

Technologies on water purification

1. Flat sheet membranes based spiral modules for disinfection of drinking water

Steps followed:

- Development at lab level, thorough characterization of membranes.
- Scale up of membrane preparation and spiral module development and analysis, third party evaluations for virus and bacteria log reduction (5 and 8 respectively).
- Preparation of prototype, demonstration & evaluation (~ 100 numbers), modifications based on feedback.
- Technology transfer to M/s Membrane Filters India Pvt. Ltd., Pune. The licensee has successfully implemented the technology and has developed innovative water purification units as shown below. One of them, 'Jaldoot'; which is an auto-operated unit has created significant impact on water-distribution in rural areas.



Water purification units marketed by M/s. Membrane Filters India Pvt. Ltd. for
(a) Community applications and (b) Household applications



Jaldoot



Water ATM



Elite

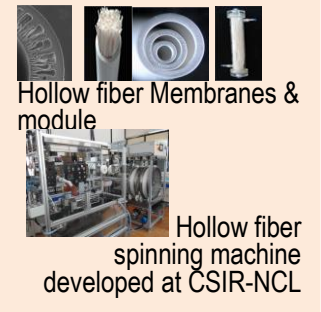


Meele

2. Hollow fiber (HF) membranes for disinfection of drinking water

Steps followed:

- Development of spinneret, spinning machine and hollow fibers at lab level, characterization of membrane, optimization (2012-13).
- Scale up of HF membrane preparation, module development and analysis (2013)
- Tech-transfer agreement signed with M/s. Technorbital Advanced Material Pvt. Ltd., Kanpur: August 2013
- Technology transfer: Feb 2014.



Water purification units marketed by Technorbital Advanced Material Pvt. Ltd.
(a) Community applications and (b) Household applications



Tech-Jal units



Foot-operated



Gravity based

Reference:

1. [Removal of hepatitis A virus from water by polyacrylonitrile-based ultrafiltration membranes, Sunil R. Vaidya, Ulhas K. Kharul, Shobha D. Chitambara, Santosh D. Wanjale, Yogesh S. Bhole, Journal of Virological Methods 119 \(2004\), 7-9](#)