POWERED BY NANOCARE SCIENCE

nanoaqua



HOCl with AgNp

Water Purification Tablets



For over 100 years, chlorination of drinking water has been one of the single most effective means of improving public health in the developing world.

- 4 billion cases of diarrhoea occur annually, of which over 3.5 billion are attributable to unsafe water, and inadequate sanitation and hygiene, accounting for 5.7% of the global burden of disease, placing diarrhoea as the third highest cause of morbidity and sixth highest cause of mortality.
- 1.8 million people die every year from diarrhoea diseases, the vast majority being children under 5 years old.
- Every day diarrhoea diseases claim the lives of approximately 5000 children from these preventable causes, accounting for 21% of all their deaths.

It was with this in mind that our research and development team at Nanocare SA set out to create a unique product that could offer the benefits of chlorinated water in an easy to use and affordable product. The result — Nanoaqua Water Purification Effervescent Tablets.

Nanocare SA is committed to driving a significant positive health impact globally by improving access to safe drinking water and developing and manufacturing cost effective disinfection water solutions.

"Because household water treatment techniques can be cheap and the impact of improving water quality dramatic, household water treatment and safe storage can produce huge health and economic benefits."

Nanoaqua water purification tablets are effervescent tablets which kill microorganisms in water to prevent cholera, typhoid, dysentery and other water-borne diseases. Nanochlor Tablets are available in a range of tablet sizes. Each tablet size is formulated to treat a specific volume of water — ranging from 25L to 10,000L

Why is this chemistry a better water disinfectant?

Nanoaqua has an organic chlorine releasing agent that, when dissolved in water, releases hypochlorous acid (HOCl), a highly powerful disinfectant. HOCl is the same molecule produced naturally in macrophages to eliminate germs absorbed in our body.

From the standpoint of the end-user, this means that Nanoaqua can disinfect at lower quantities than bleach. Furthermore, because it is a pH-neutral solution, it poses fewer health concerns. When dissolved, HOCl dissociates into hydrogen ion and hypochlorous ion (OCl-) depending on the pH of the water. OCl-, on the other hand, has biocidal action.

For example, the most popular chlorine donor is BLEACH, which, while also producing HOCl, generates a strongly alkaline solution with a pH of 12 to 13. As a result, the lesser effective OCl- makes up over 90% of the HOCl present.

In addition to the kill rate of HOCl, each Nanoaqua tablet also has a proprietary blend of NaDCC and Nano Silver. Nano silver has shown to be effective of killing pathogens and has been used for 100's of years to keep portable water safe. Our Nano Silver is 450 to 530nm with millions of Nano Silver particles dotted on a neutral carrier making our Nano Silver non-toxic. Our Nano Silver in each Nanoaqua effervescent tablet falls below the guidelines of WHO.

Nanoaqua Water Purification tablets are used both in emergency situations and also for continuous use in households that do not have access to safe drinking water.



A small tablet that packs the power to prevent infectious disease



Sodium dichloroisocyanurate also known as sodium troclosene, troclosenum natricum (NaDCC or SDIC) is approved by

- WHO - World Health Organisation
- UNICEF
- EPA — US Environmental Protection Agency (EPA) for routine treatment of drinking water
- The Food and Agricultural Organisation (FAO) specifications for drinking water

AgNP - Nano Silver

- In Germany, the drinking water regulations (Trinkwasserverordnung) set an allowable maximum for silver of 0.08 mg/L.
- WHO — World Health Organisation often refer to 0.1mg/L Nano Silver as a guideline or allowable amount for drinking water quality.
- EPA — Nano Silver in Drinking water equivalent level(mg/L): 0.2



Quality and Safety Assurance of Nanoaqua active ingredients

Safe Drinking Bulk Water Storage @ 2.5ppm

500lt	=	1 x 3.25g tablet
1,000lt	=	1 x 6g tablet
2,000lt	=	2 x 6g tablet
3,000lt	=	3 x 6g tablet
5,000lt	=	5 x 6g tablet
10,000lt	=	10 x 6g tablet

The above Nanoaqua tablets ratios can be doubled to no more than 5ppm.

Why Nanoaqua Water Purification tablets to treat water?

- Many water sources throughout the world, even after filtration, remain contaminated and require some form of disinfection.
- Nanoaqua enables areas without access to water disinfection systems to benefit from the advantages of chlorination without any infrastructure requirements in a speedy and cost-effective manner.
- Nanoaqua tablets are simple to use, easily transported, cost effective and affordable to low-income groups.

How to use

Nanoaqua Water Purification tablets
(Main purpose: For treating drinking water for human consumption)

1. If the water is turbid (dirty looking), first filter through a cloth and then add Nanoaqua Water Purification tablet(s).
2. Select the tablet size for the volume of water to be treated. (See below)
3. Add the tablet to the water and ensure thorough mixing.
4. Wait at least 30 minutes and then enjoy the benefits of safe water.

Water Purification Tablets cost less than 0.004 cent per liter

(Price estimation based on 1,000lt application 6g tablet)



Nanoaqua Water Purification tablets are self-dissolving water disinfection tablets intended for bulk and potable water treatment.

Tablets are available in various sizes for treatment of bulk to potable water needed to be disinfected making the water safe to drink. The tablet will take around 3 to 5 minutes to dissolve.

No special maintenance is required, however it is important to keep the tablets away from children and keep it in a place protected from high temperature and humidity. When not in use, keep the container closed.

nanoaqua

SANS 241 COMPLIANT

SANS1827 COMPLIANT

ISO 9001 2015 CERTIFIED

PROUDLY SOUTH AFRICAN



Nanoaqua Water Purification Tablets are available in two standard pack sizes of:

- 1.25g x 30/70 Tablets per container (used for potable drinking water 25lt)
- 3.25g x 200 (for bulk disinfecting of water storage)
- 6g x 40/120 Tablets (used for bulk disinfecting water storage)
- 35g x 100 Tablets (used for bulk disinfecting water storage)

Bulk and portable water Disinfection Applications - Nanoaqua Effervescent tablets

Liters	Tablet Sizes				PPM (Parts per Million)
	1.25g	3.25g	6g	35g	
25	1				5ppm
500		1			2.5ppm
1000		2	1		2.5ppm
1500		3			2.5ppm
2000		4	2		2.5ppm
3000		6	3		2.5ppm
5000		10	5		2.5ppm
7000				1	2.5ppm

Do not dose more than 5ppm

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