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# NASA to Use HTI Forward Osmosis Technology in Space

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HTI developed a Forward Osmosis hydration system for NASA astronauts aboard the Space Station and for future extended space missions. HTI's OsMem™ Forward Osmosis membrane technology can recycle "used" water such as wastewater and even urine to provide a fortified drink that provides hydration and nutrients to astronauts with limited resources and storage in space.

Scientists from NASA's Kennedy Space Center in Florida will test a space-adapted version of HTI's Forward Osmosis filter bag aboard Space Shuttle Atlantis during the STS-135 mission that launched to the Space Station this summer. "HTI has been very helpful in manufacturing a forward osmosis bag that we were able to certify for spaceflight and testing on board the Space Shuttle," said Spencer Woodward, Technical Integration Manager for NASA. "We are excited and optimistic for the test results that will hopefully give us the opportunities for further testing and eventual use on board the International Space Station and other future space vehicles."

HTI scientists used the same proprietary membrane technology for these NASA products that it uses in their suite of emergency hydration products sold in retail outlets such as Costco, Cabela's and Sportsman's Warehouse but with a design and configuration customized to work in the absence of gravity. HTI's products such as the HydroPack, LifePack and X-Pack have also been used by the military and in humanitarian relief efforts in addition to being sold in retail for personal use.

"We are very proud that our Forward Osmosis technology is being tested by NASA as an astronaut hydration system," said Walt Schultz, CEO of HTI. "We look forward to all the possible space flight applications using HTI's OsMem membrane."

Pending results, these tests could result in a long-term NASA application for a Forward Osmosis membrane that would exist in a space suit for upcoming space travel as well as an emergency backup source for water aboard the International Space Station, providing hydration and nutrition during emergency return-to-Earth scenarios and as aid during future long-term space exploration.

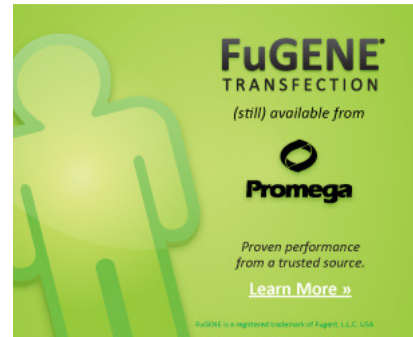
For more information on NASA's use of HTI Technology please visit [http://www.nasa.gov/mission\\_pages/shuttle/behindscenes/sts-135\\_FOB.html](http://www.nasa.gov/mission_pages/shuttle/behindscenes/sts-135_FOB.html)


For more information on HTI Technology please visit [www.htiwater.com](http://www.htiwater.com)

### About HTI's Forward Osmosis Technology

In two state-of-the-art plant facilities located in Albany, Ore., HTI manufactures a proprietary Forward Osmosis membrane material that allows osmosis, which is a natural process of liquids seeking equilibrium when separated by a membrane. This filtration process leaves behind virtually all contaminants. Forward Osmosis can filter water without the need for high pumping pressure found in many traditional filtration systems. Thus, Forward Osmosis filtration systems use very little energy, are constructed from relatively low-cost materials and are capable of filtering highly contaminated dirty water, even those containing high solid concentrations, without plugging. HTI's forward osmosis membrane has been commercially used since 1996 and most recently in such industries as oil and gas; energy generation; biogas cogeneration; and municipal wastewater

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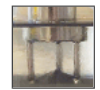


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recycling. HTI also has a full suite of Forward Osmosis emergency hydration products used by the military, in humanitarian disaster relief and sold in retail stores for personal hydration. HTI is headquartered in Scottsdale, Arizona. For more information visit [www.htiwater.com](http://www.htiwater.com).

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