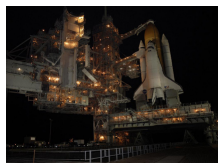


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By: Dan Talpalariu, Science Editor



Endeavour carries a urine and condensation recycler NASA

[Urine and Condensation Turned into Drinking Water](#)

ISS astronauts will rely on their own bodily fluids when they're thirsty

As previously described, the space shuttle [Endeavour](#) has recently taken off from the Kennedy Space Center in Florida, carrying a crew of 7 astronauts that will upgrade the living and resting quarters of the International Space Station. Besides that and some tools for scientific experiments, the team will provide the station with new features that will make the life of its residents easier, like a fridge, exercise gear and a novel revolutionary device from NASA that will help turning condensation and urine into potable water. The latter is regarded as a crucial addition, given the fact that the retirement of NASA's space shuttle fleet is due to happen in less than 2 years. So far, the servicing missions to the ISS were also carrying fresh fruits, water, and other beverages for the thirsty residents of the station, but as from September 2010 the Russian Soyuz spacecraft will remain the only possibility of accessing the crew directly, an alternative water source was highly needed. For the same reason, the water that the space shuttles produced as a byproduct of their electrical systems would not be available anymore either. "We can't be delivering water all the time for six crew," stated Ron Spencer, the flight director of the space station, quoted by [NewScientist](#). "Recycling is a must." Astronaut Sandy Magnus, quoted by [eFluxMedia](#), admitted that "There is definitely a yuck factor," but she explained that the team would not actually resort to urino-therapy. "We are not really drinking our own urine. We are drinking water that has been reclaimed from a process with urine as the input," she shared. "We did a blind taste test of the water," added NASA's Bob Bagdigian, lead engineer of the system, for BBC, as quoted by [The Register](#). "Nobody had any strong objections. Other than a faint taste of iodine, it is just as refreshing as any other kind of water. I've got some in my fridge. It tastes just fine." The \$250 million wastewater recycling equipment, designed to purify astronauts' urine, as well as their evaporated perspiration, is able to process a whole day's wastewater in less than 24 hours. Aside from this kit, the new fridge provided by the mission will also be a welcomed addition to the station. "It seems kind of trivial, but six months of lukewarm orange juice can kind of bum you out," explained Magnus. Upon return, Endeavour will carry along the first samples of the purified urine, for efficiency analysis purposes back on Earth. Similar samples will also be brought in by future missions performed by Discovery in February and Soyuz in April.