

Is CO₂ a problem to grow plants on Mars ?



On Mars there are :

- Carbon dioxide : 95,32 %
- Oxygen : 0,13 %

Hypothesis :

We think that plants use CO₂ to grow and they reject oxygen. So we guess that CO₂ is not a problem on Mars for the plants.

Experimental protocol :

We want to grow plants as if we were on Mars, so we try to have the same conditions.

First, we put wheat, beans and lentils with soil in jars and we mix.

Next we wet the preparation and we put compost in.

After that, we put the jars under a glass bell.

Finally, we put something in to have a similar atmosphere as on Mars (with a lot of CO₂).



Experience witness 1:

We want to see how plants are growing without CO₂.

First, we put wheat, beans and lentils with soil in jars and we mix.

Next we wet the preparation and we put compost in.

After that, we put the jars under a glass bell.

Finally, we put potassium hydroxide in to have an atmosphere rich in oxygen and without CO₂.

Experience witness 2:

We also did a witness experience with an earth atmosphere to compare with the other experiences.

First, we put wheat, beans and lentils with soil in jars.

Next we mix.

Finally we wet the preparation and we put compost in.



Results :

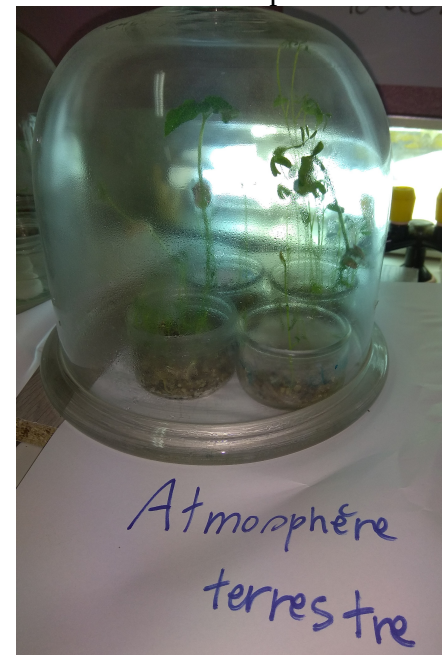
Experimental protocol: Mars atmosphere



Experience witness 1: Without CO₂



Experience witness 2: Earth atmosphere



Interpretation :

As we can observe, plants are growing faster and better with a normal atmosphere and with the atmosphere similar to the one on Mars.

In the other experience, plants are growing too but slower and they are smaller than the ones with the earth and Mars atmosphere.

So the quantity of CO₂ has an influence on the growth of the plants.

Conclusion :

In conclusion, as we can see with the different experiences and results, CO₂ is not a problem on Mars for the growth's plants. However, the less of oxygen on mars could be a problem for the germination of the plants.

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