

**GOVERNMENT OF INDIA  
SCIENCE AND TECHNOLOGY  
LOK SABHA**

STARRED QUESTION NO:248  
ANSWERED ON:06.08.2003  
TECHNOLOGY FOR WATER PURIFICATION  
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**Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:**

- (a) Whether the CSIR has developed an ultrapore filtration membrane technology for water purification ;
- (b) If so, the details thereof ;
- (c) whether the Government have provided any assistance to any NGO's for the adoption of this technology in rural areas; and
- (d) if so, the details thereof ?

**Answer**

MINISTER OF HUMAN RESOURCE DEVELOPMENT, MINISTER OF SCIENCE AND TECHNOLOGY AND MINISTER OF DEVELOPMENT (DR. MURLI MANOHAR JOSHI)

(a)&(b) : Yes Sir. Two CSIR laboratories viz. Central Salt and Marine Chemicals Research Institute (CSMCRI), Bhavnagar and National Chemical Laboratory (NCL), Pune have developed Ultrapore Filtration modules using polysulfone/ polyether sulfone as well as poly acrylonitrile membrane . In addition CGCRI has developed ceramic micro pore filters for water purification.

The ultra-filtration (UF) membrane has small sized pores that exclude micro- organisms. The typical water flux depending on water quality is 15-20 liters per hour for a domestic module and 45-60 liters per hour for community module. UF assemblies have been made employing hand and foot pump, cycle pump and compact electrical pumps. The micro filtration system is useful for removal of arsenic and iron impurities from water.

(c)&(d) CSIR ,with the assistance from other Government Departments, has provided 40 units to NGOs for trials and performance evaluation. In addition 30,000 lit/day capacity plants were set up at Allahabad (to provide safe drinking water to pilgrims in Kumbh Mela) and Radhanpur (to provide drinking water to earthquake victims). Also, Ceramic micro pore filtration units have been set up in the Barasat area of West Bengal where arsenic problem is acute. These units are operating on a cost sharing basis by the community . The laboratory has transferred the technology to an entrepreneur. It is being propagated through some NGO's including Ramakrishna Sevasharam for its use.