

The Agrosta®Texturometer Version 2 has been designed in 2016
In order to provide to researchers a simple and reliable tool to determine : Freshness, spreadability, Tenderness, Springiness, Gumminess, Hardness, Firmness, Consistency, Fracturability etc of a variety of Food Products and soft materials



Many thanks for having acquired an Agrosta instrument

Your package contains :

- The instrument itself
- 2 Beakers and one plate for trials
- 5 different tips
- A power supply & a USB cable
- The software for windows on USB key (With video for easy setup of the machine)
- A certificate of conformity
- A manual

Agrosta®Texturometer has been designed and produced in France by Agrosta

- The motor is a Nema 23 stepper motor
- There are 2 microprocessors, one is measuring and communicating with the PC, the other one is managing the movements and the motor (Both motherboards come from USA)
- Precision 1 gram, resolution 1 gram
- Threshold pressure : 300 grams
- Maxi pressure : 20 Kg
- Software compatible with Windows XP, 7, 8 and 10
- Selectable stroke and parameters by software
- Guarantee 2 years

Starting :

- Install the software on your PC before connecting the device, accept driver setup
- Connect the device with the USB cable (only to the PC, not to sector power)



- Wait till it is recognized, and driver configured
- Plug the device to the power (100 to 240 V)

Operating :

- You can chose if you use the beaker or the plate according to the products you want to test
- Use the longer axis when you use beaker, and the shorter when you use the plate



- In case of **EMERGENCY = REMOVE POWER PLUG !**
- Start the software from the PC, and select the COM port corresponding to your device (If you don't know which COM port is used by the machine, just try each of them, click on "OK", and launch a cycle

First Cycle :

Click on your device

COM1
COM7

Erase data

Export to Excel
Erase
(Production batch analysis)

Grams Mill Lb

OK

Inst Value

101	2 964	5 551	6 589	5 060	2 960	1 491	1 628	3 310	5 672	7 762	5 929	3 997	1 735	254	114	1 019	3 057	5 625	6 650	5 141	1 594	1 737	3 391	5 737	7 093	8 565	7 696	6 069	4 169	1 898
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1 - Select COM

2 - Click on OK

3 - Select a pre-config program

Statistics

Average 0

St Dev 0

Mini 0

Maxi 0

Export batch and Statistics to Excel

2 PRESS FAST 5mm

2 PRESS FAST 2mm

2 PRESS SLOW 10mm

2 PRESS SLOW 5mm

1 PRESS SLOW 5mm

1 PRESS SLOW 3mm

1 PRESS SLOW 2mm

FRUIT PENETROMETRY

4 - Launch Cycle

LAUNCH CYCLE

High Speed

Time between

Low Speed

Stroke after contact

Contact detection when grams

Return Speed before second pressure

Time between

Backlash Compensation of machine

In 1/10e

Return stroke for second pressure

In

Pause time before second press

In Milliseconds

Low Speed second pressure

Time between 2

Stroke for second pressure

In

Parameters :

You can use the pre-configured programs, or apply your own parameters

Your last configuration is recorded by the software, and will be applied the next time you will start the soft

You can adjust and select the following parameters with the software :

- “a” + fast speed in microseconds (microseconds between 2 steps of motor, 320 steps for 1mm stroke, minimum 50µs)
- “b” + slow speed after first contact with the sample, in microseconds
- “c” + stroke after first contact with sample in 1/10 of mm
- “d” + threshold in grams (For how many grams does the machine consider that the tip is in contact with sample), we recommend a minimum of 50 grams
- “e” + first return speed in µs
- “f” + backlash compensation in 1/10 of mm (Mechanical clearance compensation)
- “g” + second slow speed in µs, if not indicated, the machine does not make a second cycle (Second cycle is used to determine springiness)
- “h” + second stroke in 1/10 of mm
- “k” + return stroke between first and second pressure, in 1/10 of mm

The curve is displayed, and you have the choice between 3 buttons :

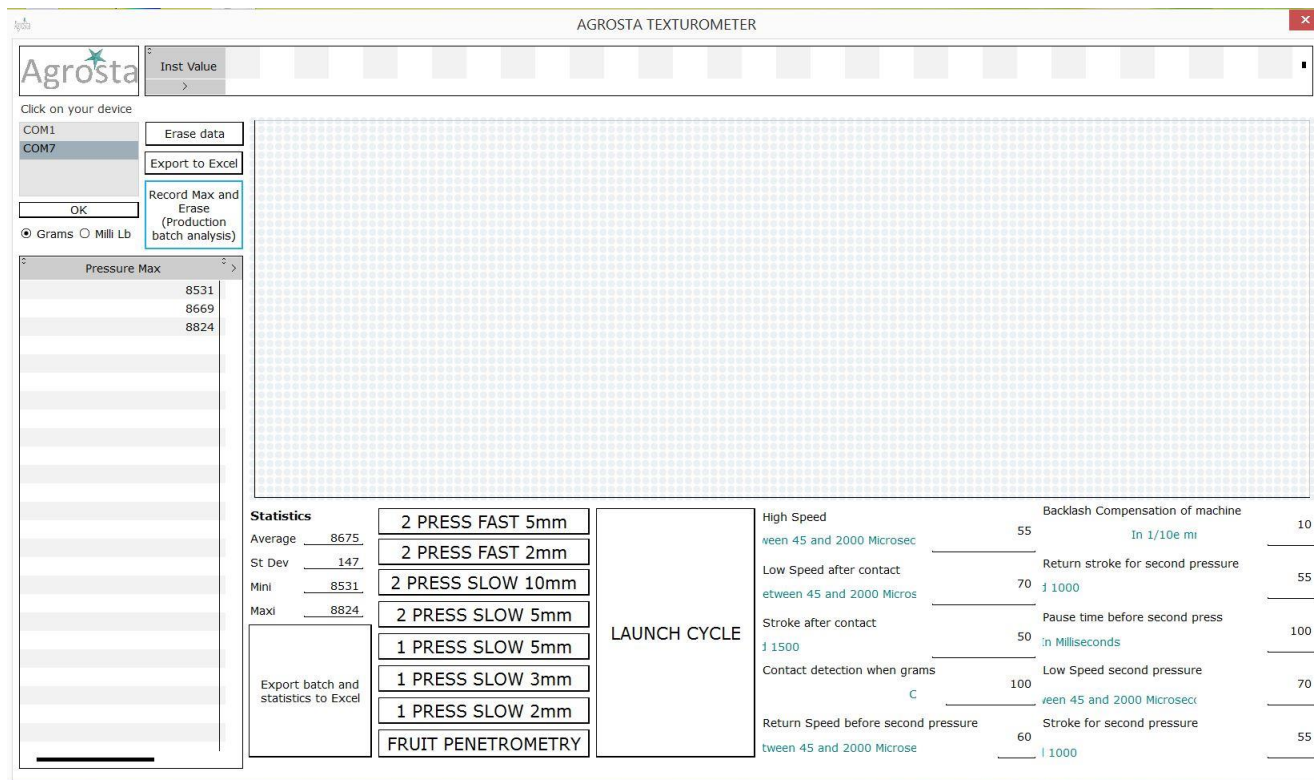
- Erase data
- Export to Excel the raw data
- Record maximum + Erase

This last button is very useful if you want to use the software for production issues

In this case, you want to manage batches of samples, and obtain statistics for a large number of samples.

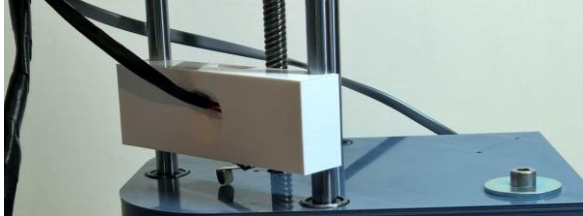
This buttons records the maximum in the chart “Pressure Max” and statistics are automatically calculated for your batch

You can record your batch values with the button “Export Batch”



Changing configuration :

It is recommended to move the upper endstop in order to adapt it to the size of your sample (This is in order to save time) – The white piece on the photo :



It slides along the metal axis
The machine will always go back to HOME position in contact with this Endstop

Using your own software to communicate with the machine (Advanced configuration) :

The machine communicates on a very simple way with the computer
Just write on the COM (Serial port) corresponding to the machine the parameters as follows :

```
a60b400c55d150j1
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This example is for only one stroke of 5.5 mm length after contact. Contact is detected at 150 grams
The instruction j1 is to start the cycle

Optional system to perform tensile strength tests (Maximum 10 Kg)

Screw the system on the load cell (first part), and place the second part inside the beaker case :

