



The ISS crew, with German astronaut Thomas Reiter (left); ©NASA

Degussa's STOKO® Skin Care Business Line participates in a research project in outer space

Astronaut investigates how weightlessness affects the skin

Today the Russian Soyuz capsule is taking off to rendezvous with the International Space Station (ISS). It will be carrying an innovative product of Degussa's STOKO® Skin Care Business Line that will play an important role in a research project – at what is certainly the world's highest and fastest-moving place to work. At an altitude of 400 kilometres (250 miles) and at a speed of 28,000 kilometres (17,400 miles) per hour, the crew of the ISS will perform scientific experiments aimed at making life more comfortable here on earth. During this mission, the focus is on our skin. In a project executed with the participation of the STOKO® Skin Care Business Line, systematic experiments will investigate how weightlessness affects human skin.

Tracking changes in the skin

During their long-term space missions, astronauts are exposed to extreme conditions. Due to the stress placed on the body in space, the structure of bones and muscles, including the heart-respiratory system, undergo serious changes. Past long-term space trips have indicated that the skin is subject to particular strain. During the current mission the astronauts will use several methods to document the condition of their skin over a long period of time. "The analysis of the data will provide detailed insights that will further our progress here on earth. We can make detailed conclusions about how the skin adapts to weightlessness, as well as how it reacts after the astronauts have returned to earth," said marketing director Dr. Annette zur Mühlen.

"Research and development are a high priority at STOKO® Skin Care. The data from the ISS will enhance the development of optimal products or additional procedures and technologies to prevent skin changes in everyday life," she added.

For everyday use – at home or in orbit: STOKO® products

For about three months on board the ISS, extensive tests will compare the skin of an arm treated with a STOKO® Skin Care product with that of an untreated arm. During the long-term experiment, the physiological condition of the skin will be determined with the help of various measuring methods. The data collected will be analyzed along with the results of additional examinations conducted both before and after the ISS mission. The skin care and protection properties of the STOKO® product will be comprehensively evaluated in a long-term test under extreme conditions.

Creatine: The body's "cell energizer"

The skin-care gel being tested is from the STOKO® product range and contains the Degussa active ingredient creatine, an energy booster that also aids in the regeneration of the skin. The product improves the skin's condition, is non-greasy and is absorbed by the skin quickly and completely, which means it is still possible to use sensitive instruments, and objects don't slip from one's hands after it has been applied. "This is something that benefits not only our industrial customers, but also the astronauts, who have to perform complicated experiments in a weightless condition, 400 kilometres above the earth's surface," Dr. zur Mühlen emphasized.