



## WAPIs for the World



### *WAPI — Water Pasteurization Indicator A gift of life through clean water!*

Every 2 minutes a child dies from a water-borne disease. Whether they are consuming contaminated water or suffering from dehydration due to diarrhea, a lack of access to safe water is responsible. [www.water.org](http://www.water.org).



#### **Vision:**

*To have the ability to assist with clean and healthy water to survive.*

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**WAPIs for the World** is a non-profit 501(c)3 ministry assisting globally with clean and healthy water for survival as well as teaching sanitation.

### **Circulating WAPIs**

In 2010, **Bob Tait** was introduced to a small water pasteurization indicator device called a WAPI which tells when water is pasteurized. Intrigued by this device he journeyed to Zambia, Africa with a ministry group who distributed the WAPI to local villages as well as teaching sanitation and personal hygiene. He saw poverty, hunger and the need for clean water as he had never seen before. After coming home, he started researching and gathering ideas to enhance the WAPI. Bob contacted the founders of the WAPI, Dale Andreatta and Dr. Robert Metcalf, both Ph.D.'s. They shared their ideas with Bob who went on to improve, intensify, and perfect the device to where the co-creators requested Bob to make WAPIs for them to distribute throughout the world.

The main purpose for pasteurizing water is to make sure that water for drinking is free from microbes that are known to cause illness to the human body. At 149°F / 65°C the temperature needed to melt the wax in the WAPI which clearly indicates when a safe pasteurization has been reached. Therefore, saves valuable-fuel which is being wasted by excessive heating, deforestation, urban air pollution and other energy-related environmental effects.

In the wild, water often contains harmful organisms, bacteria, virus and worms that can cause a variety of illnesses, especially dysentery. "Diarrhea is estimated to cause 1.5 million child deaths per-year; mostly among children under five, living in developing countries." [www.UN.org](http://www.UN.org)

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*Together we can quench the thirst!*

## Mountain Folk in Honduras

The mountains of Honduras are very majestic with flowing hillsides of lush greenery. Crops of coffee, sugar cane and vegetables dot the countryside as if to suggest a booming economy. Horse drawn carts move the products down the steep hillsides to the market place. Men with machetes holstered on their side move from place to place harvesting their next products destined for the cities below. These hard-working families labor to purchase the necessities to exist, not usually for profit.

Mountain streams amplify a sound that will catch the ear from miles away. The streams hide the fact that they are deadly because they have no life in them. There are no fish, they have been fished out. The water has been contaminated with E-coli from animal and human feces. Streams are flow-regulated by the amount of rain, sometimes very placid, sometimes a torrent of flooding water. Either way, they deliver death and sickness when the rainy season is the worst. Belin Gualcho had a very serious outbreak of hepatitis just before we arrived. They believed the cause was from the water. In these remote areas, sanitation is not understood, nor practiced. Soap is a luxury, not a necessity.

We arrived in a remote village called Aguacatillo. (small avocado). A 4-wheel-drive, motorcycle or by mule is the way to get there. But, during the rainy season a mule or walking is the only way to get there. This is truly a beautiful place. It is approximately 20 kilometers from Belin Gualcho at 4,000 feet elevation. The residents depend on mountain streams for water. I have enclosed a picture of their water collection system where they have no chlorine regulators, just a storage container. They have pumps to get the water from the stream below, but that is it. Sickness from the water is a way of life for these dear people; that is until they discovered the WAPI. They told us that they don't get sick from the water any longer because they use the WAPI which has been in use for the past two years. The WAPI isn't the total solution for these warmhearted folks, but it does answer an immediate need until they can afford the chlorination device.



*WAPIs for the World* just sent 2,000 units to Honduras to aid their relief effort in Eastern Honduras where 1500 families lost their homes and everything they owned with water destroying everything in its path. Thanks to our volunteers and suppliers who made it possible to send WAPIs. A big shout out to Ty Wheeler and the shipping company DHL who helped in our transport effort. We cannot do this alone. It takes many humanitarians dedicated to accomplishing this outreach. Also, Boy Scout Troop 320 in Vancouver, Washington produced and donated 850 units to this effort. Great job Scouts.

Visit our web page to see how you can get involved. [WAPIsfortheWorld.com](http://WAPIsfortheWorld.com). We are a 501(c)3 nonprofit. All contributions are tax deductible.

Bob Tait

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## Circulating WAPIs

Bob's ministry, **WAPIs for the World**, was built and run on dedicated volunteers who donate their time assembling, by-hand, the small (3 inch in length) WAPI made to the highest standard. After working on the WAPI for eight years, Bob is about to launch a new WAPI that needs no electricity to produce. Therefore, more remote villagers will be able to make their own WAPIs and share with their neighbors. Currently **WAPIs for the World** has donated over 70,000 plus WAPI units around the world to those in need of clean water.

Protect yourself by carrying the small WAPI in your emergency pack when camping, hunting, bicycling or hiking on the back roads. You'll never know when you need to drink clean water.

## Why Pasteurize?

WAPI is a simple low cost device containing a special harmless wax that helps users to determine when the water has reached the pasteurization point. Pasteurizing water is to make sure that water for drinking and cooking are free from diseases that are known to cause illness to the human body. For a long time now, people have been made to believe that water is only safe to drink when we use chlorine or boil for 20 minutes. Pasteurization at 149°F is way below the boiling point of 212°F. Therefore, drinkable.

It has been known since the late 1880s, when Louis Pasteur conducted groundbreaking research on bacteria, that heat can kill pathogenic (disease-causing) microbes. It has been proven that when water is heated to 149°F / 65°C it will kill all disease-causing illnesses that normally effect the human body. This saves

valuable-fuel and time savings which is being wasted by excessive heating.

Un-pasteurized water is responsible for many illnesses and deaths we see worldwide. An estimated, 1.5 billion cases of diarrhea occur each year during the rainy season resulting in death of nearly two million children worldwide. 1.3 billion people around the world do not have access to safe drinking water or toilets.

[www.UN.org](http://www.UN.org)

*WAPIs for the World* works hard to change this. We educate people about the WAPI and how using it can give them clean water and train them in sanitation procedures. We reach out to help people with fundamental rights, like having clean water to drink. *Heat is the only proven process that is effective in destroying all waterborne pathogens.* [www.who.net](http://www.who.net)

### Pasteurization occurs at 149° F – Water Boils at 212° F

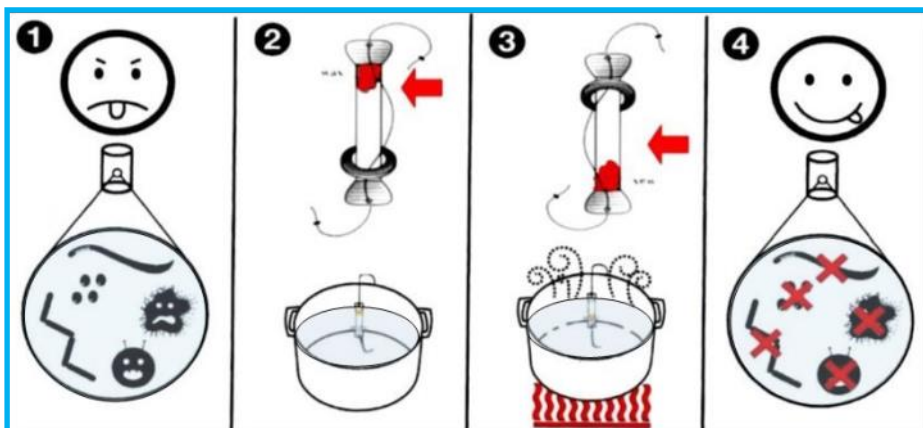
Microbe	Killed Rapidly at
Worms, Protozoa cysts ( <i>Giardia</i> , <i>Cryptosporidium</i> , <i>Entamoeba</i> )	131°F / 55°C
Bacteria ( <i>V. Cholera</i> , <i>E. Coli</i> , <i>Shigella</i> , <i>Salmonella typhoid</i> ), Rotavirus	140°F / 60°C
Hepatitis A virus	149°F / 65°C

## How to use a WAPI!

Place WAPI into a pot with wax up and washer down. Bend stainless-steel wire at top of WAPI to fit over the lip of your pan. Pour water into pot or deep pan that is used for cooking and set pot over fire. Cover pot with lid to prevent bugs flying into water while heating. When wax melts it drops to bottom of WAPI. Water is now pasteurized even if water has cooled. Pasteurization occurs when wax sinks to bottom of WAPI.

Before reuse, allow a minimum of 1/2 hour for wax to solidify. This allows the wax to cool for an accurate reading. Turn WAPI over and pull wire through to opposite end. The WAPI is now ready to use again. If you are unsure water is clean, re-pasteurize.

Here is pictured instructions of how to use the WAPI. In many developing countries villagers don't know how to read, so we are now using Agua Pura Para El Pueblo's paper inserts. Thank you, Tom Carter.





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PLEASE  
PLACE  
STAMP  
HERE

If you like this  
newsletter  
share it with a friend.



### Mountain Folk in Honduras



### When to use a WAPI?

- Everyone should have a WAPI in their emergency pack.
- When camping, hunting, bicycling or hiking on the back roads.
- When your city says to boil your water, WAPI your water instead.
- WAPIs are used in the process of pasteurizing water as well as juices and other milks.

### What makes the WAPIs Unique?

**Dr. Dale Andreatta** and **Dr. Robert Metcalfe**, both Ph.D.'s, were involved in creating the original WAPI. They shared their ideas with **Robert (Bob) Tait** who enhanced, intensified, and perfected the device. The co-creators agreed and requested Bob to make WAPIs for them. They were impressed and pleased that *WAPI for the World* has dedicated volunteers who donate their time by assembling, by-hand, the small 3 inches long WAPI made to the highest standards.

