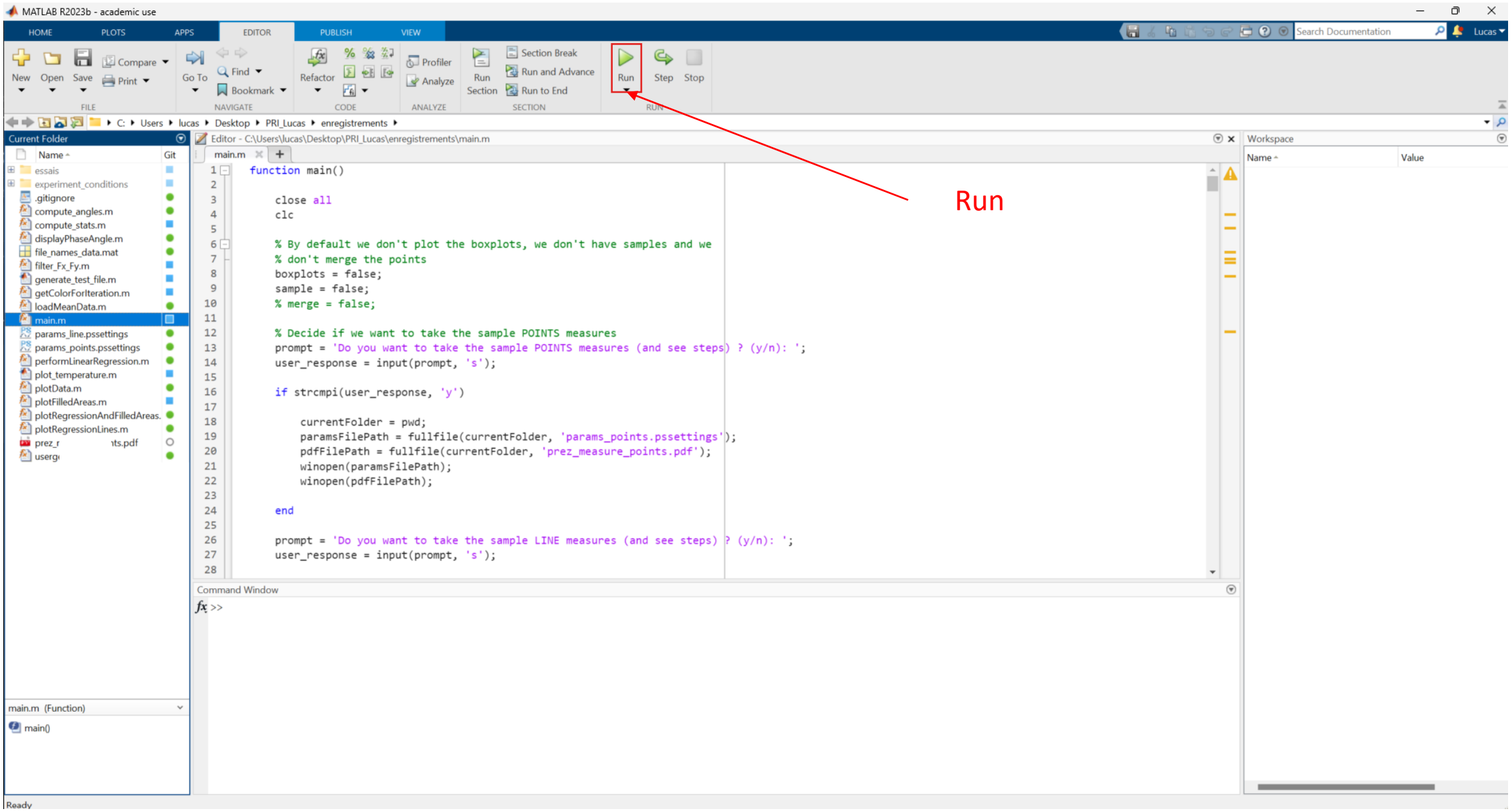
III. Results

b) Demonstration – Take sample points measures

Run this

Nom	Modifié le	Type	Taille
essais	04/06/2024 14:46	Dossier de fichiers	
experiment_conditions	04/06/2024 11:18	Dossier de fichiers	
.gitignore	21/05/2024 10:04	Fichier GITIGNORE	1 Ko
compute_angles.m	10/04/2024 09:41	MATLAB Code	1 Ko
compute_stats.m	04/06/2024 11:10	MATLAB Code	5 Ko
displayPhaseAngle.m	03/06/2024 15:25	MATLAB Code	1 Ko
file_names_data.mat	03/06/2024 14:19	MATLAB Data	1 Ko
filter_Fx_Fy.m	04/06/2024 11:06	MATLAB Code	1 Ko
generate_test_file.m	04/06/2024 11:15	MATLAB Code	4 Ko
getColorForIteration.m	04/06/2024 16:49	MATLAB Code	1 Ko
loadMeanData.m	10/04/2024 09:39	MATLAB Code	1 Ko
main.m	04/06/2024 15:06	MATLAB Code	27 Ko
params_line.pssettings	31/05/2024 14:54	PicoScope 7 Data file	4 Ko
params_points.pssettings	22/05/2024 11:12	PicoScope 7 Data file	4 Ko
performLinearRegression.m	10/04/2024 09:40	MATLAB Code	1 Ko
plot_temperature.m	04/06/2024 11:32	MATLAB Code	5 Ko
plotData.m	04/06/2024 15:41	MATLAB Code	1 Ko
plotFilledAreas.m	04/06/2024 11:04	MATLAB Code	1 Ko
plotRegressionAndFilledAreas.m	17/05/2024 16:21	MATLAB Code	1 Ko
plotRegressionLines.m	10/04/2024 09:40	MATLAB Code	1 Ko
prez_measure_points.pdf	16/04/2024 10:54	Microsoft Edge PDF Document	1 019 Ko
usergetfiles.m	10/04/2024 17:17	MATLAB Code	1 Ko



Editor - C:\Users\lucas\Desktop\PRI_Lucas\enregistrements\main.m

main.m

```
function main()

    close all
    clc

    % By default we don't plot the boxplots, we don't have samples and we
    % don't merge the points
    boxplots = false;
    sample = false;
    % merge = false;

    % Decide if we want to take the sample POINTS measures
    prompt = 'Do you want to take the sample POINTS measures (and see steps) ? (y/n): ';
    user_response = input(prompt, 's');

    if strcmpi(user_response, 'y')

        currentFolder = pwd;
        paramsFilePath = fullfile(currentFolder, 'params_points.pssettings');
        pdfFilePath = fullfile(currentFolder, 'prez_measure_points.pdf');
        winopen(paramsFilePath);
        winopen(pdfFilePath);

    end

    prompt = 'Do you want to take the sample LINE measures (and see steps) ? (y/n): ';
    user_response = input(prompt, 's');

```

Command Window

```
Do you want to take the sample POINTS measures (and see steps) ? (y/n):
```

Answer yes “y”

Measurement circuit

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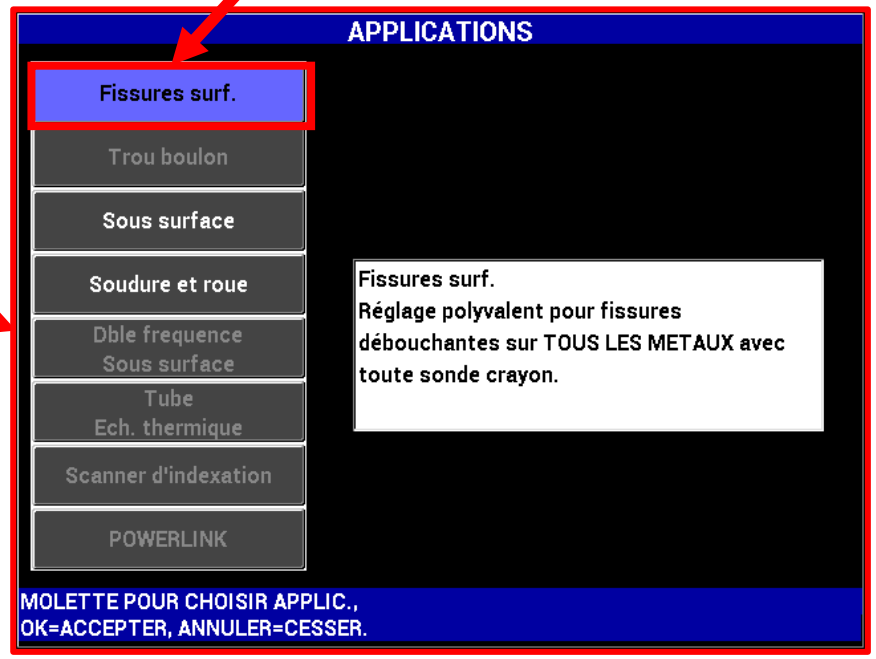
Select application “Fissures surf.”

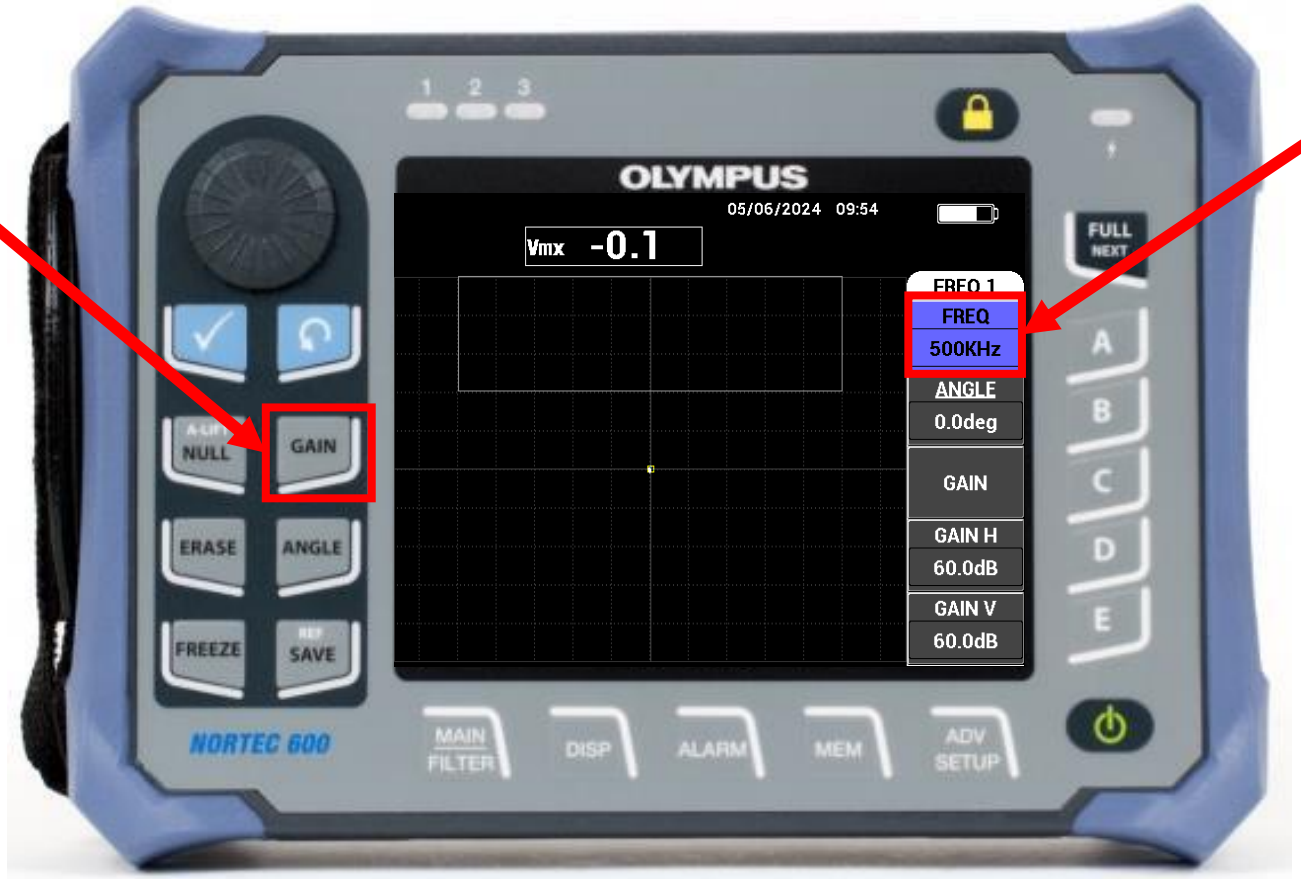


Set :

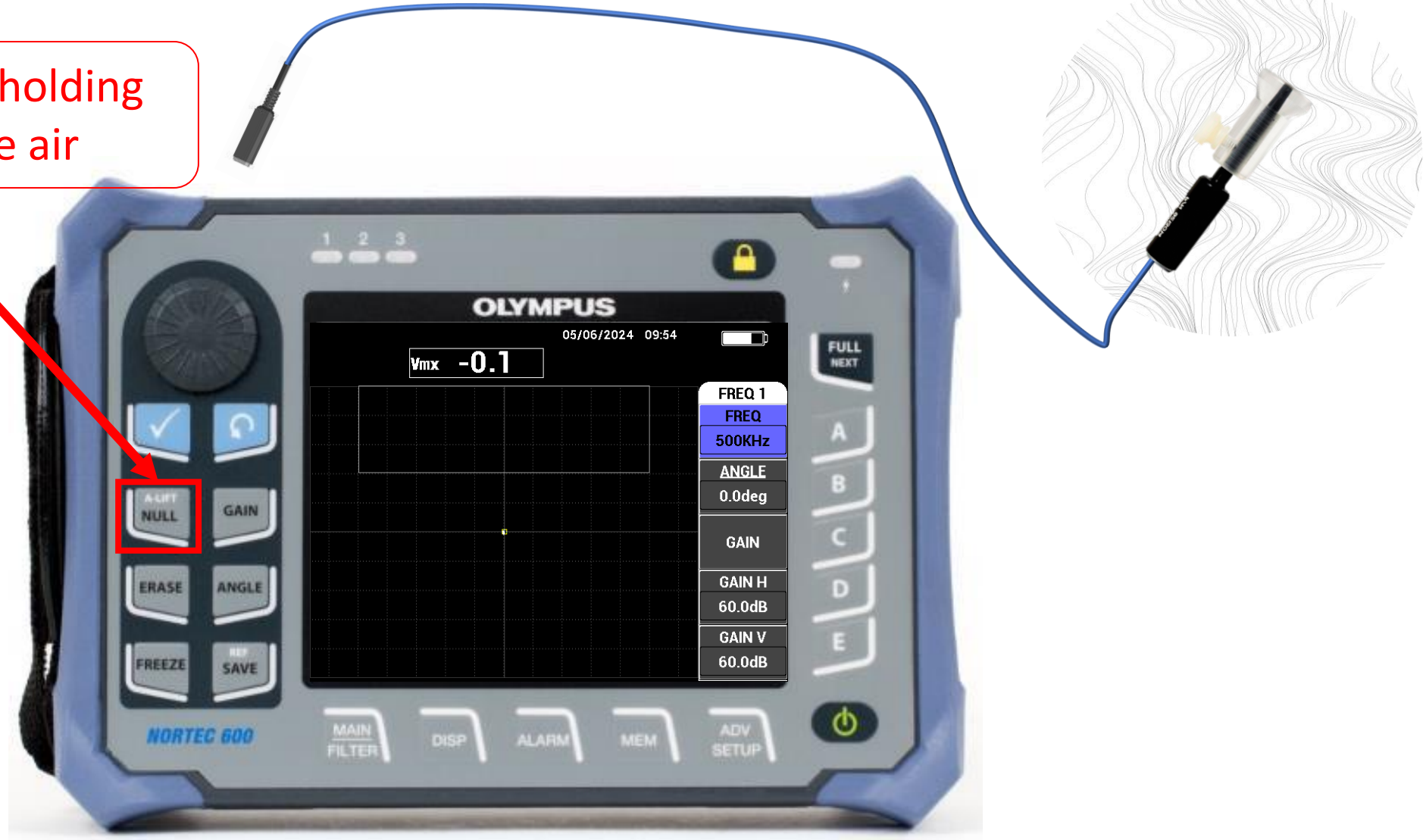
- Gain H = 50 dB
- Gain V = 44 dB

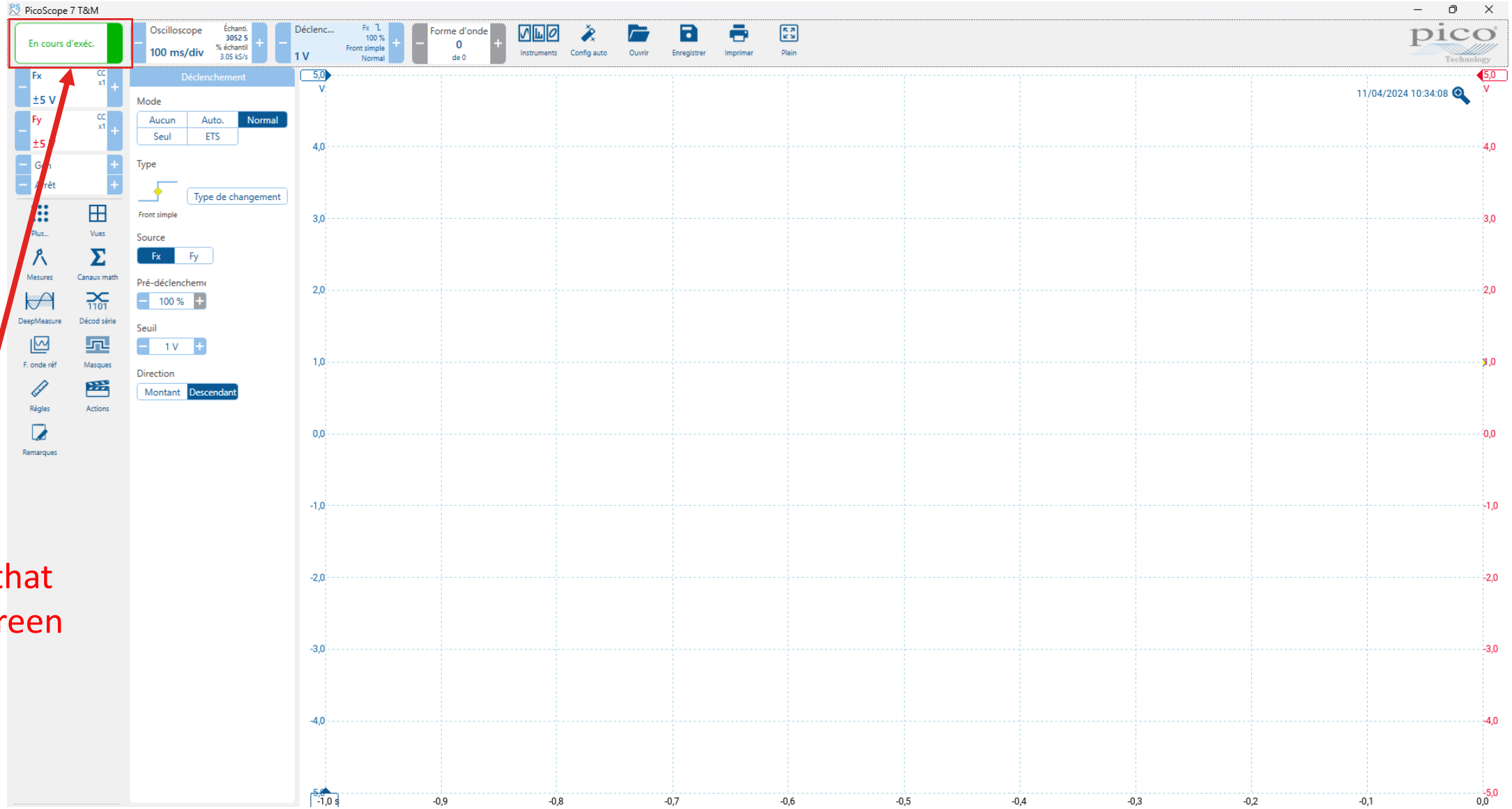
Set :

- FREQ 500KHz



Set the zero while holding the probe in the air

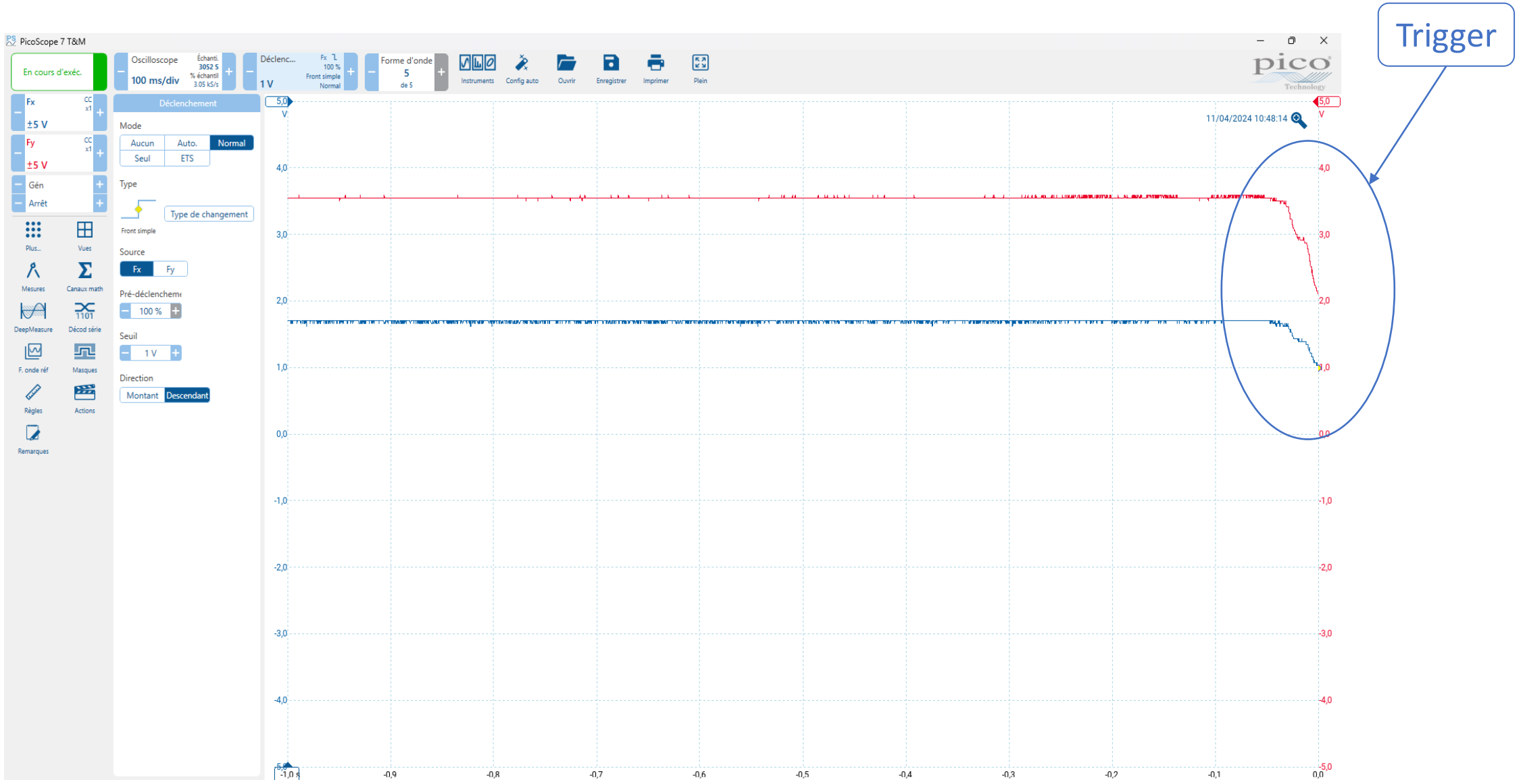




Click so that it turns green

- Step : **Measure**

Try to maintain perpendicularity by pressing the **adjustable collar**, after ~2 seconds lift the probe up


Trigger
PicoScope 7 T&M
En cours d'exéc.
Oscilloscope
100 ms/div
Déclenc...
1 V
Forme d'onde
5
de 5
Instruments
Config auto
Ouvrir
Enregistrer
Imprimer
Plein
Déclenchement
Mode
Aucun
Auto.
Normal
Seul
ETS
Type
Type de changement
Front simple
Source
Fx
Fy
Pré-déclenchem
100 %
Seuil
1 V
Direction
Montant
Descendant
Fx
±5 V
Fy
±5 V
Gén
Arrêt
Plus...
Vues
Mesures
Canaux math
DeepMeasure
Décod série
F. onde réf
Masques
Règles
Actions
Remarques
11/04/2024 10:48:14
5,0
V
4,0
3,0
2,0
1,0
0,0
-1,0
-2,0
-3,0
-4,0
-5,0
-0,9
-0,8
-0,7
-0,6
-0,5
-0,4
-0,3
-0,2
-0,1

- Step : **Save**

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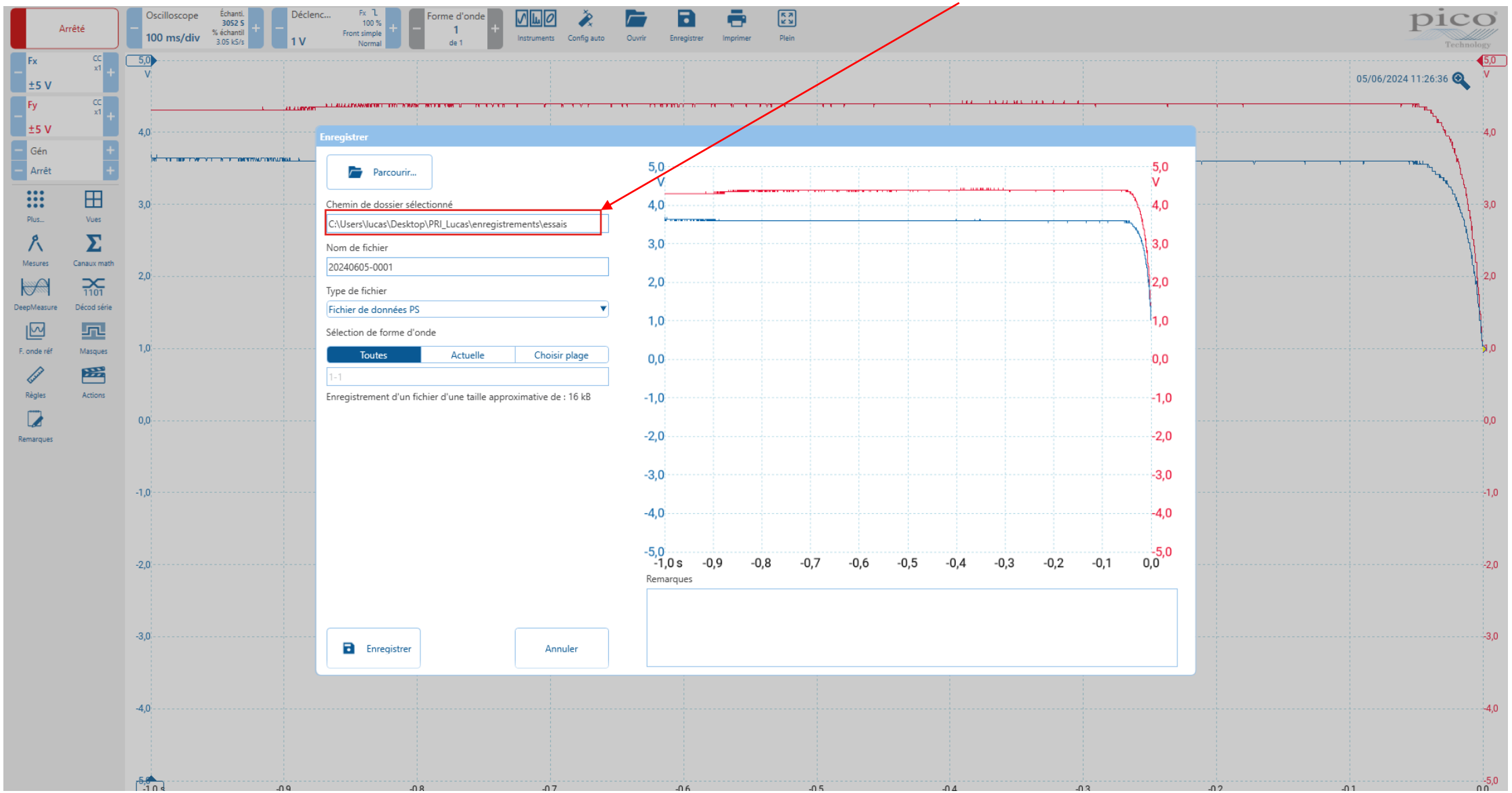
- Step : **Save**

Here choose path : ['C:\Users\',user,'\Desktop\PRI_Lucas\enregistrements\']



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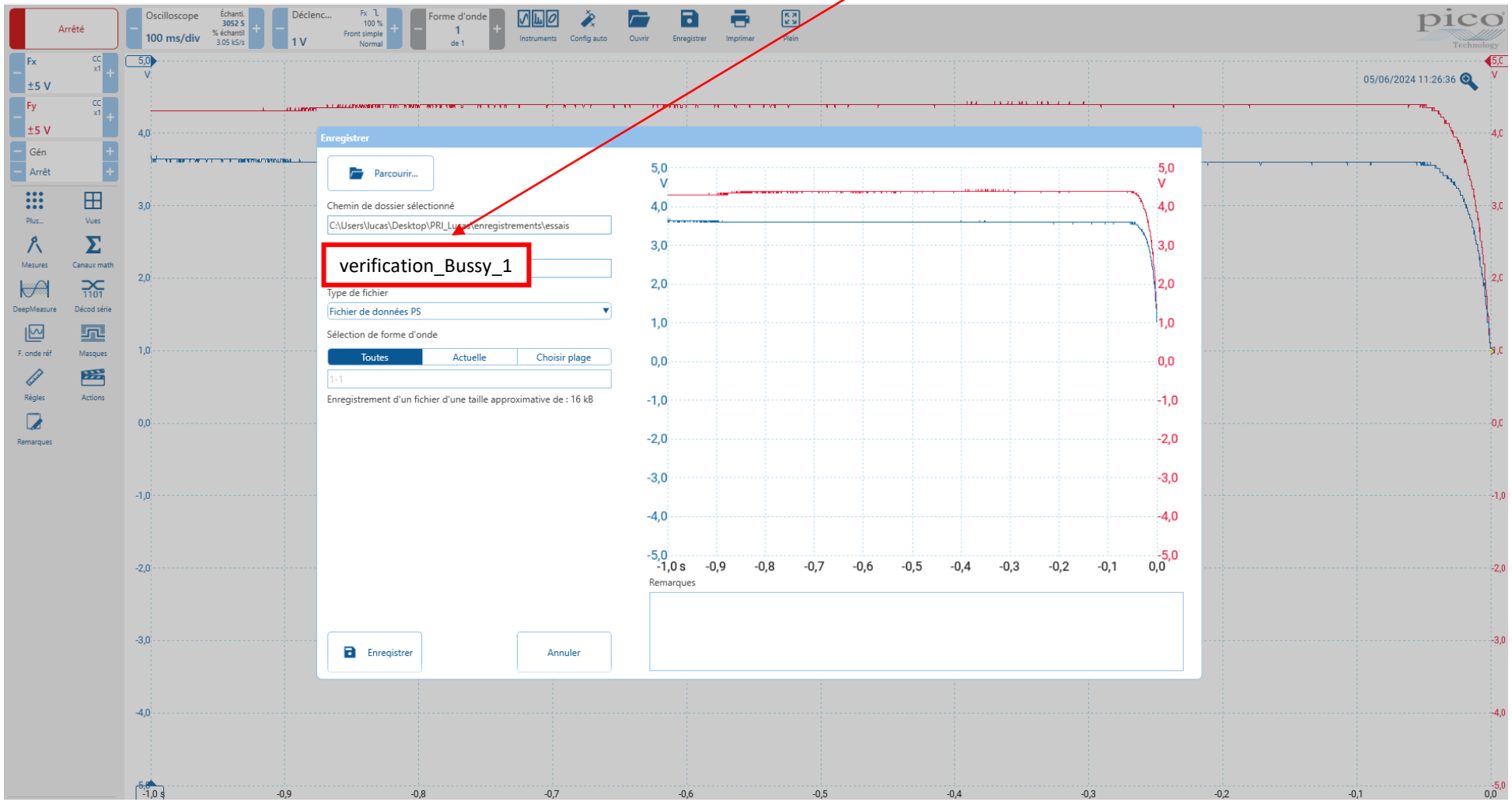
- Step : **Save**

Here file name : {*type*}_**{*sample name*}**_{*sample index*}
Example : verification_Bussy_1



Types :
- verification
- calibration

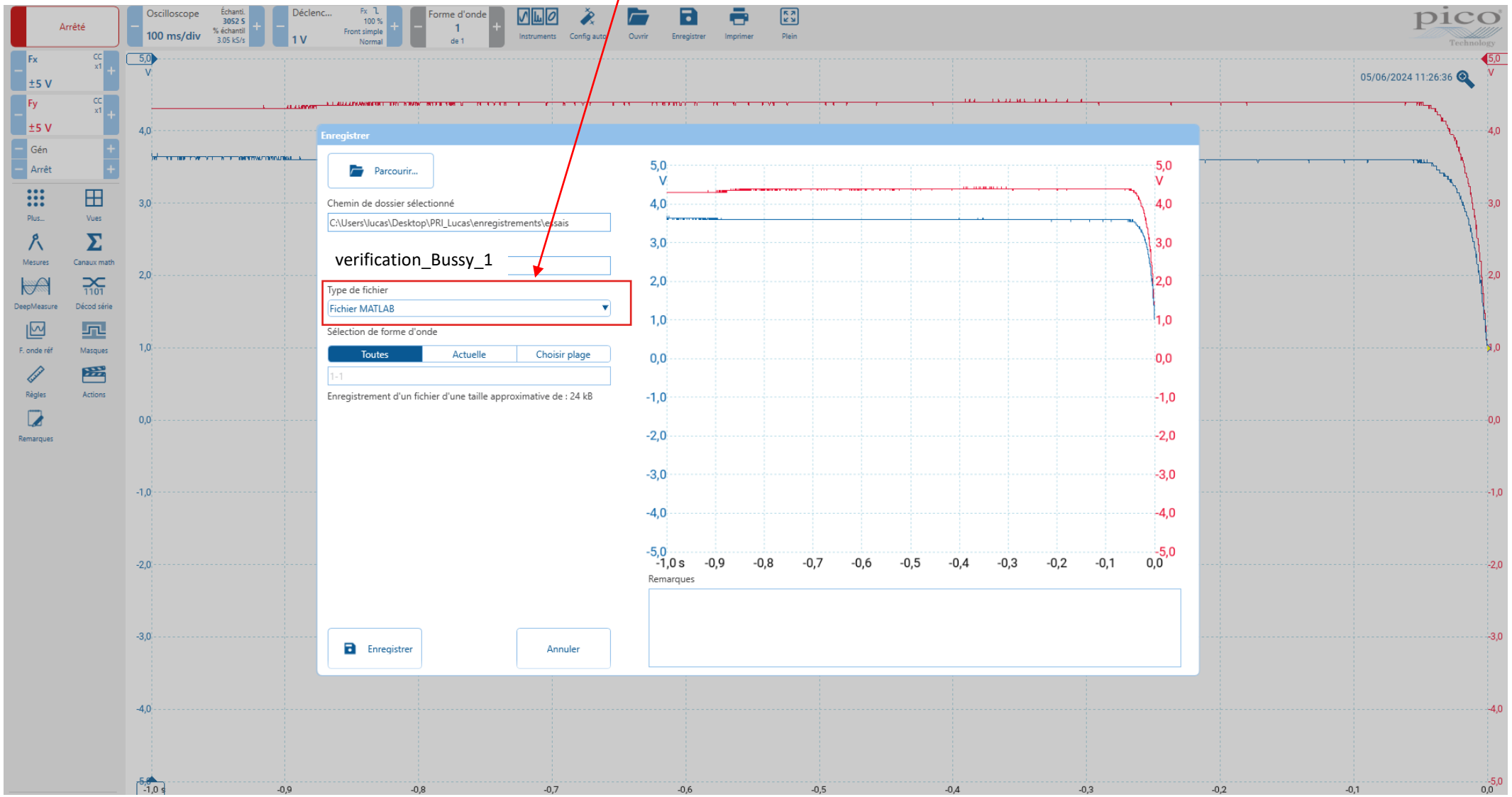
Sample name :
"Only calibration" names ! :
- perlite
- martensite
- WEL

Don't use these names on verification !

Sample index :
- 1
- 2
- 3
- 4
- …

- Step : **Save**

Here select MATLAB (.mat)



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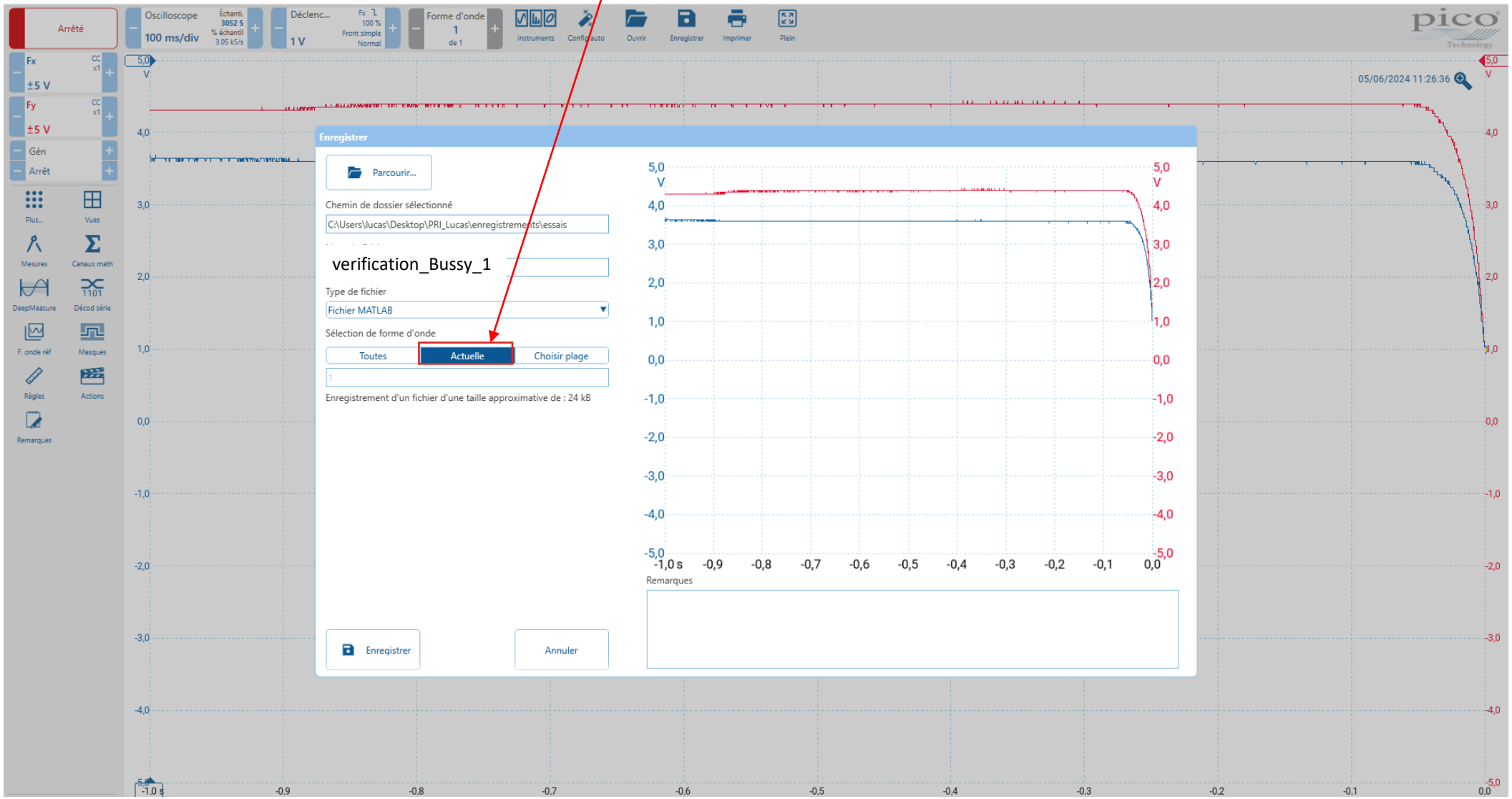
- Step : **Save**



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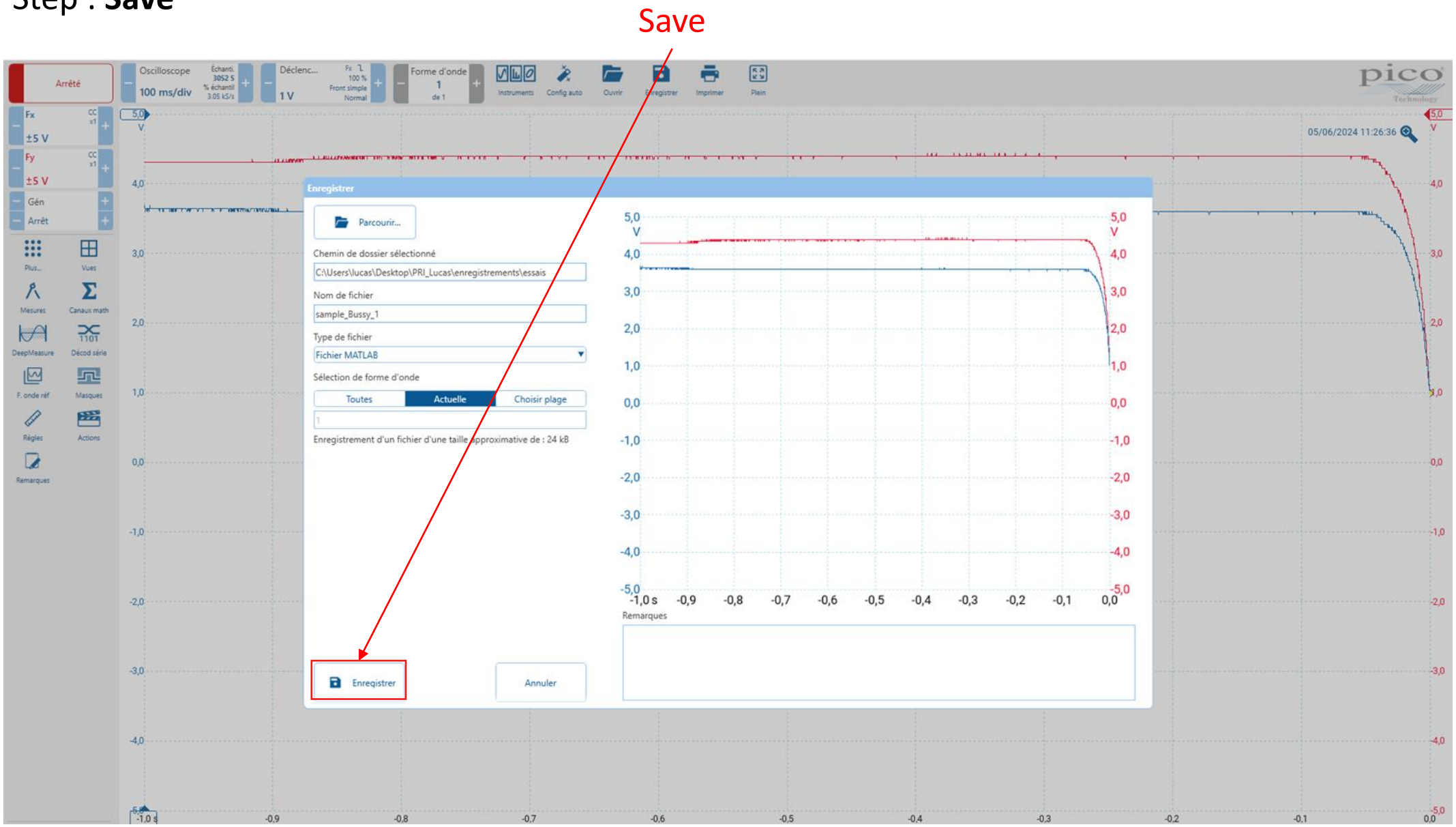
- Step : **Save**


Save
Enregistrer
Parcourir...
Chemin de dossier sélectionné
C:\Users\lucas\Desktop\PRI_Lucas\enregistrements\essais
Nom de fichier
sample_Bussy_1
Type de fichier
Fichier MATLAB
Sélection de forme d'onde
Toutes
Actuelle
Choisir plage
Enregistrement d'un fichier d'une taille approximative de : 24 kB
Remarques
Enregistrer
Annuler