

# Biological Contamination of Mars: Issues and Recommendations - Space Studies Board, Division on Engineering and Physical Sciences - National Academies Press, 1992 - 104 pages - 9780309122702 - 1992

With respect to forward-contamination control, issues include the effective characterization and/or control of the load of Earth organisms carried by spacecraft and how to accomplish these tasks in the face of increasingly complex computerized systems and sensors. In facing the decontamination of complex electronics and machinery, however, NASA is not alone, and it is thought that many of the contamination-control solutions being developed for the bioengineering world will be adaptable to spaceflight missions. (1992) Biological Contamination of Mars: Issues and Recommendations (Natl. Acad. Sci. Astronauts are working carefully to ensure that they don't contaminate other worlds (or our home planet) while they hunt the solar system for signs of life. This is low-angle self-portrait of NASA's Curiosity Mars rover combines dozens of images taken on Aug. 5, 2015. NASA/JPL-Caltech/MSSS. Nov. 29, 2016, 8:44 PM UTC / Updated Nov. 29, 2016, 8:44 PM UTC. By Charles Q. Choi, Space.com. Future astronauts may return to Earth with valuable samples of Mars. Contamination by chemicals from the environment is a major global food safety issue, posing a serious threat to human health. These chemicals belong to many groups, including metals/metalloids, polycyclic aromatic hydrocarbons (PAHs), persistent organic pollutants (POPs), perfluorinated compounds (PFCs), pharmaceutical and personal care products (PPCPs), radioactive elements, electronic waste, plastics, and nanoparticles. Some of these occur naturally in the environment, whilst others are produced from anthropogenic sources. Monitoring contamination levels, enactment of control measures including remediation, and consideration of sociopolitical implications are vital to provide safer food globally. Contaminating Mars isn't an unforeseen consequence. A quarter century ago, a National Research Council report entitled "Biological Contamination of Mars: Issues and Recommendations" asserted that missions carrying humans to Mars will inevitably contaminate the planet. I believe it's critical that every attempt be made to obtain evidence of any past or present life on Mars well in advance of future missions to Mars that include humans. What we discover could influence our collective decision whether to send colonists there at all. Even if we ignore or don't care about t