Agrosta® Fruit Texture Analyzer

Version 2022

The Fruit Texture Analyzer has been designed by end 2020, updated in 2022
It comes with the best technology for measuring the **firmness / softness, size and weight** of quite any kind of fruit or vegetable – It is a statistic instrument for measuring the crispiness of Apples, pears, potatoes, mangos, apricots, papaya, cucumber, peaches, kiwi, and the firmness of oranges, lemon, pomelo, cherry, strawberry… and many other fruits and vegetables

Many thanks for having acquired an Agrosta instrument

Your package contains :

- The instrument itself
- 2 Tips : 8 and 11 (mounted on instrument), other tips on demand
- A USB Stick with the software for windows
- A USB cable
- A power supply
- A certificate of conformity
- A manual

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The FTA is provided with 2 tips : A tip of 11 and a tip of 8 + specific tips according to your requirements

- The tip of 11 is recommended for : APPLE, PEAR, PEACH, KIWI, PAPAYA
- The tip of 8 is recommended for : MANGO, CUCUMBER, APRICOT, POTATO
- Other tips on demand (ORANGE, CHERRY, STRAWBERRY, MELON, AVOCADO..)

Main characteristics of the machine :

- Using Stepper Motor Nema 23
- Stepstick (Motor Electronics) from Asia
- Main electronic processor based on dual core ESP32
- Electronic shield for pressure testing made in Hong Kong (Based on HX 711 24 bits precision)
- Design and software made by Agrosta in France
- Precision force sensors

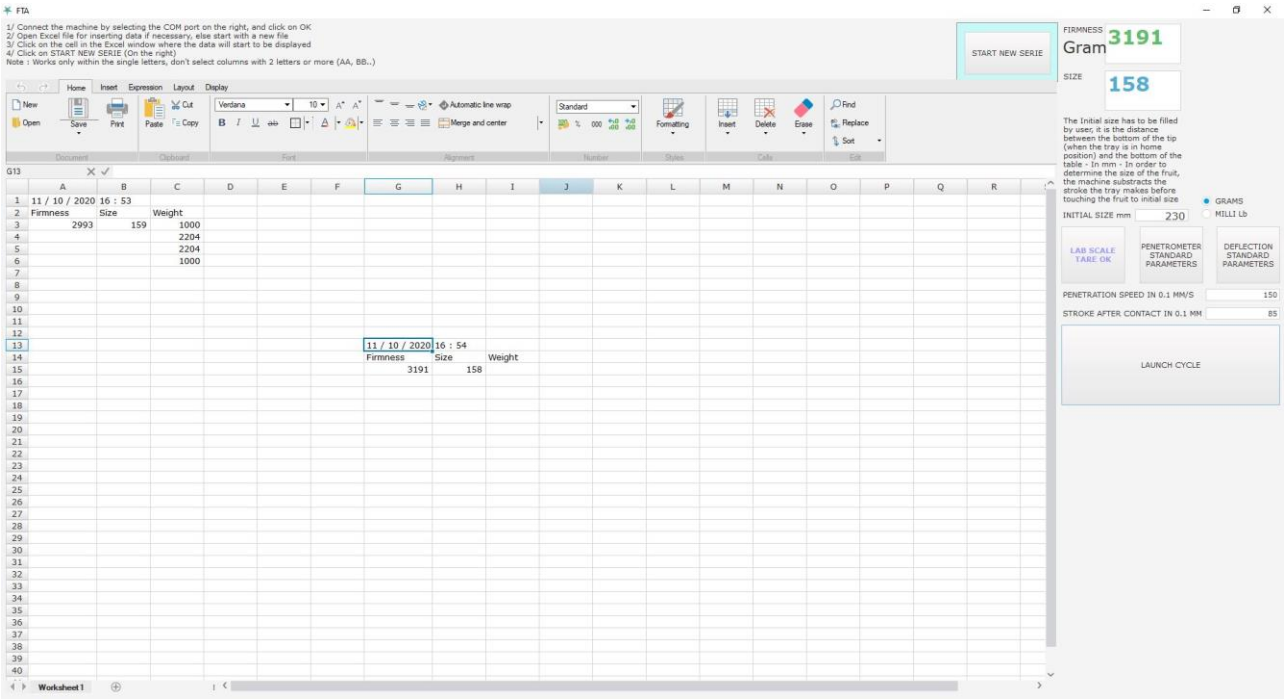
- Resolution : 1 gram

- Max pressure : 20 000 grams (Capacity 20 Kg, limited to 18 Kg by software)

- Min pressure measurement : 31 grams

- Precision : 0.2 grams

- Software compatible with Windows XP, 7, 8 and 10



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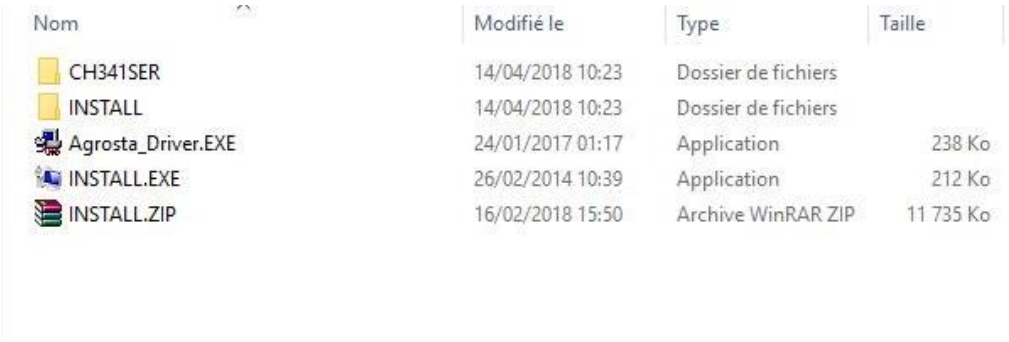
1/ Install Driver

- Don’t connect your machine
- Insert USB stick in your computer



- Double click on “Agrosta_Driver” – Follow setup procedure

2/ Connect Usb cable between instrument and your computer

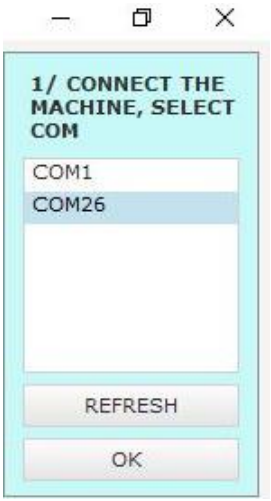
3/ Wait a few seconds till it is recognized (Driver linked to device)

4/ Install Software from USB Stick (Doble click on INSTALL)

5/ The software starts after setup

6/ Connect power plug

7/ Select the COM corresponding to your machine in the list on the right (Usually, the last one)



8/ Double click on OK

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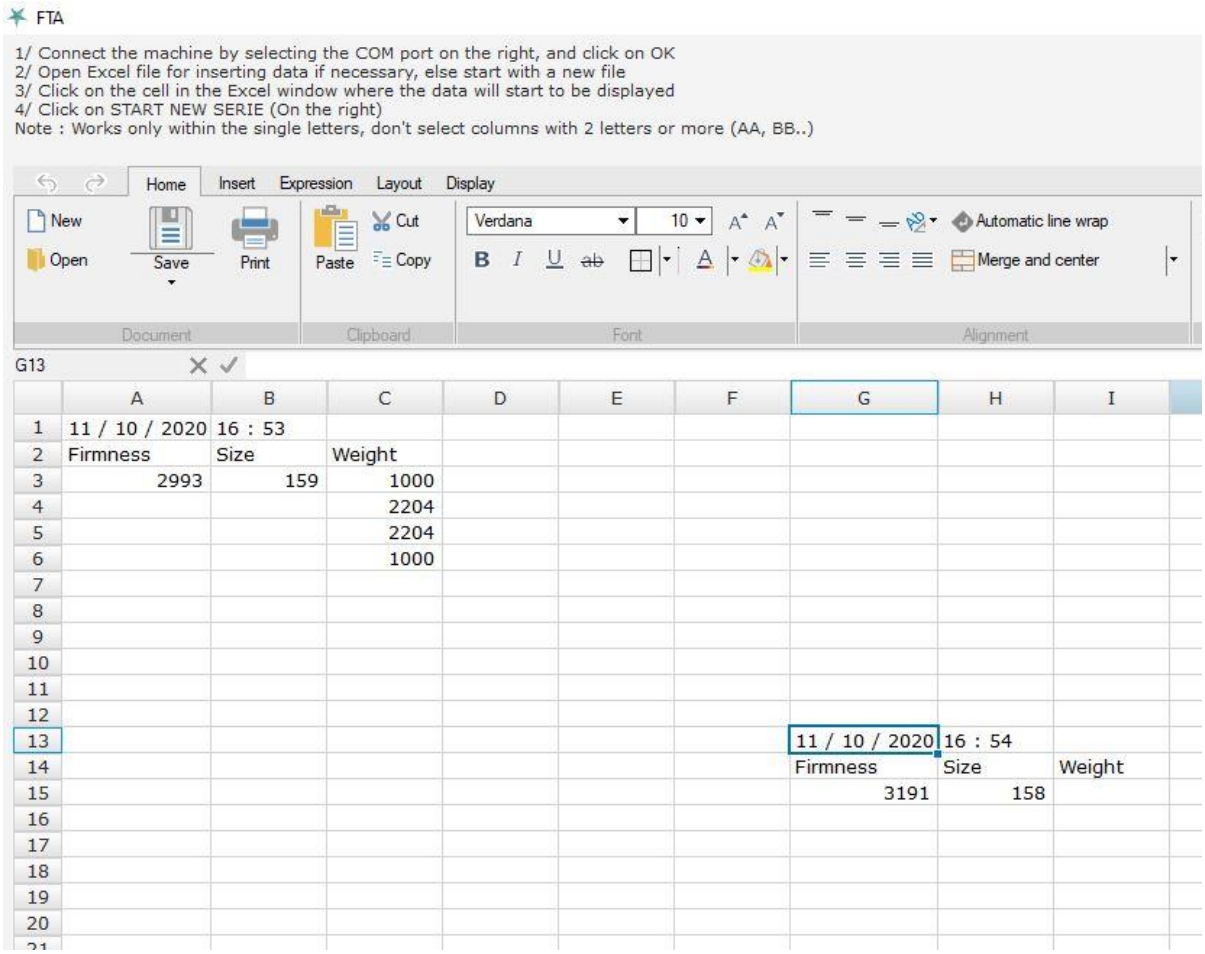
- The software comes with a light version of an OPENSOURCE EXCEL – So you don't need to have Excel on your computer, The software will generate Excel files, and you will have the opportunity to open and modify those files inside Agrosta Software (Only **.xlsx** files)

- Once your machine is connected (Procedure described before), you can either open an existing Excel file in order to add your measurements inside this file, or start with a new file

- Inside the EXCEL module, click on the cell where you want the measurements to be added for the coming Serie of fruits. The measurements will be added under the cell you have selected

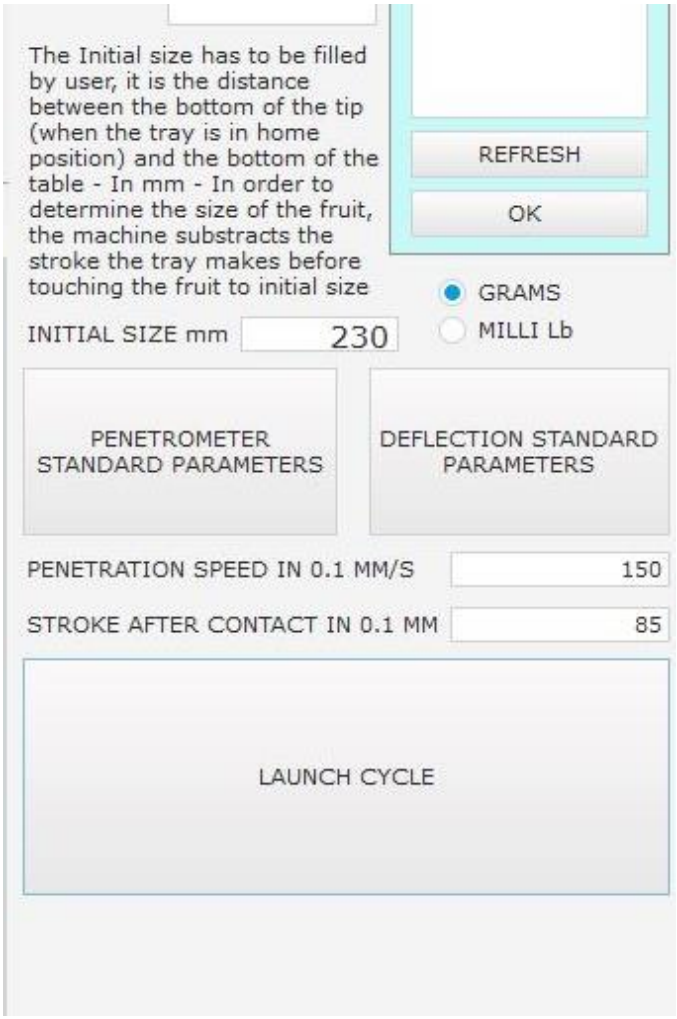
- Then click on "START NEW SERIE" – The titles of the columns, as well as the date and time will be added



	A	B	C	D	E	F	G	H	I
1	11 / 10 / 2020	16 : 53							
2	Firmness	Size	Weight						
3	2993	159	1000						
4			2204						
5			2204						
6			1000						
7									
8									
9									
10									
11									
12									
13							11 / 10 / 2020	16 : 54	
14							Firmness	Size	Weight
15							3191	158	
16									
17									
18									
19									
20									

- Try to place a fruit on the lab scale, the weight will be instantly displayed in the Excel chart

- You can now place your first fruit on the table, fill the initial size and adjust the parameters of speed and stroke after contact (Or click on one of the 2 buttons with preset parameters: Penetrometer or deflection)



- Now, you can click on “LAUNCH CYCLE”, the machine starts, and the values are displayed

- Measure your fruits one after each other (Weight, then firmness and size) :

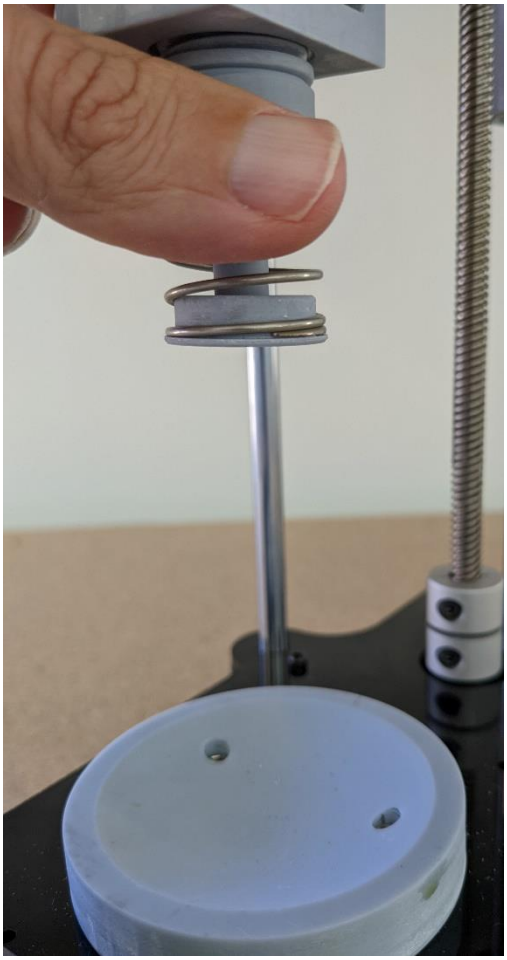
- You can start a new serie of fruits if you want by clicking on another cell inside Excel module, and then clicking again on “START NEW SERIE”

- You can modify your file, record it, add comments, insert columns or lines as you do in Excel: You can make calculations with functions like AVERAGE() or SUM() like you do in any Excel file – Find all functions in the tab “Expression”

- Take care to limit your sheet to columns from A to Z, don’t use columns starting from AA after Z

9) Maintenance

- You can remove the spring if necessary for changing the spring for example (The machine works well without spring) – For this, just unscrew and remove the spring module



10) Changing table

Un can unscrew the table and screw a new one as per photo hereafter (mushrooms table)