

LS-PWT²® - pH WATER TREATMENT



LS-PWT²® PRODUCT DATA SHEET

- Effective in antibiotic-free production programs
- Acidifies the crop to help bird digestion and maintenance of healthy gut microflora
- Improves water palatability to increase consumption
- Minimizes cost with effective low addition rate
- Maximizes bactericidal efficacy of chlorine through pH manipulation
- Helps to dissolve lime and scale, and restore and maintain full function of waterlines for optimum flow
- LS-PWT²® is FDA approved-GRAS, and is manufactured under GMPs in an ISO 9002-2000 certified facility in the U.S.A.

As the strongest animal feed grade mineral acid available, LS-PWT²® requires a low addition rate to acidify drinking water to biologically effective low pH levels. The low addition rate allows water palatability to be maintained to promote optimum water consumption in birds and livestock. LS-PWT²® can also be used to manipulate pH in order to maximize chlorine effectiveness for waterline cleaning and sanitation.

Mixing Instructions

1. Test pH and alkalinity of incoming water.
2. Identify target pH (for general acidification or chlorine optimization).
3. Determine LS-PWT²® dosage from Recommended Usage Rate Chart.
4. Add LS-PWT²® dosage to four gallons (15 liters) of water to create stock solution. Dissolve thoroughly. Mixing in larger quantities will help avoid interruption in continuous administration.
5. Administer stock solution at a rate of 1:128.

LS-PWT²® Recommended Usage Rate Chart

Number of Scoops/ Pack of LS-PWT ²	General Acidification Target pH 3.0-4.0	Chlorine Enhancement Target pH 5.5-6.5
½ scoop/pack	Alkalinity > 60-115 and pH < 6.4	
1 scoop/pack	Alkalinity < 115 and pH 6.5-7.5	Alkalinity 77-191
2 scoops/packs	Alkalinity 115-192 and pH > 7.5	Alkalinity 191-399
3 scoops/packs	Alkalinity 193-350 and pH > 8.0	Alkalinity > 400
4 scoops/packs	Alkalinity > 350 and pH > 8.5	

Note: More or less LS-PWT²® may be needed to achieve desired target pH.

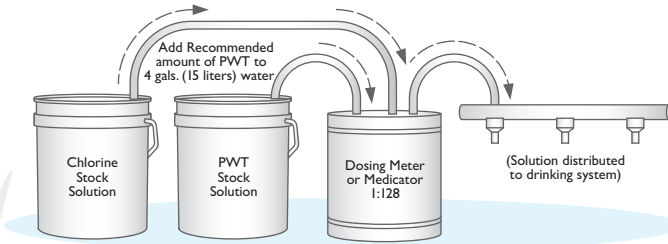
*Sodium Bisulfate has been reviewed by EPA's Safer Choice Program and qualifies for use in Safer Choice-labeled products.



For optimal performance of LS-PWT²® and to gain the maximum health and performance benefits for birds, the following application procedures are recommended.

LS-PWT²® APPLICATION PROCEDURES

For optimal performance of LS-PWT² and to gain the maximum health and performance benefits for birds, the following application procedures are recommended.



When chlorinating drinking water, administer LS-PWT²® continuously at a rate necessary to maintain water pH around 6.0 at bird level. NEVER ADD CHLORINE DIRECTLY INTO THE LS-PWT²® STOCK SOLUTION.

GENERAL ACIDIFICATION USE WITH LS-PWT²®

Refer to the front of the sheet to determine the stock solution strength required to achieve a pH of 3.0-4.0. Mix the required amount of LS-PWT²® into 4 gallons of water to make a stock solution. Administer the stock solution at a rate of 1:128.

Broilers

1. Mix LS-PWT²® stock solution as directed.
2. Prime drinking system with LS-PWT²® prior to placement. Administer continuously the first 7-10 days after placement.
3. Administer LS-PWT²® 1-3 times per week and/or 48-72 hours before and after each feed change. Administer continuously the last 24-48 hours prior to catch.
4. Heat Stress/Other Stress Periods and Free Range/Chemical Free Programs: Administer LS-PWT²® continuously during times of heat stress and other stress periods, and reduced feed consumption.

Pullets

1. Mix LS-PWT²® stock solution as directed.
2. Prime drinking system with LS-PWT²® prior to placement. Administer continuously the first 7-10 days after placement.
3. Administer LS-PWT²® continuously every day off feed until movement (i.e. if birds are fed Mon/Wed/Fri, deliver LS-PWT²® on Sun/Tues/Thurs/Sat).

Broiler Breeder Hens

1. Mix LS-PWT²® stock solution as directed.
2. Prime drinking system in breeder house with LS-PWT²® prior to transfer. Administer continuously the first 7-10 days after transfer into breeder house.
3. Administer LS-PWT²® continuously for 48 hours before and after any stress period such as vaccination, heat stress, etc.

Commercial Turkeys

1. Mix LS-PWT²® stock solution as directed.
2. Prime drinking system with LS-PWT²® prior to placement. Administer continuously the first 14-21 days after placement.
3. Administer LS-PWT²® 1-3 times per week and/or 48-72 hours before and after each feed change.

4. Prime drinking system with LS-PWT²® prior to transfer to grow-out barn. Administer continuously the first 7 days after transfer. Administer LS-PWT²® continuously the last 24-48 hours prior to catch.

TURKEY BREEDERS

1. Mix LS-PWT²® stock solution as directed.
2. Prime drinking system with LS-PWT²® prior to placement. Administer continuously the first 14-21 days after placement.
3. Administer LS-PWT²® 1-3 times per week and/or 48-72 hours before and after each feed change.
4. Prime drinking system with LS-PWT²® prior to transfer to breeder barn. Administer continuously the first 7 days after transfer. Administer LS-PWT²® 1-3 times per week and/or 48 hours before and after each feed change.

COMMERCIAL EGG LAYERS

Pullets

1. Mix LS-PWT²® stock solution as directed.
2. Prime drinking system with LS-PWT²® prior to placement. Administer continuously the first 7-10 days after placement.
3. Administer LS-PWT²® continuously for 48 hours before and after any stress period such as vaccination, heat stress, etc.

Commercial Layers

1. Mix LS-PWT²® stock solution as directed.
2. Prime drinking system in layer house with LS-PWT²® prior to transfer. Administer continuously the first 7-10 days after transfer into layer house.
3. Administer LS-PWT²® continuously for 48 hours before and after any stress period such as vaccination, heat stress, etc. Administer continuously from 48 hours before beginning of molt until 7 days after birds resume full feeding.

Antibiotic-Free Production

For antibiotic-free production, water acidification using an inorganic mineral acid such as LS-PWT²® is recommended to reduce crop pH to 3.5-4.0 from 0-21 days, or in the first week and then 3-4 days around the time of each feed change. Intermittent applications should be considered for 72-96 hours during stress periods and the last 48 hours prior to movement. An inorganic acid will not affect the taste profile of water, allowing birds to maintain optimal consumption levels. See your Jones-Hamilton representative for help creating an effective water acidification program.

WATER LINE CLEANING AND SANITATION WITH LS-PWT²®

In Between Flocks: When cleaning between flocks, mix 2-4 scoops of LS-PWT²® with 4 gallons of water to make a stock solution.

Note: Extremely "hard" water may require higher amounts of LS-PWT²® to reach the desired pH level. Deliver one ounce of stock solution per one gallon of water (1:128). Allow a minimum of 8 hours for cleaning and descaling, but do not exceed 24 hours with cleaning solution in water lines. Flush drinking system thoroughly with clean water.

During the Flock: Run 1-2 scoops of LS-PWT²® through drinking system to clean water lines after administering other water additives such as sugar, vitamins, or powdered milk.

