

Problems of equipment creation for hygienic treatment of textiles (underwear, garments, hygienic towels and napkins) for long-term space missions

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Impossibility of just in time stocks delivery to the International Space Station (ISS) because of Shuttle space flights absence has led to forced changing of standards of underwear, garments and personal hygiene means using. Therefore, hygienic treatment of textiles (underwear, garments, towels and napkins) are necessary for long-term space flight missions.

Investigations into the ways of cosmonauts sanitary – hygienic supply are prepared. The resent equipment, means and methods of cosmonauts sanitary – hygienic supply were created for space flight conditions with an opportunity of stocks updating. This investigations are confirm necessity of new generation system creation for cosmonauts sanitary – hygienic supply and special designing of hygienic treatment (laundry/drying) equipment and technologies for long-term space flights without an opportunity of stocks updating, in particular for martian mission. One from main requirements for equipment, means and methods of cosmonauts sanitary – hygienic supply is full safety for human organisms under systematic and long-term application (in space flight conditions), small energy consumption and combining with space Life-Support Systems.

Method and program of experimental investigations of textiles laundry with application of washing means for long-term space flight conditions are prepared. It is necessary to estimate opportunity and efficiency of washing means application for textiles laundry for space flight missions, also to estimate compatibility of washing means for textiles laundry and for washing procedures with sanitary - hygienic water reclamation system.

This investigations is part of new generation complex of sanitary – hygienic equipment for interplanetary space flights (such as bath-house, washing machine, drying unit, water-dispenser for washing hands, shower et al.), which will be compatible with Life-Support Systems and sanitary - hygienic water reclamation system.