

Microsoft  
**VIRTUALIZE YOUR BIGGEST WORKLOADS.**  
 LEARN MORE >  
 Windows Server 2012  
 BUILT FROM THE CLOUD UP.

More Hotmail Messenger MSN India

Make MSN India my home page

Hotmail | Page Options | Sign in



Follow

HOME TOP STORIES INDIA WORLD BUSINESS MONEY CRIME WEATHER PHOTOS VIDEOS WINDOWS 8 HER COURAGE SPECIALS  
india top stories pakistan matters gandhi & new india weekend edition delhi gang-rape

Fri, 08 Feb 2013 19:32:02 GMT

# Sari-sun combo can sterilise dirty water

Share 3



Share 3

Bangalore, Feb 8 (IANS) Ladies, don't throw your torn or used saris, because scientists have found excellent use for them.

An Indian study has shown that even dirty water gets sterilised and becomes drinkable after it is filtered through a folded cotton sari and then exposed to sunlight for less than an hour.

Cloth filtration is already a common practice in rural areas, especially when water becomes turbid during the rainy season. What scientists have now shown is that the sari-filtered water exposed to sunlight gets sterilised and becomes fit to drink without any need for boiling.

This simple technology for getting safe drinking water has been demonstrated by Nandini Nimbkar and Anil Rajvanshi of Nimbkar Agricultural Research Institute (NARI), a non-profit institution in Phaltan, Maharashtra, in western India. They have reported their work in the upcoming issue of the journal Current Science.

As the water treatment technologies currently available for homes are fairly costly and not sustainable, the combination of sari filter and solar heating can be used effectively -- especially by people in rural areas -- for sterilising the water they usually obtain from streams or draw wells, says the duo.

Disinfection of water may be accomplished by chemical treatment like chlorination or by boiling the water. Chlorination may alter the taste and have side-effects, while raising the water to boiling may not always be possible with sunlight and would require electricity or some other fuel.

NARI scientists have shown that disinfection could be achieved even at sub-boiling temperatures as low as 55 degrees Celsius that can be reached using solar energy.

To demonstrate their technique, the scientists used raw water taken from a canal and passed it through a four-layered cotton sari-cloth. The water filtered through the tiny pores in the sari was then heated to different temperatures ranging from 50 to 60 degrees Celsius and analysed for coliform bacterial content. Coliform bacteria that are present in large quantities in human excreta are good indicator organisms for the presence of disease-causing bacteria.

Their experimental data showed that sari filtration alone -- besides filtering particulate matter -- significantly reduced the coliform count in the raw water. Heating the filtered water to 60 degrees Celsius and maintaining this temperature for 15 minutes completely eliminated the coliform population. At 55 degrees Celsius it required 45 minutes for the water to become bacteria free.

These heating conditions for water using sunlight can be achieved even on a partially cloudy day, the scientists claim. There is even no need to use a thermometer as one can guess the water temperature by feeling with the hand, says Rajvanshi. "At 50 degrees Celsius one can keep the hand immersed in the water for up to 10 seconds without getting singed, and at 60 degrees Celsius one cannot keep the hand in water for more than five seconds."

Thus, a combination of sari filter and solar heating "is an effective, feasible and environmentally sustainable technique of disinfection to obtain clean drinking water", the researchers conclude.

(K.S. Jayaraman can be contacted at killugudi@hotmail.com)

©Indo-Asian News Service

PREVIOUS ARTICLE: Kin of Jallainwala Bagh martyrs seek apology from David Cameron

NEXT ARTICLE: Banking services in Bengal likely to be hit in two-day strike

Share 3



Share 3

photos



Advertisement

ADFeedback

news videos



Like 0 Send

## Cong-BJP war of words heats up over Justice Katju

more news videos



Cong-BJP war of words heats up over Justice Katju  
17-02-13 3:01



Govt ready to discuss all issues: PM  
17-02-13 1:56

1 of 3606

## most popular

viewed | shared

President Obama with his young fans: Pics

Malini Agarwal, Indian woman blogger: Pics

Voices of Indian women

Maldives: A paradise lost?



President Obama with his young fans: Pics



The many moods of P Chidambaram: In Pics



Malini Agarwal, Indian woman blogger: Pics



George Ferris' 154th birthday: Making the world go round



Maldives: A paradise lost?

More »

more india news

- Kin of Jallainwala Bagh martyrs seek apology from David Cameron
- Banking services in Bengal likely to be hit in two-day strike
- Not possible to release Cauvery water to Tamil Nadu: Shettar
- Bihar potato farmer sets new world record
- Lalu's MLA smashes bottle outside Assembly, demands liquor ban in Bihar

More »

top stories

- Britain and India to agree cyber crime joint taskforce
- Let parliament decide on Afzal's body: PM
- SC stays death to Veerappan aides till Wed
- Tatra truck deal: ED sends LRs to the UK, HK
- Chopper deal: Sanjeev Tyagi rubbishes charges of kickbacks

More »

today on msn india

news



The many moods of P Chidambaram: Pics

IAF's power display on Feb 22

Fear still haunts Delhi women

entertainment



Photos: Star Guild Awards 2013

Preview: 'Zila Ghaziabad'

Rishi dons biker avatar

sports



Australia can beat 'under-pressure' India

India is vulnerable: Lawson

Watson ready to open in Tests

lifestyle



Megan Fox: Star style file

Celeb spotting at promos, launches and more!

The art of tribal tattoos

autos



New Cars launched in 2013: Pics

Parx Super Car Show 2013

Cars made of strange stuff

msn | News Entertainment Lifestyle Sports Videos Autos Astology Money Photos MSN Specials

Terms of use Advertise on this site Privacy Statement

MSN Code of conduct Anti-Spam Policy MSN Worldwide

© 2013 Microsoft | Microsoft

Kumbh Mela: In Pictures

get connected



734,555 people like MSN India.



Facebook social plugin

Follow.Share.Connect

