

Aquarius Drilling Services

Water Bore Construction - Pump Installation - Irrigation - Water Treatment

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CIB Treatment - bore clean ups and stain removal **Instructions for use**

There are a lot of chemical and non chemical based iron-calcium-bacteria treatments on the market. Clearbore and Cleanbore are perhaps the oldest.

Most of them, if not nearly all of the, are quite overpriced and many under-perform. We were pushed to manufacture our own because the price of the last treatment kept sky-rocketing in price.

We now have a chemical that contains Oxalic Acid as a base. The treatment is a powder that is quite powerful and is designed to re-dissolve calcium and brake the bond with the iron, kill the bacteria.

It will quite quickly clean up bore pumps, bore screens and plumbing if used as instructions such as shown below in the picture where CIB can be used to clean iron sludge build up from plumbing.



This sludge problem that coats pump impellers and the inside walls of plumbing is depicted as the pipe end shows below.



We have now used this product (CIB) on extensively over the years has been general use for some time. It is low cost and effective.

Bore Treatment

The method I recommend and use is to push a piece of poly down the bore hole almost down to the pump, then open the top end out and fit a funnel. Shut and disconnect the bore output and attach a simple garden hose or suitable re-circulation method and return the water supply back under the bore cap down the hole.



Make up the mix in a 20 litre bucket and pour it down the funnel. Mix about 3-5 kg at a time in 15 litres of water. The reaction usually occurs within minutes. The water can go dark or lift up the brown bacteria froth or go green, then black and often really creates quite an odour.

Keep mixing and applying the mix to darken the colour.

The whole operation is usually over inside two hours. Once the flow has been restored to maximum and the colour of the water is at its darkest point you have likely succeeded.

I test the water before for the following

pH

Total iron

Soluble Iron

The bigger the difference between the total iron content and soluble iron content the more advance the calcium -iron - bacteria problem.

For example,

Soluble iron .5ppm

Total iron 5ppm

A great deal of iron has been oxidised coming out of the bore.

Soluble iron 5ppm

Total iron 0ppm

No oxidised iron present and bore treatment successful.

Bacteria causes an increase in oxidised iron production out of the bore due to bacteria reaction feeding off it.

When the soluble iron content is high and the total iron tests as low or no reading then the problem has been solved at that moment of test.



When the mix is at its richest I test pH again and am seeking a pH of around 1-2 or as low as it will go. Once completed, pump rate to full flow, pull the hose from the bore casing and send to waste or send it up-line to remove any other build up of bacteria related residue in the line to waste or drain. You can then let the mix sit in the plumbing to clean out the inner pipe surface.

Once the pH has restored to around 5 plus turn the system back on. The extra pipe can be left down for the next time or simple remove it.

This treatment may have to be applied at least annually and is generally a lot simpler and quicker the successive times applied.

For iron stain removals

Make up the mix in the bucket again, 5 kg to about 15 litres. This mix can upset users so and me so a chemical mask can be necessary plus long rubber gloves. Spray or brush to the mix on the surface and let soak. Within minutes the stain should start to break up except where it is deep into the surface and heavy.

Leave soak if need be or apply repeatedly. The stain should break down and come back to a cleaner surface.

Some pictures are attached for an example.

For filter cleaning

Make a up a similar mix and drop the iron affect filters in solution and wait for them to soak for up to an hour then re-fit back into the filter housings as they are for desalination work and for other filtration uses, drain and wash out before use.