

Summary:

Raman spectroscopy is a widely used method in geoscience fields. Using a portable Raman spectrometer is possible to identify different materials, Raman spectrometer will participate in the survey the Martian surface. Its use is widely applied in mineralogy. There was measured a set of dark, green and some bright minerals of different mineralogical system groups that have been assessed the applicability of the chosen detector excitation at 785 nm mainly off-road equipment. The obtained spectra were measured off-road equipment Ahura at excitation 785 nm and laboratory equipment InVia Renishaw and there were used lasers at excitation of 785 nm and 514 nm.

It was set of these minerals:

Prehnite, Sulphur, Tyrkenit (howlit), Pyroxene (diopside), Libethenite, Toutmaline (verdelite), Dioptas, Klinoklas, Langit, Jadeit, Pseudomalachit (ehlit), Actinolite, Epidote, Augite.

Results are composed of field measurement device Ahura, with excitation 785 nm and laboratory apparatus InVia Renishaw excitations with 785 nm and 514 nm. Measured values are arranged in tables, where the measurements are compared with each other, including literature and reference graphically demonstrated in the form of spectra. Subsequently evaluated their measurability.

Keywords: Raman spektroskopi, portable Raman spectrometer, mineralogy, dark and green minerals, exobiology

