a cup, no measure is taken

Once the batch is finished, press N

The maxi number of fruits in a batch is 200



2 Figures are displayed :

- The durofel percentage on the right
- After S : The number of steps necessary for the motor to reach the fruit (Here the motor has made 105 steps before it has touched the fruit) – You can correlate it to the size of you fruits by placing on the turntable berries for which you know the size, and then make a correspondence chart

No statistics are provided for the size, but all size data are stored inside SD card

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)



3) 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

4) AUTO-CALIBRATION

You can check if the calibration of your device is still valid.

1st – Start the instrument according the starting procedure above (Be sure that the sensor is in the right position when you start the device !!)

2nd – Press very strongly a hard surface on the tip (like a piece of metal) – You should obtain more than 96 % (The best is to obtain 100%) – If it is not the case, contact Agrosta for calibration