Some methods of human liquid and solid wastes utilization in bioregenerative life support systems

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The possibility of stepwise utilization of human liquid and solid wastes with the purpose of an increase of a closure degree of bioregenerative life support systems (BLSS) and sodium chloride inclusion in the organic matter turnover was investigated. On the first stage urine and faeces were subjected to oxidation by Yu. A. Kudenko physicochemical method. On the next stage the products of human liquid and solid wastes oxidation were used for roots nutrition of wheat grown by substrate culture method. Soil-like substrate, the technology of which was described earlier, was used as a substrate. After the wheat cultivation the irrigational solution and the solution obtained in the result of substrate washing containing mineral elements not absorbed by the plants were used for cultivation of salt-tolerant *Salicornia europaea* plants. The aboveground biomass of these vegetables can be used as a food and roots washed from dissoluble mineral elements can be added to the soil-like substrate. Four consecutive wheat and *Salicornia europaea* vegetations were cultivated. In the result of this complex technology of wheat and *Salicornia europaea* cultivation the soil-like substrate salinization by NaCl introduced into the irrigational solution together with the products of urine oxidation has considerably decreased.