

SOLVATTEN - FAQ

Using solar energy SOLVATTEN makes unsafe water drinkable

• Why SOLVATTEN?

SOLVATTEN can be a valuable water-treatment tool for vast numbers of people around the world where there is polluted water and energy sources are scarce, yet there is a lot of sun. Its use will bring health and environmental benefits and improve quality of life and opportunities for many.

• What are the advantages with SOLVATTEN?

The SOLVATTEN system is

- *Safe*
- *Reliable*
- *Simple*
- *Sustainable*
- *Cost-effective*
- *Socially and culturally acceptable*

• How does it work?

SOLVATTEN uses solar energy (heat and UV radiation), water turbulence and filters.

• What kind of purification is achieved?

SOLVATTEN inactivates micro-organisms which cause waterborne diseases and also filters out macro-organisms. The output is "Safe Water" according to WHO's guidelines (<1 E-coli/100ml water).¹

• How much contamination can be treated?

Water samples with more than 200,000 E.coli/100 ml have successfully been treated.

¹ WHO: World Health Organisation.
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- **How turbid can the untreated water be?**

Very turbid, up to 200 NTU. The filter reduces the turbidity by about 35%.

- **How long does it take to get safe drinking water?**

2-4 hours when the sun is shining, 5-6 hours when it is cloudy. SOLVATTEN does not work when it is raining – in these conditions we recommend rain-water harvesting.

- **How come it works so fast?**

The containers have been specially designed to maximise the rate at which the water temperature rises, and amount of UV radiation to which the water is exposed.

- **Geographically, where can SOLVATTEN be used?**

In countries with a lot of sunshine but not necessarily warm weather. In mountain areas as well as lowlands. In cooler countries (e.g. Sweden) on sunny days in spring and summer.

- **How much water can you treat on one occasion?**

10 litres, which is the capacity of the containers. If the weather is good SOLVATTEN can be used two or three times a day.

- **Do you need any spare parts?**

Only the filter may have to be replaced. This is easy to do and a folded piece of local fabric (eg sari) can be used.

- **How many years does SOLVATTEN last?**

The life expectancy is at least five years.

- **Does the water treatment affect the taste of the water?**

No, there is no change.

- **Can you use SOLVATTEN for other purposes?**

Yes, to warm water for personal hygiene, washing and rinsing food etc. This will help prevent infections and could be especially useful in health settings eg for midwives.



- **What are the benefits for the environment?**

If the system is used to warm water then other energy sources (eg firewood or kerosene) can be replaced. This will bring environmental benefits such as reduced deforestation, soil erosion and green-house gas emissions. Also the plastic material can be recycled after long-term use and there are no chemicals involved in the water treatment process.

- **Is the material used FDA approved?**

Yes; the material used in SOLVATTEN is approved by the FDA².

- **Are any harmful chemicals produced during exposure to the sun?**

No, the material used withstands the heat and the UV light without harmful side effects.

- **Is the technique for using SOLVATTEN easy to learn?**

Yes, it is very straightforward and graphic instructions are attached to the SOLVATTEN containers.

- **Where and how should SOLVATTEN be positioned during use?**

Where there is no shade, no wind or draught. Directed towards the sun.

- **Is it necessary to re-position SOLVATTEN during use?**

Not when the sun is high in the sky, but if the sun is lower (eg in winter or in more northerly countries) you have to change the position of SOLVATTEN up to two times during use.

- **Is it reliable?**

Yes, the indicator shows when the treatment process is completed and the water is safe.

- **Is the water safe the day after treatment?**

Normally for up to 24 hours.

² FDA = Food and Drug Administration in the USA.
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- **Is there a risk for recontamination when handling?**

The openings for pouring have a built-in guard to prevent recontamination. Also, the risk is minimised since water is collected, treated and stored in the same container.

- **How do you clean SOLVATTEN inside?**

By adding a handful of dry beans, rice or lentils with some water to the container, shaking and rinsing. Soft wool balls can also be used for this method.

Or by leaving it empty, facing the sun for approximately 30 minutes, with the caps open, so it is heated to a high temperature for a short time.

Do not use sand as it may scratch the surface. Do not use detergents.

- **How do you clean SOLVATTEN on the outside?**

Rinse with water but do not scrub.

- **Apart from households, where can SOLVATTEN be used?**

The technology is suitable for use in many contexts e.g. schools, health centres, the tourist industry, disaster relief etc.

- **What is the size and weight of a SOLVATTEN?**

The dimensions are 35 x 50 x 11 cm and the weight is about 2.75 kg.

- **How will SOLVATTEN reach the market?**

SOLVATTEN is suitable for local water, hygiene and sanitation programs and will initially be distributed through international organizations that work on aid, development and humanitarian relief projects. In the longer-term SOLVATTEN will also be sold to individuals through local distribution channels.