

# Solar Water Disinfection (SODIS)

SODIS uses solar energy to destroy pathogenic microorganisms causing water borne diseases and therewith it increases the quality of drinking water.

**1** Wash the bottle well the first time you use it



**2**

Fill the bottle 3/4 full with water



**3** Shake the bottle for 20 seconds



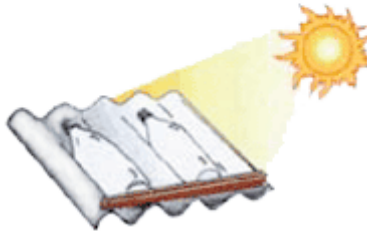
**4**



Now fill up the bottle fully and close the lid

**5**

Place the bottles on a corrugated iron sheet



**6**



**7**



Expose the bottle to the sun from morning until evening for at least six hours

**8**

The water is now ready for consumption



## ***Procedure for Solar Water Disinfection***

### **Preparation**

1. Check if the climate and weather conditions are suitable for SODIS.
2. Collect plastic PET-bottles of 1-2 litre volume. At least 2 bottles for each member of the family should be exposed to the sun while the other 2 bottles are ready for consumption. Each family member therefore requires 4 plastic bottles for SODIS. (Note: PET-bottles are preferable to PVCs)
3. Check the water tightness of the bottles, including the condition of the screw cap.
4. Choose a suitable underground for exposing the bottle, for example a CGI (corrugated iron) sheet.
5. Check if the water is clear enough for SODIS (turbidity <30 NTU). Water with a higher turbidity cannot be used for this method unless pretreated.
6. At least two members of the family should be trained in the SODIS application.
7. A specific person should be responsible for exposing the SODIS bottles to the sun.
8. Replace old and scratched bottles.

### **Note:**

- This treatment is restricted to the household level.
- Water bottles should be placed horizontally rather than upright position.
- Start exposing in the early morning as possible.
- If the sky is cloudy, expose the bottles for 2 consecutive days.
- How to distinguish PET from PVC bottles: PVC bottles have a bluish gleam especially marked at the bottom of the edges of the piece of the bottle materials that has been cut out.

[http://www.searo.who.int/en/Section1257/Section2263/info-kit/SODIS\\_Manual\\_med.pdf](http://www.searo.who.int/en/Section1257/Section2263/info-kit/SODIS_Manual_med.pdf)