

## ***Fact Sheet for the BleachMaker by WaterStep***

### **1. Why make bleach?**

Chlorine bleach is the World Health Organization's (WHO) recommended disinfectant to stop the spread of infectious disease, and it's the most commonly used disinfectant/sanitizer in the world. The BleachMaker by WaterStep produces a bleach concentration that meets the WHO standard for disinfection in a medical setting.

### **2. How does WaterStep's BleachMaker work?**

The BleachMaker uses a process called electrolysis to make sodium hypochlorite (bleach) at a 0.5% concentration, which is the level recommended by WHO for medical disinfection. The device will make about a gallon (5 liters) in about an hour using available water, table salt and a 12 volt DC power source, typically a car battery.

### **3. Is the bleach made by the BleachMaker the same as purchased bleach?**

No, it's not as strong as purchased bleach. Purchased bleach, however, comes in many different concentrations and must be diluted carefully to be at the appropriate concentration for medical use.

### **4. What are the uses for bleach?**

Bleach can be used to sanitize hospitals and medical clinics that handle bodily fluids; to disinfect cooking areas, cooking equipment and clothing; and it can also be dosed into small amounts of water to make it safe to drink.

### **5. How can the bleach produced by the BleachMaker be used to disinfect water?**

Add 1.5 milliliters of the bleach solution produced by the BleachMaker for each liter of water that needs to be disinfected. Stir and let it set for 30 minutes, then test the solution. The complete instructions are available at [www.waterstep.org](http://www.waterstep.org).

### **6. WaterStep's M-100 Chlorine Generator is designed to disinfect water. Why does WaterStep have two products to disinfect water?**

The M-100 is typically a permanent installation and best suited to communities that have large water tanks. The BleachMaker is easily set up, portable and advantageous to communities that have only small containers available.

### **7. What makes the BleachMaker more efficient than using purchased bleach?**

Liquid bleach is expensive in many parts of the world, and it's very costly to ship. The BleachMaker is small enough to fit in a backpack for easy shipping and transportation. The kit weighs about 5 pounds (2kg). It uses common table salt, water and a direct current (DC) power source (i.e., 12V DC car battery) – all of which are readily available on every continent of the globe. The ability to make medical strength bleach on-site can be far less expensive and more efficient than purchasing, transporting and storing liquid bleach in remote areas.

### **8. Who will use the BleachMaker?**

The tool was created for members of the medical community to use in the developing world, but it can be used by anyone who needs a sanitizing disinfecting solution.

**9. Where did the idea for the BleachMaker come from?**

After experiencing many sanitation challenges in the field, as well as receiving a request from another Non-Governmental Organization (NGO) during the 2014 West Africa Ebola outbreak, WaterStep endeavored to create a device that could produce medical strength bleach for disinfection that was simple, effective and portable.

**10. Who designed the BleachMaker?**

The concept for this device originated in 2014 at Hack2O, a hackathon hosted by WaterStep and FirstBuild. This event gathered over 60 innovators to explore and develop ideas to ease the world water crisis. WaterStep volunteers Frank Diebold, David Mekus and Dr. Joe Jacobi led a group of volunteers from University of Louisville, Louisville Water Company and General Electric's First Build Innovation Center who worked together to develop this very powerful disinfectant tool. After nearly two years of development and field testing, the device is ready to go to work and save lives.

**11. How can the Bleach Maker be purchased?**

The device can be purchased through WaterStep at 502-568-6342, at [www.waterstep.org](http://www.waterstep.org) or by calling +01-502-568-6342.

**12. Who can I contact if I have more questions?**

For more information, please contact Kurtis Daniels at [kurtis.daniels@waterstep.org](mailto:kurtis.daniels@waterstep.org).