



Brines on Mars

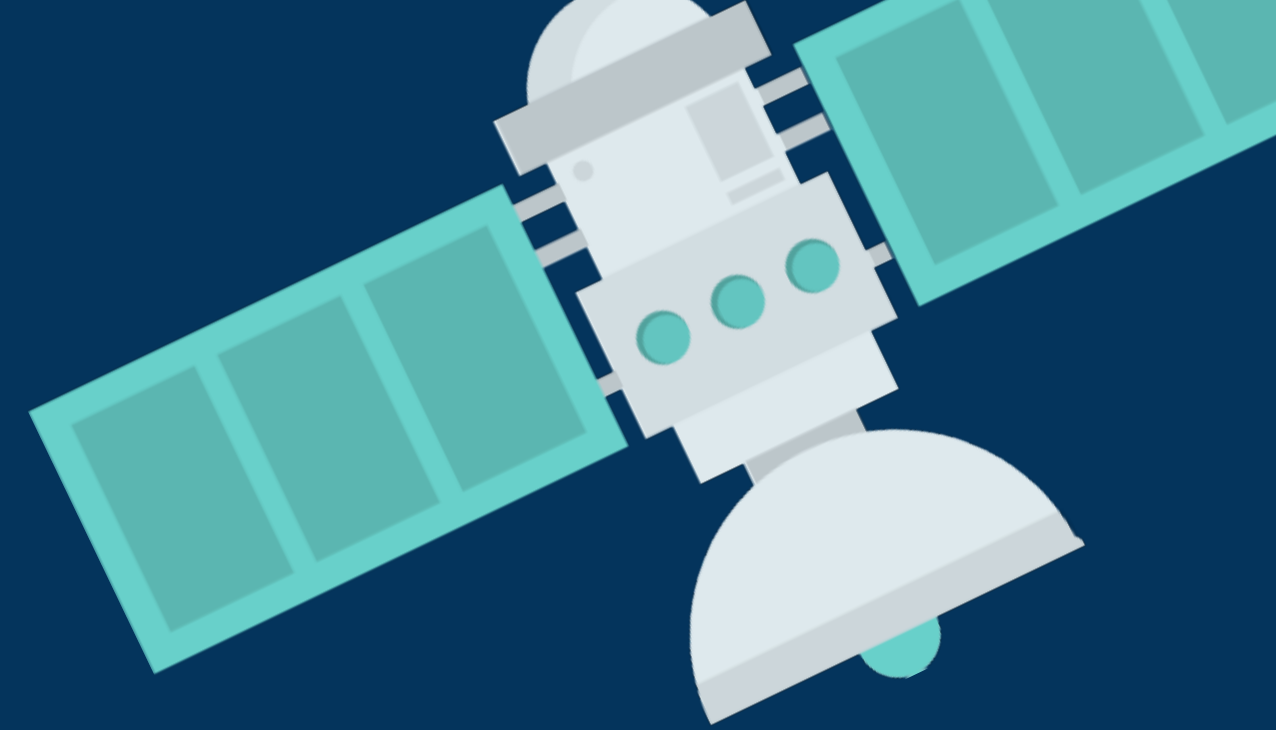
Understanding Saturated Salt Solutions



Objectives

By the end of this lesson you will be able to:

- Understand how crystallisation works.
- Understanding saturation points.
- Understand how do saturated salt solutions affect habitability.





Introduction to Saturation

What is solubility and a saturation point?

- Solubility = the maximum amount of a solute that can dissolve in a solvent at a specified temperature and pressure.
- It is measured in terms of the maximum amount of solute dissolved in a solvent at equilibrium.
- The resulting solution is called a saturated solution.

Super-Saturation



Laguna Negra

Argentina

- In the Argentinian Andes.
- Can be used as an analogue to past Mars due to high concentrations of CaCl_2 salts.

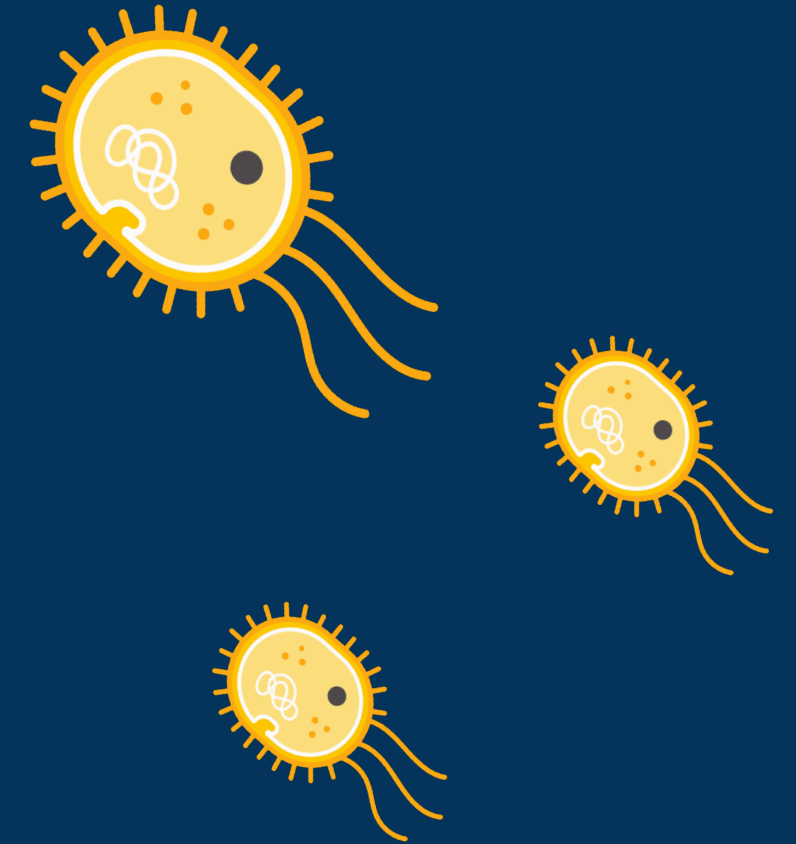


Image source: Fernando J. Gomez

How habitable do you think the Laguna Negra is?



Image source: Fernando J Gomez





Crystallisation



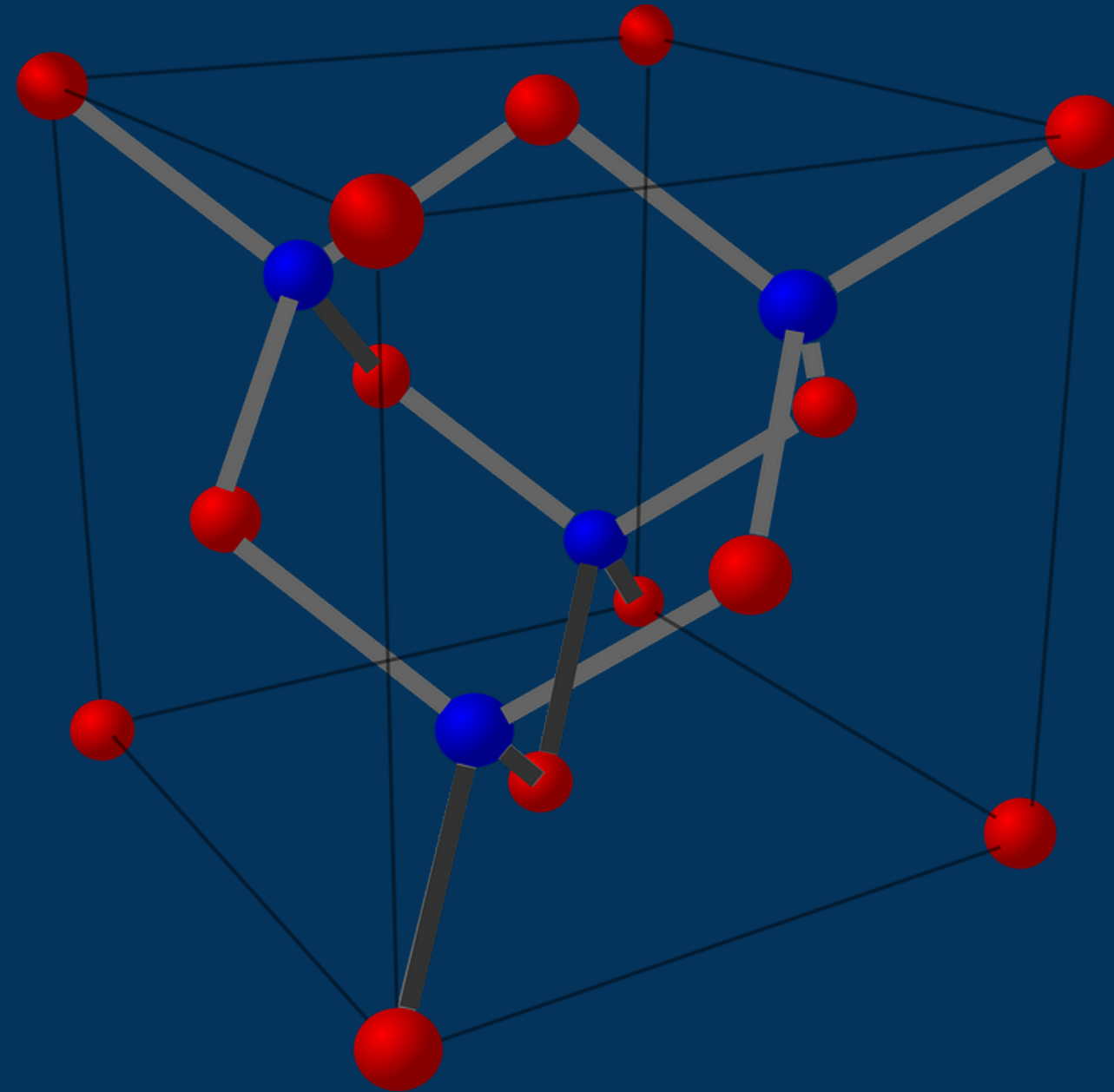
What does crystallisation look like?

Click button below to link to video:



What happened? Why?

Discuss in groups





Recap

Now we can...



1

Understand how crystallisation works.



2

Explain how we get saturated and super-saturated solutions.



3

Reason how saturated salt solutions affect habitability.