Instruction Manual for DayOne Waterbag

Make clean drinking water in 30 minutes.

Let’s get started!

The DayOne Waterbag™ is a 10-Liter (2.5 gallon), family-sized water purification unit for disaster relief to purify contaminated freshwater sources, protecting survivors from the leading causes of diarrheal disease. It provides all four functions needed to treat and safely store drinking water:

Collection > Transportation > Treatment > Hygienic Storage

Parts of the DayOne Waterbag

- Hanging Strap
- Closure Buckles
- Fill Line
- Mixing Handles
- Port-to-filter Tube
- Bag Port
- Outlet Tube
- Filter
- Tube Clamp
- P&G™ Packets
- Packet Cutter
- Syringe for Backflushing

Open / Close Tube Clamp for Water Flow

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# Using the DayOne Waterbag

## 1 FILL

Make sure the tube clamp is closed.

Fill the Waterbag to the fill-line with contaminated water (10 L / 2.5 gal). Make sure that the end of the outlet tube does not contact the water source during the filling process.

## 2 ADD

Open the packet using scissors or provided cutter and add contents of packet to the Waterbag.

## 3 CLOSE

Close Waterbag by tightly folding top down three times, then fasten buckle.

*Using the DayOne Waterbag continued on next page...*
4 **MIX**

Hang Waterbag on a tree, pole, or other permanent object, or wear as a backpack.

Grab handles on side of Waterbag and mix contents of Waterbag vigorously for 5 minutes by rotating Waterbag back and forth continuously.

Water will become colored when the powder is added and mixed. The color indicates that the product is working.

5 **WAIT**

Wait 25 minutes before dispensing drinking water from outlet port in Waterbag. Floc will settle to bottom of Waterbag below dispensing port. When the process is finished, the water will be clear.

Note: You may tap the side of the bag if the particles stick to the bag walls.

6 **DRINK**

Dispense water from the Waterbag into a clean container, such as a cup or glass for drinking. Do not dispense water once water level is below dispensing outlet port.

**OFF:** Pinch clamp closed to stop flow of water.
**ON:** Release clamp to open position for water to flow.

Drink treated water from Waterbag within 24 hours after its preparation. Water that is not consumed may be used for cooking, washing, watering animals or otherwise discarded.

Do not drink if water is colored, yellow, or cloudy. This could mean that water was not mixed properly. Repeat step 4. If water remains yellow, then discard water.
Backflushing the Filter

To extend the lifetime of the DayOne Waterbag, the filter should be cleaned using this backflushing procedure after every 10 L (2.5 gal) passes through the filter. Note: bag capacity is 10 L (2.5 gal). This cleaning will help prevent filter clogging, maintain optimal flow, and extend the life of the filter. Backflushing is performed while the Waterbag is empty.

*Note: Do not backflush the filter with contaminated water.*

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**STEP 1**
Collect at least 300 mL (1.5 cups) of filtered water from the previous Waterbag treatment run. Collect the water in a clean container, such as a cup or jar.

**STEP 2**
Fill the backflush syringe with filtered water. Open the tube clamp on the discharge tube to allow water to reach the filter.

**STEP 3**
Insert the syringe tip firmly into the discharge tube outlet. Secure the discharge tube on the shoulder strap with the Velcro loop. Keep the tube at this elevation during the backflush.
STEP 4
In one rapid motion, push the syringe plunger down, forcing the clean water through the filter in the reverse direction from normal clean water production. The dirty backflush water will drain into the Waterbag.

STEP 5
Repeat five times (or more) until the water discharging from the filter is clean.

STEP 6
Close hose clamp prior to the next use and keep the discharge tube in place.

STEP 7
Dispose of backflush water in a sanitary manner, such as burial away from vegetable gardens.

*Note: If flow does not restart after backflushing, air might have been pushed into the filter, making an air lock. See Troubleshooting section.*
Operational Notes

Carrying Water: The backpack straps on the bag allow the user to carry water (before or after treatment) and allow families to bring water home.

Hanging the Waterbag: When hanging the Waterbag on a tree, unbuckle the top handle and strap it around the tree branch. Make sure buckle is securely fastened.

Cleaning the Waterbag: Clean Waterbag after each use, or after every 24 hours, whichever comes first. To clean, agitate remaining water with floc (sediment) that has settled below dispensing outlet. Open top of the Waterbag and pour floc from the Waterbag. Floc may be disposed of in a latrine, or buried in the ground away from children, animals, or gardens. If possible, wipe the inside of the Waterbag with a cloth to remove any remaining floc. It is recommended to backflush the filter after every 10 L (2.5 gal) of purified water passes through the filter. Note: bag capacity is 10 L (2.5 gal). See reverse side for Backflushing the Filter.

Repeat Treatment: The Waterbag may be used repeatedly to prepare clean drinking water. ALWAYS check Waterbag for leaks prior to adding the packet.

Cleaning for Long-term Storage

Disinfect Waterbag & filter: To eliminate the growth of bacteria or mold, always disinfect the Waterbag and filter before or after long-term storage, or after long-term use (15+ consecutive days).

- **USE** approximately 2-4 L (0.5-1 gal) clean water and 2 tablespoons of household bleach. Make sure the tube clamp is in the closed position. Mix the solution inside the Waterbag.
- **LET** the cleaning solutions and Waterbag sit for at least 30 minutes.
- **OPEN** the tube clamp to run the cleaning solution through the filter.
- **MAKE** sure the tube clamp is in the closed position and dispose of rest of water from the Waterbag, making sure the water and bleach is rinsed away before using again. Dispose of cleaning water in a toilet or latrine.
- **ONCE** the Waterbag is clean, air dry or towel dry, so no moisture is trapped inside.

*Note:* The inside of the Filter Cartridge will not dry completely, but the bleach in the solution will prevent the growth of harmful microorganisms and biofilm.

- **STORE** out of sun when not in use. Do not let the filter freeze.
## Things to Avoid

- **DO NOT** eat chemical packets.
- **DO NOT** consume or eat the sediment.
- **DO NOT** drink water if it is colored after treatment and filtration.
- **DO NOT** put hands inside the Waterbag prior to cleanout to avoid recontamination of the treated water.
- **IF SEDIMENT** and particles are re-suspended, allow time for particles to settle before filtering and drinking.
- **DO NOT** puncture or cut Waterbag.
- **DO NOT** use the Waterbag to treat seawater.
- **DO NOT** freeze the filter cartridge, as it may damage the filter fibers.

## Troubleshooting

*(potential areas where problems may arise)*

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>SOLUTION</th>
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<tbody>
<tr>
<td>Decreased Flow / No Flow</td>
<td>Trapped air in the filter cartridge</td>
<td>If the Waterbag is filled with water, but water is not flowing through</td>
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<td></td>
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<td>the tube, there may be trapped air in the filter cartridge. To fix this,</td>
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<td>get the syringe and make sure the plunger is pushed all the way into the</td>
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<td>barrel of the syringe. While keeping the tube clamp in the open position,</td>
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<td>insert the syringe into the discharge tube outlet and then pull the</td>
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<td>plunger towards you. This is “priming” the flow and will draw the water</td>
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<td>to the outlet. Once the water flows through the filter, disconnect the</td>
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<td>syringe and the water will begin to flow as normal.</td>
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<td></td>
<td>Clogged filter</td>
<td>Backflush filter cartridge (see section on “Backflushing the Filter”).</td>
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<td></td>
<td>Kinked tube</td>
<td>Straighten tube.</td>
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<tr>
<td>Leak in Bag</td>
<td>Loose bag closure</td>
<td>Re-close the bag by folding down the top closure 3 times. Fold flat and</td>
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<td>tight. Excess air may need to be released. Grasp both ends of the buckle</td>
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<td>to bring together and fasten.</td>
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<td>Tear in bag</td>
<td>Dry off area with a towel or t-shirt. Then tape the outside and inside</td>
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<td>of the bag at the leak point, using medical tape or other available tape.</td>
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# Specifications

| Kit Contents:                      | DayOne Waterbag™ and attached filter  
Pictograph instructions  
Syringe for backflushing filter  
P&G™ packets  
Packet cutting tool |
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<tr>
<td>Technology:</td>
<td>Multiple treatment processes (P&amp;GTM flocculant/disinfectant packets and a turbidity filter)</td>
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<td>Capacity:</td>
<td>10 L (2.5 gal) per use (reusable)</td>
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<td>Purification time:</td>
<td>30 minutes</td>
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<td>Removals:</td>
<td>Robust in removal of turbidity, cysts (&gt; 3 logs), viruses (&gt; 4 logs), bacteria (&gt; 6 logs) and arsenic from contaminated water sources such as creeks, rivers, lakes, and ponds.</td>
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| Flow Rates:                       | 0.5 L/min to 1.5 L/min  
0.13 gal/min to 0.4 gal/min |
| Weight:                           | 454 g (16.0 oz) when empty  
10 kg (22 lbs) when full of water |
| Dimensions:                       | 35.5 x 79 cm (14 x 31 in) when flat  
7.6 x 35.5 cm (3 x 14 in) when rolled |
| Operation:                        | Support by easy-to-use pictographic instructions. Treatment shows visual indication that water is becoming cleaner. |
| Shelf-life:                       | Waterbag can be stored at room temperature for 10 years from date of manufacture. P&G™ packets can be stored for 3 years from date of manufacture. |
| Patents:                          | U.S. Patent No. 7,514,006 |
Precautionary Statements for the Filter

**WARNING:**
- The filter does not remove salt.
- Do not freeze the filter cartridge.
- The filter contains an array of thin porous tubes (Hollow Fiber Membranes) that can be damaged by dropping or freezing. This damage cannot be seen.
- The filter works properly only when the flow passes through in the direction indicated by the large arrow on the filter.
- READ, UNDERSTAND, & FOLLOW ALL instructions and warnings in this manual before using this filter.

*If flow decreases:* See Troubleshooting: Decreased Flow.

**Storage / Disposal:** Disinfect the filter thoroughly before long-term storage to prevent the growth of mold, mildew, and bacteria. Never use a dishwasher or microwave to disinfect parts because the high heat will damage or melt them.

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Precautionary Statements for the P&G™ Packets

**WARNING:** *Hazards to humans and domestic animals.*
Dry product causes substantial but temporary eye injury. Harmful if absorbed through skin or if swallowed. Avoid contact with skin or clothing. Do not get in eyes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse. Contains Iron Sulphate (352 mg of ferric iron).

**FIRST AID**

*If in eyes:*
- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
- Call poison control center or doctor for treatment advice.

*If on skin:*
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call poison control center or doctor for treatment advice.

*If swallowed:*
- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to by a poison control center or doctor.
- Do not give anything to an unconscious person.

Have the product container or label with you when consulting a poison control center or doctor, or going for treatment. In North America you may also contact 1-866-461-4403 for emergency medical treatment information.

**Storage / Disposal:**
- Store away from heat, humidity and sunlight.
- Dispose of empty container in trash.
- Dispose of bag sediment in latrine or buried in the ground away from humans, animals, or gardens.

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