

MARS IN-SITU RESOURCE UTILIZATION

1 RESOURCES

Mars Resources utilization will create a sustainable life in our future home.

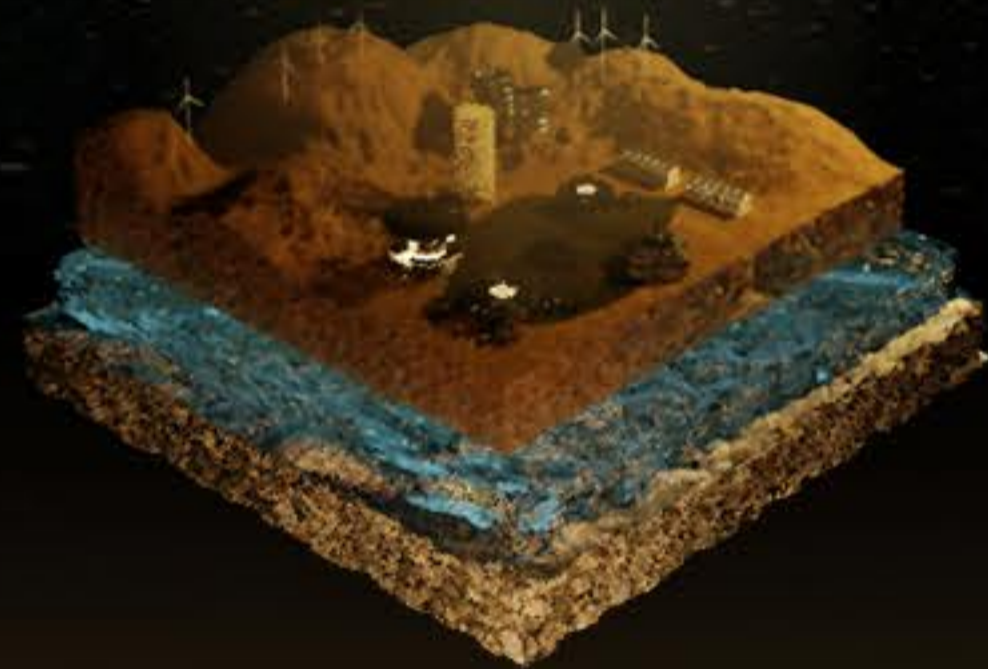
ATMOSPHERE

Carbon Dioxide 96 %

Argon < 2 %

Nitrogen < 2 %

Other < 1 %



DID YOU KNOW THAT?

There are effectively unlimited supplies of carbon dioxide and water on Mars. Let's see a comparison to our own planet:

MARS
5 million cubic km ice
25 trillion tons of CO2

EARTH
30 million cubic km of fresh water
3.2 trillion of tons of CO2

2 UTILIZATION

The second step is using our conversion systems to process both the CO2 and Water.

CO2 CONVERSION

Cemvita Factory's CO2 utilization platform mimics the complete photosynthesis process by simultaneous uptake of solar energy, water, and processing of carbon dioxide to produce intermediate chemicals needed for manufacturing of a wide variety of life support resources such as nutrients and pharmaceuticals and the chemicals and polymers needed for establishing a settlement.

CO2 CAPTURE

The abundant Martian CO2 is captured and purified in preparation for further processing by Cemvita Factory's utilization platform.



CO2 CONVERTER



CO2 COLLECTOR

3 INTERMEDIATES

The following step is to use the products we receive from the CO2 and water conversion.



Glucose



Formic Acid



Glycerol



Acetic Acid



Ethanol



Polysaccharides



Fatty Acids



Amino Acids



Oxalic Acid



Propionic Acid

4 BIOMANUFACTURING

Using the intermediates we can create different kind of products such as:



Pharmaceuticals



Polymers



Fibers



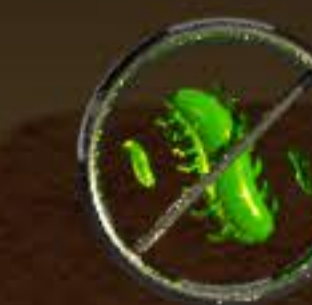
Vinegar



Plastics



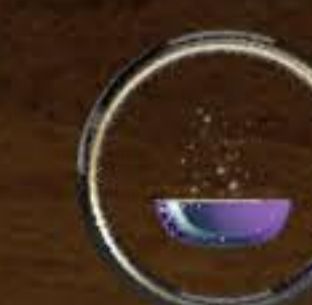
Vitamins



Antiseptics



Proteins



Carbohydrates



Fertilizers