



What Could Happen to the Tomato Seeds?

An Orion spacecraft with astronauts aboard is heading to Mars. On the outside of the spacecraft are several storage units for supplies and other important equipment. The stowage units are sealed and have pressure and temperature conditions like those inside the spacecraft.

The astronauts suddenly hear an alarm indicating a problem with one of the external storage units. They perform a spacewalk a few days later to investigate the problem and find that one of the storage units has been punctured by a micrometeorite. It is the storage unit that contains the tomato seeds to be used to grow food on Mars.

The hole in the storage unit is sealed up, but the seeds were exposed to the harsh space environment (-80oC and almost no atmospheric pressure) for several days. Yikes! Although the storage unit has been repaired, the astronauts are now wondering "How will this affect the seeds that will be used to grow tomatoes on the surface of Mars?"