

# Tardigrades

## **Brainstorming : how did we find the subject**

We decided to do a brainstorming to find an idea of project. So we decided to write some ideas on a board.

## **Our subject :**

We search to study an original organism and after a brainstorming, we choose tardigrades. It is a very interesting species because there are extremophiles. Tardigrades can live also in the emptiness! The specificity of this organism is that it can enter in cryptobiosis. It is a process where tardigrades reduce their volumes. It is a sort of "hibernation". Tardigrades start this process under many extreme conditions as temperature, pressure, hydration etc... So we want to observe this phenomenon with binocular magnifying glass. We want to quantify it and measure the time that tardigrades need to quit this state.

## **First approach :**

We went on the cochon's roof top to recolt mosses where live tardigrades  
[protocole](#)

- 1) take the mosses and

## **Materials :**

- tardigrades
- binocular magnifying glass
- different captors (temperature, water, movement, etc...)
- moss and lichens
- beakers

## **Protocol**

We called a specialist Cedric Hubas we realised that our experiment was not possible : the cryptobiose is process too long to be observed during only one week

## Finding a new project.

After proposing many project such study the photosynthesis of cyanobacteria or plant) or create a new sensor for medical diagnosis we decided to study the effect of electronic cigarette liquid on yeast.

We want especially to study the effect of the nicotine concentration on the yeasts.

The first idea is to take electronic cigarette liquid and put it in YPD and observe the influence of this liquid on the growth of yeast. We want especially focus on the effect of the nicotine contained in it or the effect of the other composants on living organisms. For example, we thought about test it with solution which only contains nicotine (Ivan told us that there is some nicotine in the lab) and compare it with the e-cigarette liquid.

So we think to realize this tests:

- negative control (normal YPD media)
- YPD + e-cigarette liquid
- YPD + nicotine
- YPD + propylène glycol (it's another component of e-cigarette but we are not sure to find it)
- positive control (all conditions)