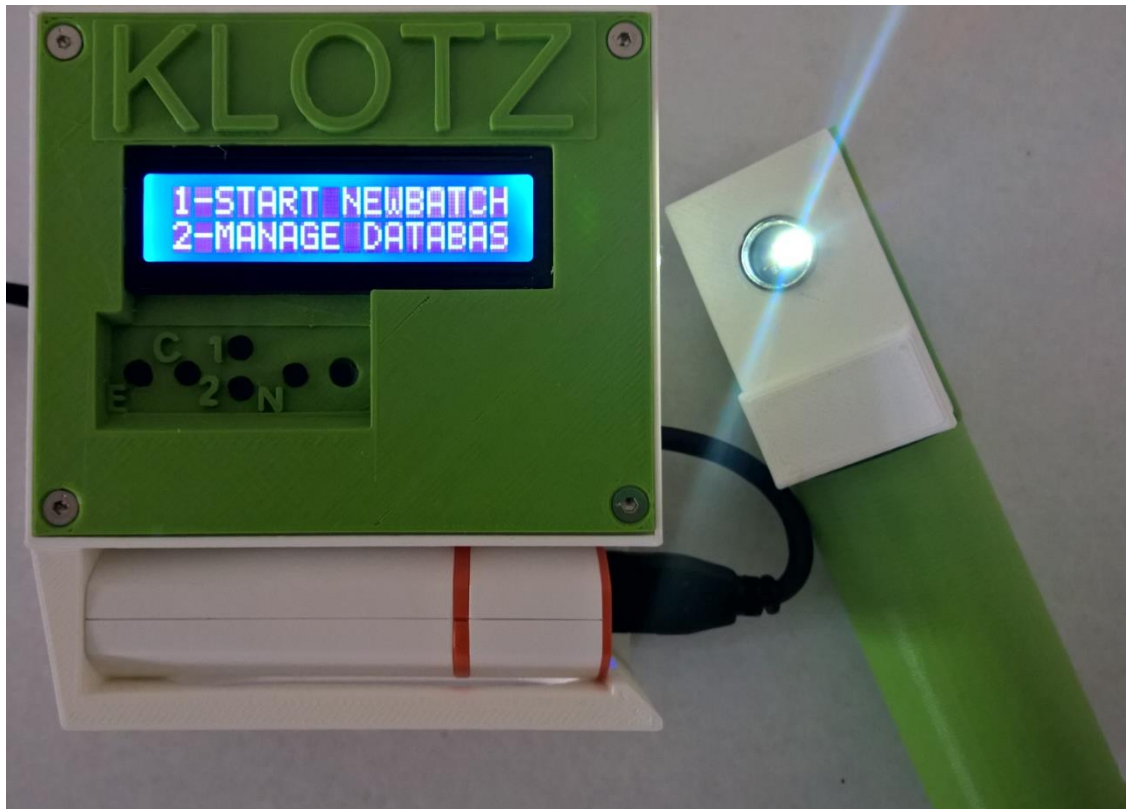


# RGB Color Tester

Digital Colorimeter

The RGB Color Tester has been designed in 2015 by our sister company KLOTZ ROBOTIK. It integrates the best technology for measuring Red / Green / Blue colors according (from 0 to 250) – It is a statistic instrument giving the average for each color per batch.



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 manual
- 2 Cottons to clean the sensor

# RGB Color Tester

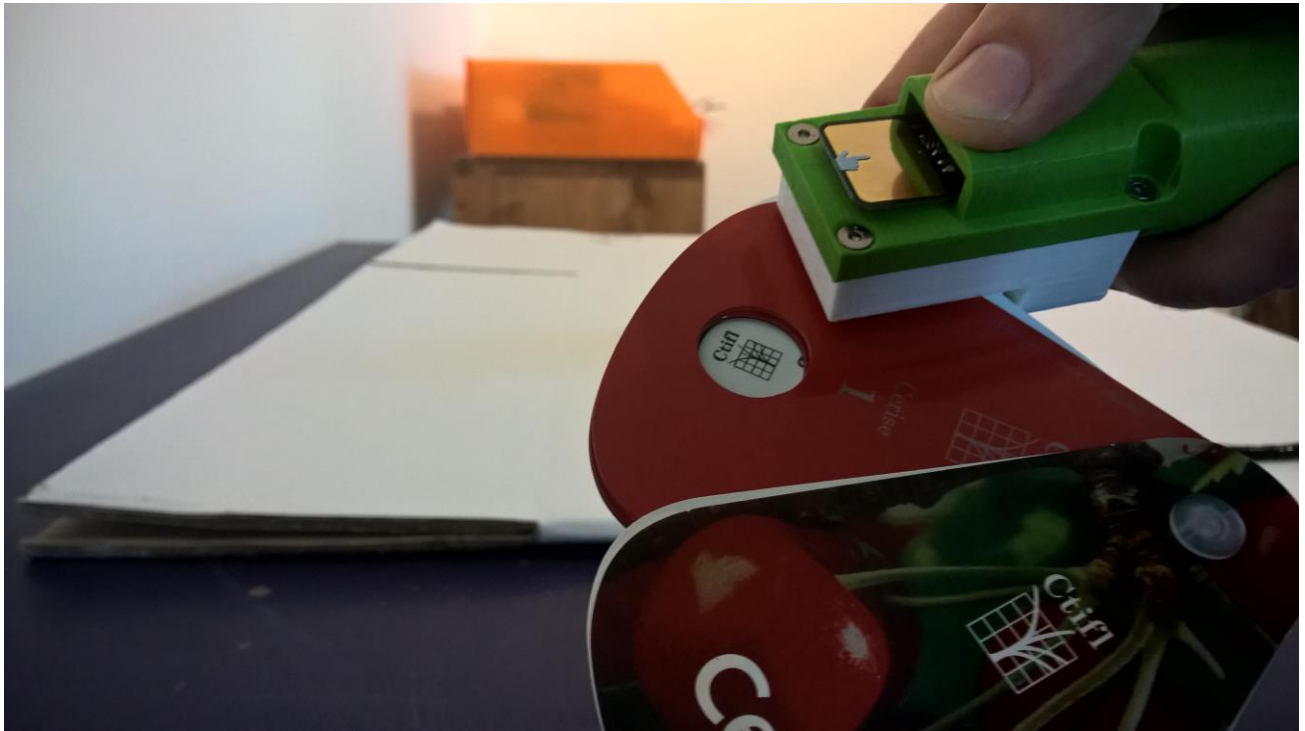
## Digital Colorimeter

The RGB Color Tester is a statistic colorimeter that has been entirely designed and assembled in France. The motherboard comes from Italy, and the shield boards are made by DF Robot (For touch sensor) and Seeed (For color sensor). The battery comes from DURACELL in the UK.

The RGB Color Tester is not waterproof! It is a precision instrument; please take care to avoid dropping or knocking it.

The RGB Color Tester has a two year guarantee from its date of shipment (Except on SD card, no guarantee on SD card).

- Minimum Red : 0 / 7 Ctifl
- Maximum Red : 250 / 1 Ctifl
- Resolution: +/- 1
- Charging time: 20 to 120 minutes for one day's work
- Maximum memory capacity: Huge – Limited only by SD.
- Maximum number of pieces of fruit per batch: 200



## 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 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 (Place the sensor on the fruit (the black ring on the sensor completely in contact with the fruit, pressed on it, and then place your finger on the touch sensor, the data is displayed and recorded)

Press C to cancel last measurement

Press N to record and obtain statistics

Press E to go back to Home menu without recording

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”



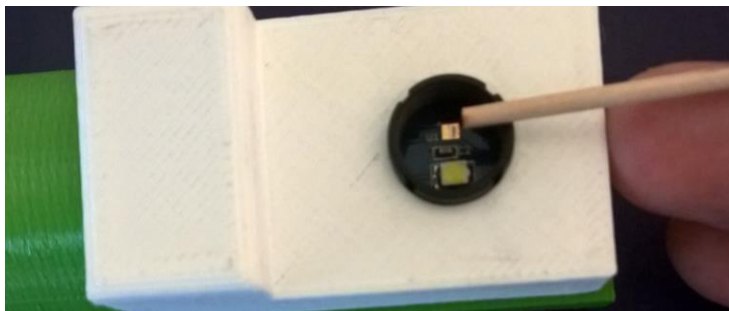
2 Files are available on the SD card :

- 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

	A	B	C	D	E	F	G
1	RGB COLOR SENSOR						
2	Red quantity between 0 and 250						
3	250	250	250	250	250		
4	Green quantity between 0 and 250						
5	20	20	20	20	102		
6	Blue quantity between 0 and 250						
7	10	10	10	10	5		
8	BATCH 5	AVERAGE Red 250.00	AVERAGE Green 36.40	AVERAGE Blue 9.00	COUNT 5		
9	RGB COLOR SENSOR						
10	Red quantity between 0 and 250						
11	250	35	250				
12	Green quantity between 0 and 250						
13	20	32	225				
14	Blue quantity between 0 and 250						
15	10	10	67				
16	BATCH 6	AVERAGE Red 178.33	AVERAGE Green 92.33	AVERAGE Blue 29.00	COUNT 3		
17	RGB COLOR SENSOR						
18	Red quantity between 0 and 250						
19	30	250					
20	Green quantity between 0 and 250						
21	28	227					
22	Blue quantity between 0 and 250						
23	8	68					
24	BATCH 7	AVERAGE Red 140.00	AVERAGE Green 127.50	AVERAGE Blue 38.00	COUNT 2		
25	RGB COLOR SENSOR						
26	Red quantity between 0 and 250						
27	54	250	173	11	12	12	13
28	Green quantity between 0 and 250						
29	51	223	151	32	44	43	47
30	Blue quantity between 0 and 250						
31	47	66	44	106	143	137	152

## 4) CLEANING

Here you can see the color sensor (colorimeter) :



Here you can see the LED (light) :



You can clean those two components regularly with a wet cotton (like the ones provided)  
Take care that no water enters inside the sensor – If it is the case, wait till it is completely dry before switching the device on

There is no glass on the sensor because a glass decreases the accuracy of the sensor due to reflective effects