

Agrocolor® is a colorimeter designed by Agrosta, dedicated to food business. It provides the intensity along the visible range through 6 values : Intensities at 450 (Blue), 500 (Green), 550 (Green/Yellow), 570 (Yellow), 600 (Orange) and 670 (Red)nm



We have searched the best components available on the market in order to provide a simple and accurate colorimeter for food, fruits and vegetables

We had the following requests :

- High accuracy
- Large measurement area (Large aperture) compared to colorimeters available on the market, and giving reliable measurements for varied forms, from flat to curve.
- Recording data and providing statistics, classified by batches
- Easy to interpret
- Easy to calibrate

ACCURACY :

The sensor provides a 40nm of full-width half-max detection, and covers all the visible area - The sensor comes with 6 phototransistors, each having a sensitivity in a specific spectrum, according to the graph on the right

- The light is a white LED with a large spectrum on all visible area

MEASUREMENT OF LARGE AREAS :

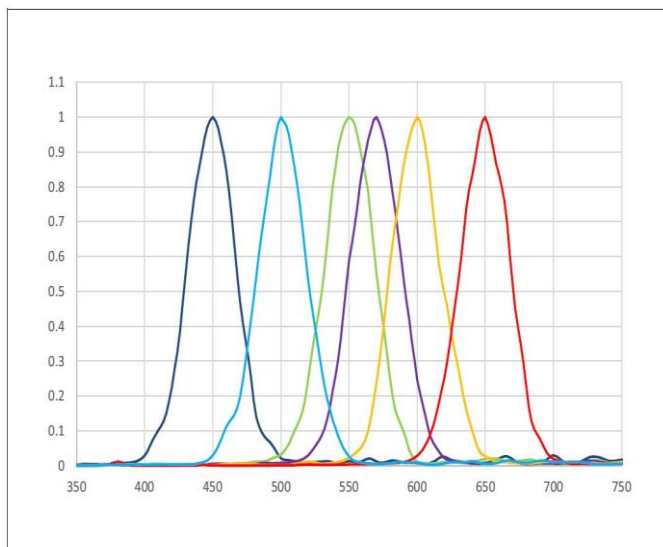
The sensors available on the market were giving values of color while measuring a very small surface of the sample. We think this is not adapted for food, nor any fruit or vegetables, as this kind of products present large variations within the same sample.

For a fruit for example, the controller prefers to obtain a global value on a large surface than a value on one small point, that can be a bad indication of global fruit color.

The area measured by our colorimeter corresponds to a circle of 10 mm diameter.

Thanks to a plano-convex lens, the distance to the sample has a lower incidence than with other colorimeters, which is better for fruits or vegetables curved at the surface (And with various curves)

Range of measurement of each of the six phototransistors inside the sensor : The visible range is covered



Color	Wavelength
violet	380–450 nm
blue	450–495 nm
green	495–570 nm
yellow	570–590 nm
orange	590–620 nm
red	620–750 nm

1/ INSTALL DRIVER

Nom	Modifié le	Type	Taille
CH341SER	14/04/2018 10:23	Dossier de fichiers	
INSTALL	14/04/2018 10:23	Dossier de fichiers	
Agrosta_Driver.EXE	24/01/2017 01:17	Application	238 Ko
INSTALL.EXE	26/02/2014 10:39	Application	212 Ko
INSTALL.ZIP	16/02/2018 15:50	Archive WinRAR ZIP	11 735 Ko

Double click on “Agrosta_Driver” – Follow setup procedure

2/ CONNECT THE USB PLUG OF THE COLORIMETER TO YOUR COMPUTER, WAIT 1 MINUTE

3/ DOUBLE CLICK ON “INSTALL” AND FOLLOW SETUP PROCEDURE

4/ THE SOFTWARE STARTS

★ AGROSTA Visible spectrometer

Calibration Factors

450nm	0,133
500nm	0,322
550nm	0,241
570nm	0,233
600nm	0,146
650nm	0,346

Calibration :
Place the small mirror on the sensor head (Completely covered) and press on CALIBRATE

CALIBRATE

VISIBLE LIGHT

	450 nm	500 nm	550 nm	570 nm	600 nm	650 nm	°F	°C
	1450	2750	2389	2255	1543	2261	75	24
	1207	1373	437	339	221	305	75	24
	1717	2689	2291	2088	1471	1707	75	24
	519	1755	1776	1961	2056	3860	77	25
	3996	4000	3999	4001	3999	4003	75	24
Counter	5	5	5	5	5	5		
Average	1778	2513	2178	2129	1858	2427	75	24

MEASURE +

OK (Double Click)

Refresh

Erase Data

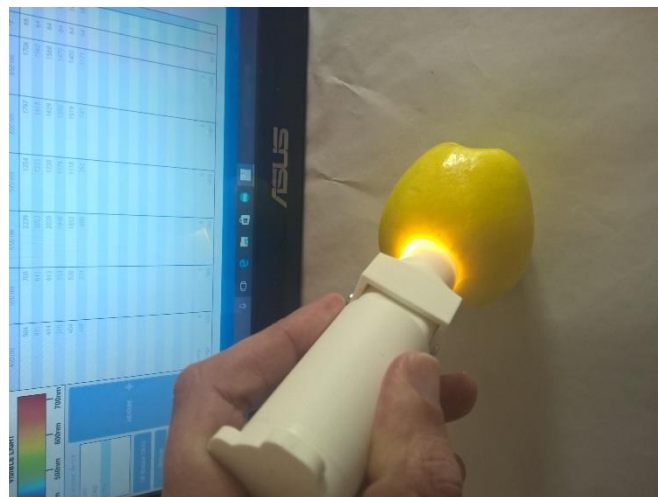
5/ SELECT THE COM PORT CORRESPONDING TO YOUR DEVICE

6/ DOUBLE CLICK ON “OK”

7/ PRESS THE SENSOR HEAD ON THE SMALL CALIBRATION MIRROR AND CLICK ON “CALIBRATE”



8/ YOU CAN MEASURE YOUR SAMPLES ONE AFTER EACH OTHER BY CLICKING ON “MEASURE”



9/ EXPORT DATA TO EXCEL / WORD BY CLICKING ON THE CHART WITH THE RIGHT BUTTON OF YOUR MOUSE

EXPORT GRAPH AS WELL BY CLICKING ON IT WITH RIGHT BUTTON