High quality living nitrifying culture to start-up the nitrification process

**Problem**

Ammonia and nitrite are of permanent concern for each aquarium or pond holder and aquaculture fish farmer since both compounds are very toxic to fish. In nature, both compounds are converted into the less harmful compound nitrate by the nitrification process. The conversion of ammonia to nitrate is performed by the successive action of two groups of bacteria:

\[
\begin{align*}
\text{NH}_3 & \xrightarrow{\text{O}_2} \text{NO}_2^- \\
\text{NO}_2^- & \xrightarrow{\text{O}_2} \text{NO}_3^- 
\end{align*}
\]

Ammonia oxidizing bacteria \hspace{2cm} Nitrite oxidizing bacteria

A shortage of one group or both groups of nitrifying bacteria gives rise to conditions which are harmful to the fish.

**Solution**

Based on a thorough knowledge of microbial processes in aquatic biofilters, Avecom developed a high quality living nitrifying culture for the accelerated start-up of the nitrification process in biofilters. The product is a liquid suspension containing ammonia and nitrite oxidizing bacteria. This mixed consortium is grown to be robust and applicable in a wide range of practical conditions.

**Advantages**

- Drastic time savings to start-up the nitrification process in biofilters
- Culture of a well organized team of viable concentrated nitrifying bacteria
- Both bacterial groups remain and establish in the biofilter
- High specific nitrifying activity
- Quality controlled product
- Proven technology (in scientific publications and in reality)

**Application**

- Aquarium industry (both public aquaria and aquaria at household level)
- Aquaculture industry
- Active in fresh water and salt water

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