

# Agrosta®DFT14

Digital Firmness Tester for special use

The Agrosta DFT14 is a load cell tester that can be adapted for many sectors, either as penetrometer (With needle for testing cauliflower or cabbage for example) or deformation tester for surface firmness testing (For cows udders or women breasts for example)

Version 2023 :



Version 2022 with abutment for cows udders



Many thanks for having acquired an Agrosta instrument

Your package contains :

- A Box with the instrument itself and the sensor
- A SD card already inserted in the instrument
- A charger
- A certificate of conformity A manual

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The AGROSTA®DFT14 is entirely designed and assembled in France. The motherboard comes from Taiwan, and the shield boards are made in the USA. The battery comes from DURACELL in the UK.

The AGROSTA®DFT14 is not waterproof! It is a precision instrument; please take care to avoid dropping or knocking it.

The AGROSTA®DFT14 has a two year guarantee from its date of shipment (Except on SD card, no guarantee on SD card).

- Minimum grams (Threshold) : 100
- Maximum 12000 grams
- Accuracy: +/- 3 grams
- Maximum memory capacity: Huge – Limited only by SD.



## 1) CLICK ON START



- 2) CLICK ON “RECORD SENSOR WORK POSITION” : BUTTON ON TOP WHILE TAKING THE SENSOR IN HAND IN THE RIGHT POSITION
- 3) CLICK ON THE GREEN SQUARE IN THE MIDDLE, A KEYBOARD IS DISPLAYED
- 4) TYPE THE NAME OF THE BATCH, AND CLICK ON “OK”

PS : Points 3 and 4 can be skipped, in this case, the batch will have no name, which is not a problem for the instrument

## 5) CLICK ON “START”

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The measurement page is displayed, you can start the measurements one after each other, statistics are updated

Once you have finished to measure the batch, click on “HOME OR NEW BATCH”

## 6) CLICK ON “CONSULT”

On the “CONSULT” page, you have access to the statistics of up to 15 batches. The batches displayed are the ones that you have created since the last switch on of the device

If you want to have an access to the full data (each measurement and statistics), you can use the microSD, storing data under csv format (Excel compatible) – each batch is stored in a file having the name of the batch

Take care to the side when placing the SD : Back side of the SD (no logo) looking at the top

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## USE THE ANDROID APP FOR SMARTPHONE AND TABLET

First, switch on your device and associate it to your phone or tablet  
For this, go in PARAMETERS / BLUETOOTH and click on "Add device"  
Once it is associated, switch the Esther/DFT14/Kingfisher off and on again

### ESTHER & DFT14

[www.agrosta.org/esther.apk](http://www.agrosta.org/esther.apk)



### KINGFISHER

[www.agrosta.org/kingfisher.apk](http://www.agrosta.org/kingfisher.apk)



- Once the file is downloaded, you will find it in the DOWNLOADS folder of your smartphone or tablet
- Click on it in order to install it
- You will have several warnings as this file does not come from GOOGLE PLAYSTORE
- The first warning says "Setup of unknown applications is not authorized on this phone"
- Click on PARAMETERS
- Select "ALLOW THIS SOURCE"
- Click on INSTALL
- Then you have a warning : "BLOCKED BY PLAY PROTECT" : This app can be dangerous

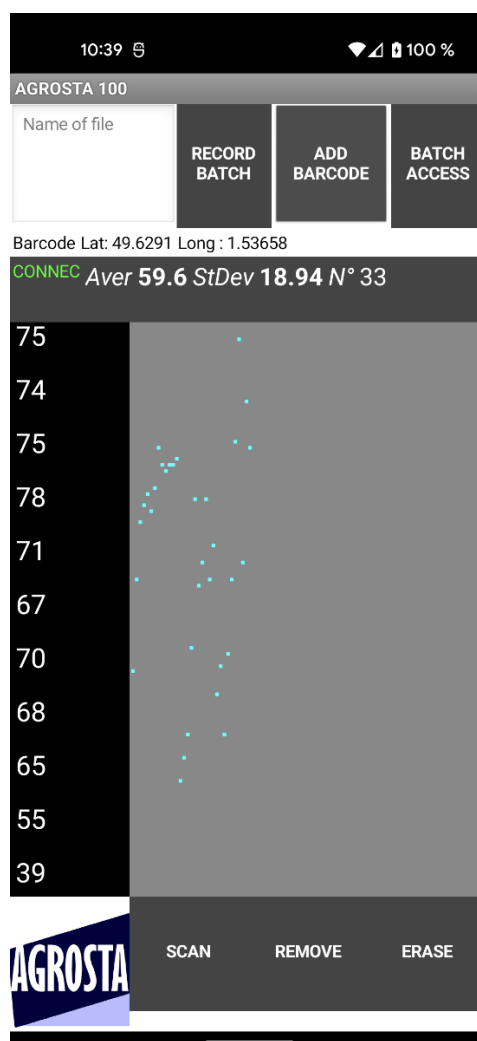
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- Then click on INSTALL ANYWAY

For using the APP :

- AGROSTA ESTHER : Simply switch on the device and wait 3 seconds
- Once installed, start the app (only **after** having switched ON the device) :



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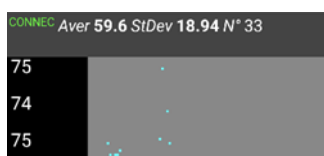
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- You see now CONNECTED appearing in green, which means the device is connected to your smartphone / tablet

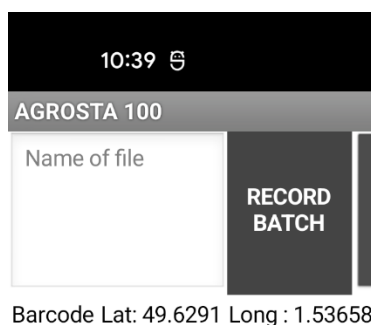
**If not :**

- 1/ Check that the device is appaired (first steps in parameters)
- 2/ Close the app (Really close, don't let it working in background)
- 3/ Switch off and then on again the Agrosta ESTHER / DFT14
- 4/ Reopen the app

- You can now start the measurements



Once you have finished to measure your batch, enter a name of file and then click on RECORD BATCH



- If you use the name of an existing file, the data will be added at the end of the file (append)
- You can consult the previous batches by clicking on "BATCH ACCESS"

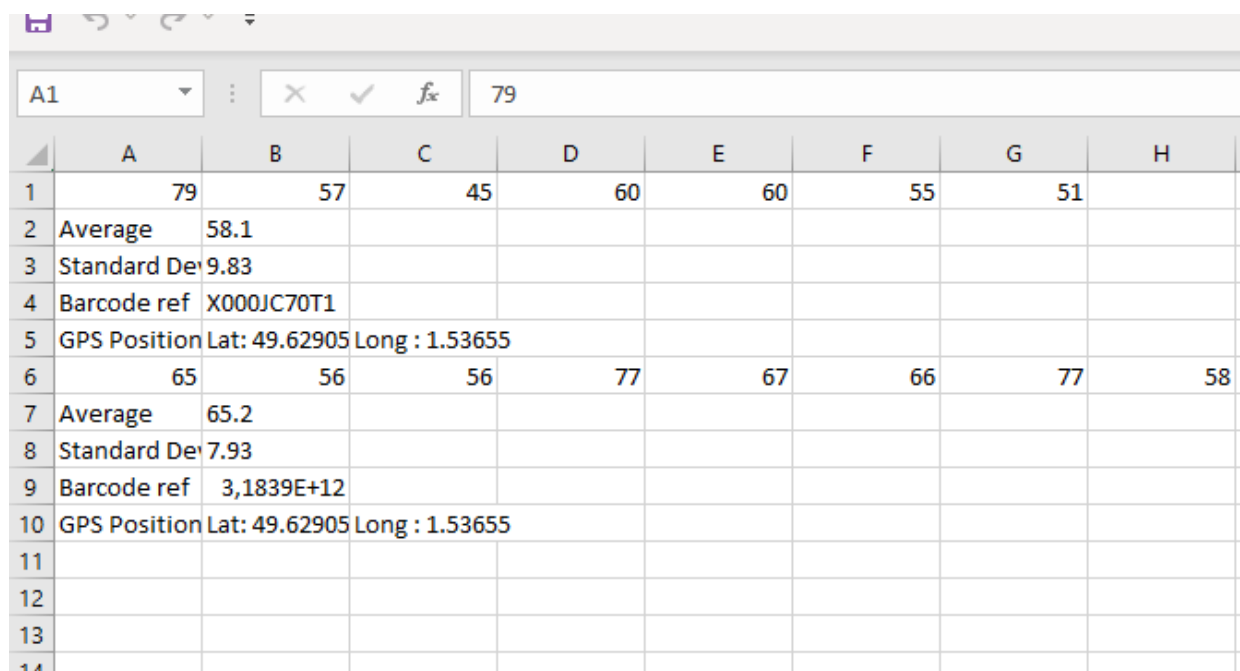
BACK	<p>79 57 45 60 60 55 51  Average 58.1  Standard Deviation 9.83  Barcode ref X000JC70T1  GPS Position Lat: 49.62905 Long : 1.53655  65 56 56 77 67 66 77 58  Average 65.2  Standard Deviation 7.93  Barcode ref 3183942910136  GPS Position Lat: 49.62905 Long : 1.53655</p>
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- Click on the button "BACK" in order to return to the measurement screen
- The files are available under ".csv" format (Excel compatible) with separator " ; "

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- There are located here on your phone or tablet : **Android/data/com.lak.esther/files**
- Here is how a file look like after having stored 2 batches under same file name :



	A	B	C	D	E	F	G	H
1	79	57	45	60	60	55	51	
2	Average	58.1						
3	Standard Dev	9.83						
4	Barcode ref	X000JC70T1						
5	GPS Position	Lat: 49.62905 Long : 1.53655						
6	65	56	56	77	67	66	77	58
7	Average	65.2						
8	Standard Dev	7.93						
9	Barcode ref	3,1839E+12						
10	GPS Position	Lat: 49.62905 Long : 1.53655						
11								
12								
13								
14								

- **Voice function :** Click on UNMUTE and choose between more than 40 languages  
The results will be said by a voice  
It's a very good help for the user, that does not need to watch the phone or tablet when measuring



## Communication with a PC under WINDOWS

Download the software for Windows here :

**<https://www.agrosta.org/14100.zip>**

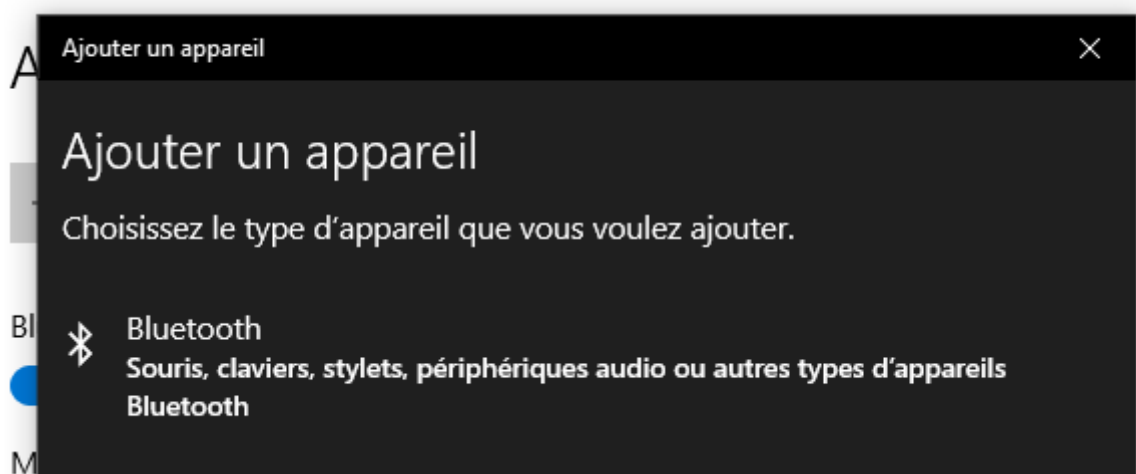
First, you need to add the Bluetooth device to your PC :

### Setting up the Bluetooth communication :

- Switch on the ESTHER / KINGFISHER / DFT14
- On your computer, go the parameters, and then Bluetooth devices:



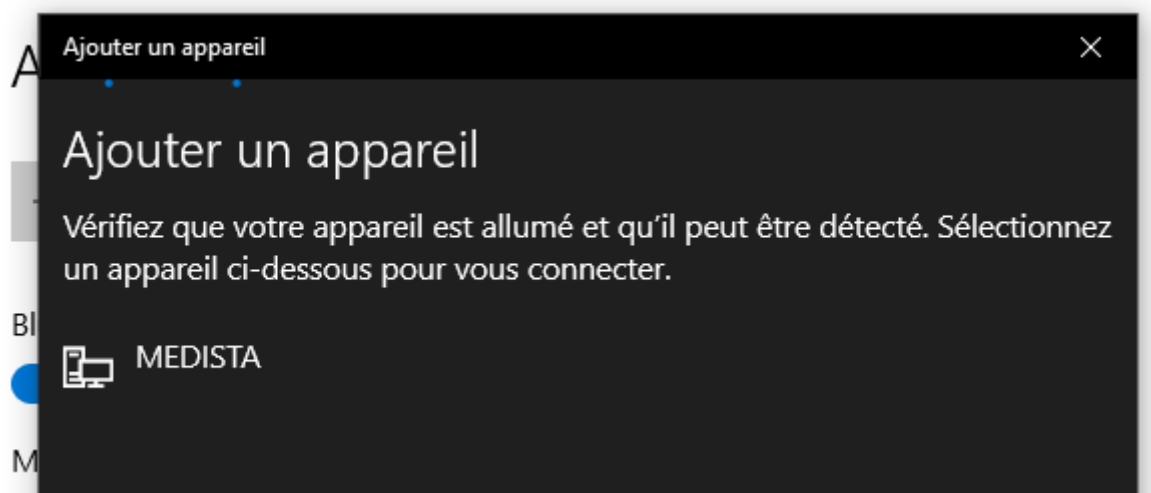
- Click on “Add a Bluetooth device”, and check that the Bluetooth is activated
- Then click on the first category : Bluetooth keyboards, mouse, audio and others :



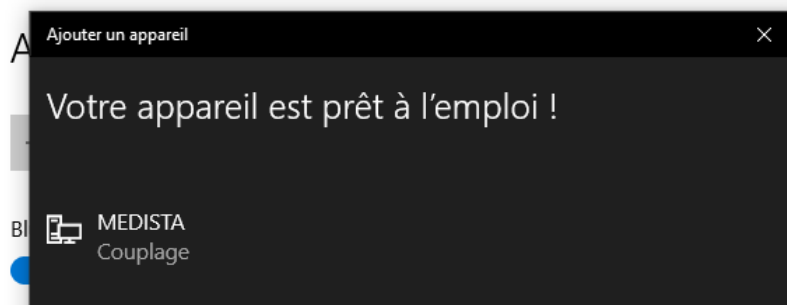
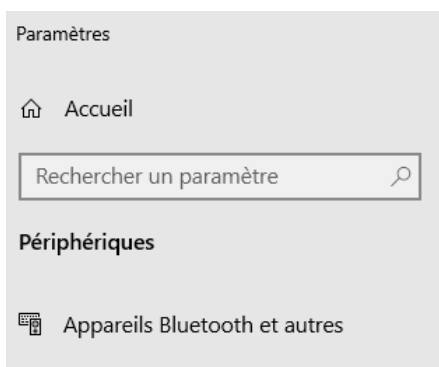
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- Then click on “ESTHER”



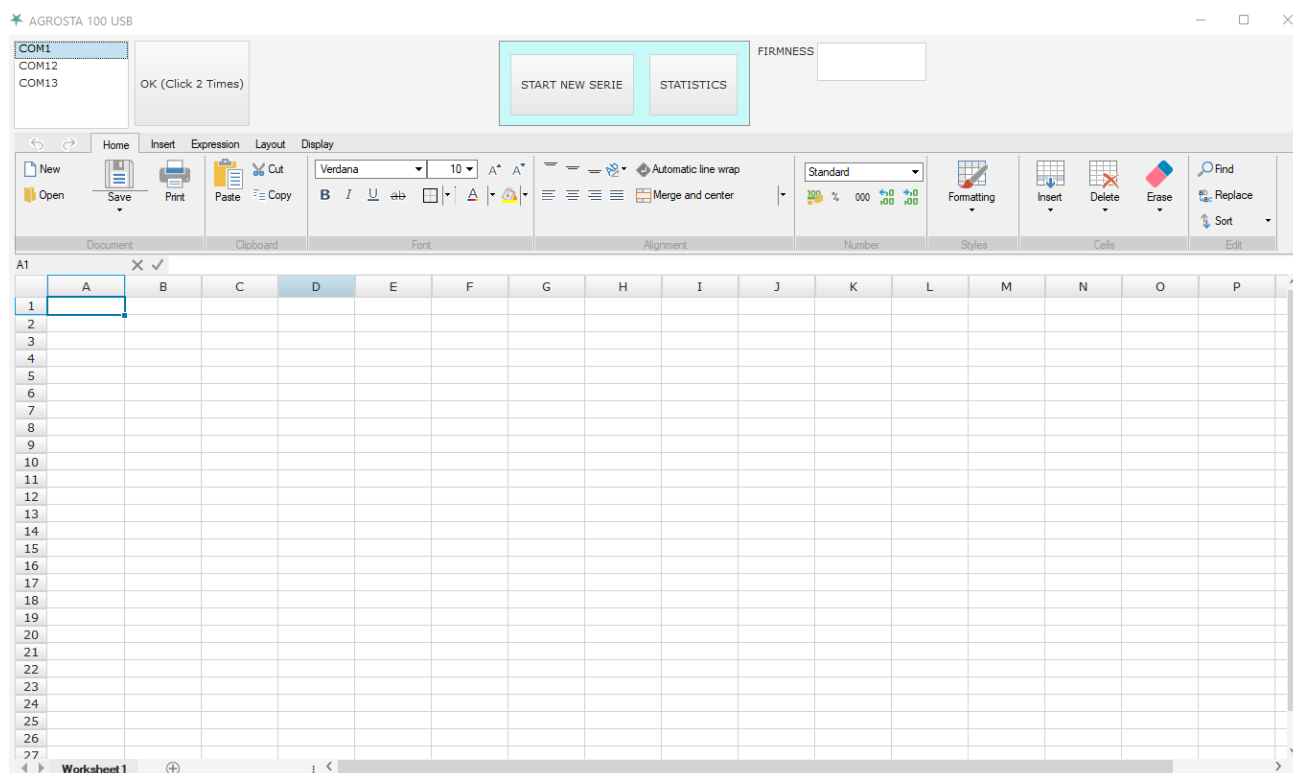
- Once you have clicked on “ESTHER”
- Your computer indicates : “the device is ready to use”



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Start the software – One of the COM indicated on top left corresponds to your device  
 Click on it, and then 2 times on OK  
 Usually, the right COM is the last one



To start a new batch, click on any cell in the chart, where you want the data to be displayed  
 Then click on “START NEW SERIE”  
 Make the measurements  
 When finished, click on “STATISTICS”  
 You will obtain the average and standard deviation