

CLEARWATER

A technical letter published by Chemical Resin Products

New Issue

Volume I, Number 1

New edition

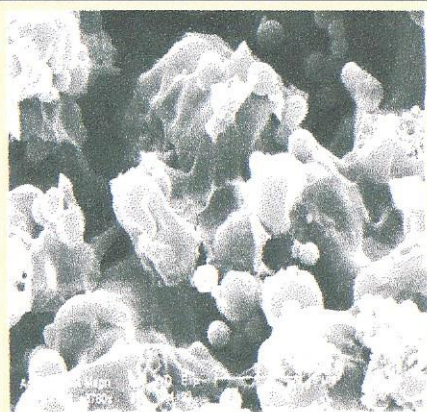
A NEW RESIN IN THE STRUGGLE AGAINST ALGAE GROWTH

Clearwater is a new product for the fresh and marine water aquaria and for ponds. It adsorbs nitrite, nitrate, ammonia and phosphate in large quantities.

**AFTER MANY YEARS OF RESEARCH
SEE THE DIFFERENCE WITHIN
A FEW WEEKS**

TECHNICAL PAGE .. P.1

Inside structure



Enlargement 4000 x

Clearwater is a newly developed filter media for use in aquaria and ponds. It is a polymer resin in the form of granules, which have a large contact surface and a high capacity for polar substances. Measurements of the absorptive capacities have been measured for ammonium, nitrite, nitrate and phosphate.¹

Main Feature

The main feature of the product is that it prevents growth of algae by keeping the nitrate and phosphate level low enough.²

Experiments done at the laboratory have shown a very pronounced effect if compared with active carbon filters.

After about one month the aquarium filtered with carbon was definitely showing algae on the bottom and sides of the aquarium, whereas the ones filtered through the resin were still as clear as ever even after three months.

The Usage

The granulate can be used in the same filter units as the ones used for active carbon.

Recommendation

Just like normal filter material it needs to have particle free water, thus a mechanical filtration step is required.

Be sure that the water is properly cleaned of floating particles. This prevents an early blockage of the granulate.

INSIDE THIS ISSUE

Technical info .. P.1

A new kind of resin to destroy algae growth

Measurements .. P.2

Absorption capacity of 1 kilo Clearwater measured in the laboratory in The Netherlands

Transport

Transport may have caused some dust. Therefore be sure to rinse the Clearwater to prevent small particles to come into the water.

Quantity

In general 60 g are sufficient to filter fresh water aquaria and ponds up to 300 liter. For marine water aquaria we recommend to double the amount of resin.

These amounts guarantee a standing time of up to three months.

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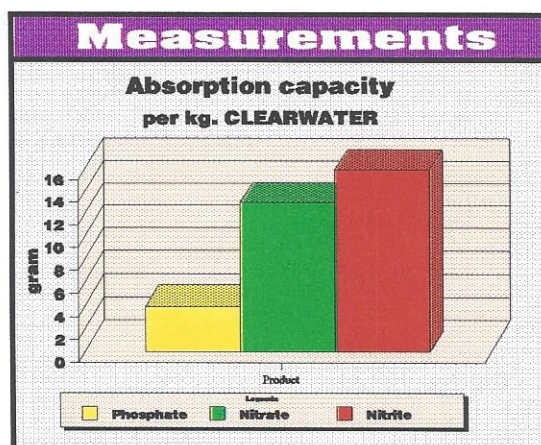
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AFTER MANY YEARS OF RESEARCH CHEMICAL PAGE .. P.2

1 Measurements have been done by suspension of resin in a solution of the according salt followed by measurement of the resulting concentration after one hour. Then salt was added to match the initial concentration etc.

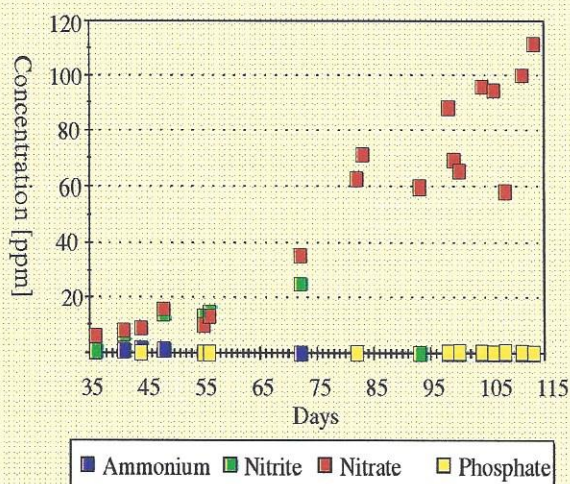
2 Continous observation of the nitrate, nitrite and phosphate levels showed the normal settling of the bacteriological equilibrium. The aquariums containing the resin however showed a pronounced drop in nitrate level and a very stable pH of 7.5



PAGE 2

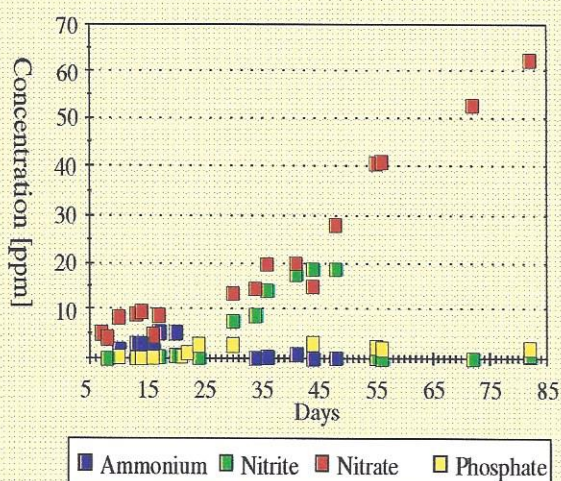
Aquarium 1

25 g resin



Aquarium 2

40 g active carbon



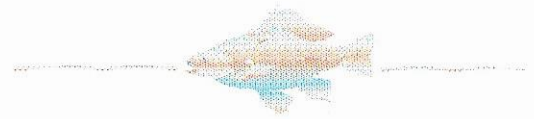
Aquarium data:

Capacity: 30 ltr

Temperature: 26 C

Filterpump: Eheim 2007

Fishes: 3 Carassius splendens, 3 Carassius c., 3 Cheirodon axelrodi en 3 Thayeria boehlkei



ENCLOSURE

Comparing 'Clearwater' with active carbon

The new material Clearwater has been tested together with active carbon. The figures show that there is not much difference in the formation of nitrate in both aquariums. Of course this is logical, because in the long term an absorbing filtermedium will be saturated with absorbed material.

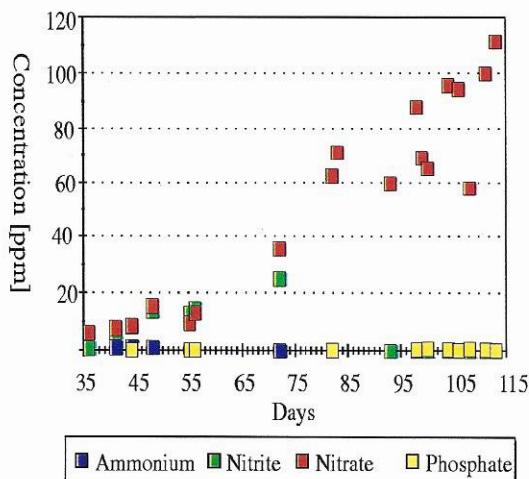
However we have noticed some clear differences in both aquariums; after 40 days the aquarium containing active carbon showed a strong growth of algae all over the glass. In the aquarium filtered by Clearwater the algae stayed away, in spite of a high nitrate concentration at the end of the test.

So when we compare the filter containing active carbon with the filter containing Clearwater the following comments can be made:

- Active carbon: algaegrowth after 40 days, before that point of time action has to be taken.
- Clearwater: even using half the quantity, after 80 days still no algae growing. Furthermore the pH stayed remarkable stable [at 7.5]

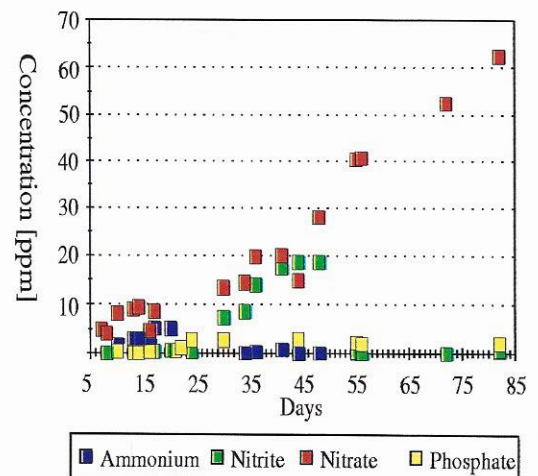
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