





Your water purification Expert



Water Hygiene

The importance of good water quality

Clean water is essential to healthy chickens. Contaminated water not only leads to diseases, but it can have a significant impact on growth and productivity. Studies show that poultry with good quality water grow faster and healthier, reducing the need for antibiotic treatment.

Kersia's approach to offer healthy and clean water to your animals is achieved through a comprehensive water hygiene programme containing 4 necessary steps:

- 1) Undertake water analysis
- 2) Clean pipes and drinkers, both internally and externally
- 3) Disinfect clean tanks and pipes from the inside, use a "shock-disinfection"
- 4) Continuous water treatment

It is essential that no part of the water system is overlooked in the cleaning and disinfection procedure. On-going water treatment with products such as Aquatabs[®] or Aquatabs InLine, a world leader in water disinfection, is essential to ensure microbial levels remain low and to prevent biofilm build up.

WATER HYGIENE

A 4 STEP PROCESS









1. Analysis

Undertake water analysis to determine micro and scale causing microbial levels.

2. Cleaning

- a) Choose a suitable detergent cleaner and descaler for inside the pipes and tanks.
- b) Choose a suitable detergent cleaner for outside the pipes and drinkers.

3. Shock Disinfection

Use a shock disinfection between two crops to reduce microbial challenges.

4. Continuous Treatment

Choose a suitable water disinfection treatment for avoiding the reestablishment of the exopolysaccarides matrix which is bearing the biofilm and to ensure continuous supply of clean water.

Continuous water treatment by Aquatabs® and Aquatabs InLine

It is essential that no part of the water system is overlooked in the cleaning and disinfection procedure. On-going water treatment with products such as Aquatabs® and Aquatabs InLine, a world leader in water disinfection, is essential to ensure microbial levels remain low and for avoiding the reestablishment of the exopolysaccarides (EPS) matrix which is critical to the function and support of biofilm.



Aquatabs®





Disinfectant for Stock Drinking Water

Effervescent tablets based on NaDCC for disinfecting of stock animal drinking water.

In solution, the precursor NaDCC releases active chlorine through a reservoir system with an optimum pH level (\sim 6) and keeps the water safe by maintaining an equilibrium between active chlorine and free chlorine. As active chlorine is progressively consumed by disinfection, the tablets replenish the consumed active chlorine as needed.

Advantages of active chlorine released from NaDCC

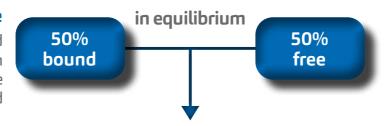
Aquatabs[®] is an effervescent tablet containing 50% NaDCC (NADCC = sodium dichloroisocyanurate)

NaDCC+2H2O = 2 HOCI hypochlorous acid

- » HOCl, hypochlorous acid, has the most effective biocidal action
- » Undissociated HOCl is 100 times stronger that the dissociated form (hypochlorite)

Aquatabs® = Reserves of active chlorine

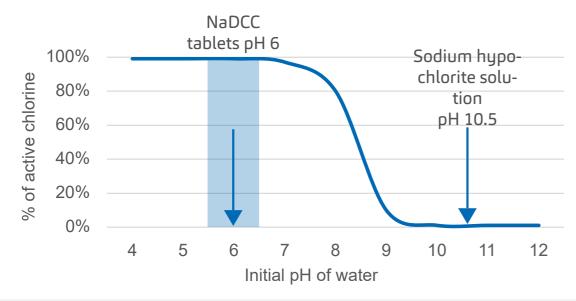
Available chlorine is progressively consumed by disinfectant activity. By maintaining an equilibrium between active chlorine and chlorine reserves, the tablets replenish the consumed active chlorine as needed.



Aquatabs® = Optimized pH

In solution, NaDCC generates an optimum pH level \approx 6. The level of active chlorine availability in such solutions is greatly superior to that of sodium hypochlorite (alkaline pH).

The slightly acidic solution avoids the reestablishment of the exopolysaccarides matrix (EPS) which is bearing the biofilm when used continuously at low concentrations.



Aquatabs[®] Efficacy Tests = Tried, Tested, Tusted!

UBA method "Quantitative determination of the efficacy of drinking water disinfectants" to confirm efficacy for PT5: animal drinking water disinfection

Tested organisms		Test Conditions	Concentra- tion	Contact Time
Bacteria	E. coli (A3) E. faecium (Teltow 11)	13.5°C	1mg/L available chlorine	10 minutes (2 log 10 level reduction)
Bacteriophages	Bacteriophage MS2 Bacteriophage PRD1	Clean Conditions		25 minutes (4 log 10 level reduction)



	Aquatabs [®]
Finished weight of tablet	17.36 g
NaDCC content per tablet	8.68 g
Available chorine content per tablet	5.59 g

ADVANTAGES

- Simple to use
- Dissolves rapidly and completely
- Maintains healthu water
- Assists in the control of biofilm built up avoids the reestablishment of the exopolysaccarides (EPS) matrix which is critical to the function and support of biofilm
- Assists in the control of calcium deposits at nipple drinkers and pipes
- Generates optimum pH-level
- Optimises performance
- Contains no heavy metals

RECOMMENDED USAGE

Application - Troughs, Water tanks and Dosing pump

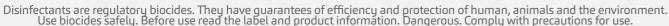
1 Aquatabs® tablet in 5000 litres of water = 1ppm Active Chlorine.

Water Disinfection:

Add one Aquatabs 8.68g tablet to 5000 liters of clear water (1mg/L available chlorine). Leave for 30 minutes before drinking.

Water Disinfection using a dosing pump:

N° of Tablets	Stock Volume (litres)	Stock Solution conc. (mg/L Available Chlorine)	Propor- tioner Setting	Dosage (mg/L Available Chlorine)
1	50	100	1.0%	1
10	500	100	1.0%	1
1	0.5	10,000	100ррт	1
60	30	10,000	100ррт	1



Aquatabs Inline Water Purification System



Aquatabs® InLine



An innovative system for disinfecting water at point of collection with no power required and works on the flow of the water. Water is forced down through a cartridge and around the tablets, which

The tablets are slow dissolving and are therefore perfect for continuous water disinfection.

dissolve to mix the required level of chlorine into the water line.



« Aquatabs InLine, simple, safe, low cost water disinfection system »

Aquatabs Inline Water Purification System

ADVANTAGES

- Suitable for all water systems; mains, wells and boreholes
- Easy to install, no power required
- Low maintenance and no moving parts
- Assists in the control of biofilm built up avoids the reestablishment of the exopo-lysaccarides (EPS) matrix which is critical to the function and support of biofilm
- Assists in the control of calcium deposits at nipple drinkers and pipes
- Generates optimum pH-level
- Maintains healthy water
- Cost effective and sustainable water solution
- Dosing of integrated water units and systems at POC (point of collection)
- Continuous / automatic dosing on the flow of water at point of entry into a tank or in-line for gravity /open and/or pressurized water systems
- 10 to 30 litres per minute
- Replace cartridge when empty

RECOMMENDED USAGE

Each cartridge treats 360,000 litres @ 0.2-3ppm at 100% water flow. The water pressure should not exceed 5 bar.

TRAINING VIDEO

Scan the QR Code and follow our explanatory training video:







Instructions for Use

- Simply add the required number of tablets to the water.
- Wait for 30 minutes.
- Water has been purified and now ready to use.

Instructions for Use - Dosing Pump

- Prepare your stock solution of Aquatabs using the dilution chart below. Stock should be made up in a clean container free of contamination.
- Wait 30 minutes before using treated water.
- Avoid dosing 24 hours prior to and 12 hours post vaccine treatments.

Dosing Pump regulation	0.1%	0.2%	0.5%	1%
No. of Tablets	10	5	2	1
Litres of Water	10 l	10 l	10 l	10 l

0.2%	0.5%	1%
5	2	1
10 l	10 l	10 l
	<u>a</u>	



Instructions for use

«Always wear safety goggles, mask and gloves.»

Note: Where a bypass system is in operation, a proportion of water to be treated must pass through the Inline device during use, to ensure complete dosing.

- Turn off the main water supply.
- Cut away the required length of pipe.
- Place a stop valve at each end of the cut mains pipe.
- Using plumbing tape, securely attach a 1.5" female thread to each end of the InLine device housing unit. Note: do not use sealant for this step.
- · When installing the InLine device housing unit, ensure the arrows on the top of the unit are pointing in the correct orientation i.e. that the arrows are pointing in the direction of the water flow.
- Keeping the housing in an upright position, connect to the stop valves attached to the mains pipe.
- Unscrew the retaining ring from the InLine housing.
- Remove the cap from the InLine cartridge.



TABLET

Dosing Levels

1 ppm 2 ppm

5 ppm



AQUATABS®

Volume of Waster per

Tablet (Litres) 5,000 l

2,500 l

1,000 l

quatab

- Guide the cartridge into the InLine Housing.
 - » see InLine leaflet included with the housing unit or scan the QR code and watch the training video. Align the circular grid opening with the water inlet located on the underside of the housing unit whilst applying light upward pressure.
- To ensure the cartridge is inserted correctly, when gently twisted limited movement should be observed. Note: until the retaining ring is secured, ensure the tablet cartridge is held in place by the
- Replace the retaining ring and tighten in an anticlockwise direction.
- Turn on the water supply. Flush the InLine system continuously for a minimum of 5 minutes to ensure all components have been fitted correctly. During the flushing step, the water that is passed through the system should be diverted to a container/ drainage and disposed of. After the 5-minute flush, the water is suitable for consumption.

Disinfectants are regulatory biocides. They have guarantees of efficiency and protection of human, animals and the environment. Use biocides safely. Before use read the label and product information. Dangerous. Comply with precautions for use.



For more information please contact us on +33 (0)2 99 16 50 00 or email us at <u>poultryandpigs@kersia-group.com</u>

> 55, Boulevard Jules Verger 35803 DINARD – France