



MURANGI BIOTECH & PROCESSING SERVICES

ACTIZYME

Scoping Report

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MURANGI BIOTECH & PROCESSING SERVICES

INTRODUCTION AND OVERVIEW

MURANGI BIOTECH & PROCESSING SERVICES (cc) is seeking to import a waste water treatment system remediation product that is proposed to be used in the treatment of waste water (i.e. sewage) the product is Acti-Zyme and it is sought to import the product into the country.

Acti-Zyme products are environmentally friendly and contains only non-hazardous material and non-pathogenic microbes. Acti-Zyme will not harm aquatic life when used at recommended dosage rates as supported by a bio-assay. It will not harm pipes or fixtures and when used in a line. It will increase its activity throughout the line if not blocked by inorganic materials. Acti-Zyme can be used in conjunction with existing systems to clean bio-wastewater effluent more efficiently with no environmental side effects.

BACKGROUND TO THE PROJECT

The Acti-zyme blends are proprietary in-house blends which have been produced first in the USA and now Canada since the mid 1950's. These products are only to be used in waste water treatment systems and will only treat the bio-solids in these systems. These products are not for animal consumption.

The ingredients used the same for all the blends, the only difference between blends is the amounts of ingredients used in the blends.

The bacteria consortium in the products do not contain any pathogenic microbes. They have not been genetically modified. Environment and climate change Canada have authorized the technology for production and sales under the file reference NSN-1954.

The enzymes in the Acti-Zyme products are produced from components arising from the controlled fermentation of edible, non-pathogenic and non-toxic microorganisms. The enzymes are manufactured using ingredients which are free of any animal sources and do not contain any animal origin materials.

The water-soluble bags/film the product is shipped in, is made from polyvinyl alcohol-based film.

DESCRIPTION OF THE PRODUCT

Acti-Zyme products are a combination of proprietary aerobic, anaerobic and facultative anaerobic microbes, enzymes, nutrients and neutralizers for optimal treatment. Planned activities

Acti-Zyme AZ+ is for Sludge Removal and Lagoon Remediation speeds up the process of decomposition during initial treatments and assists in balancing the pH levels.

Acti-Zyme AZ Commercial is the all-purpose baseline product used for proper management of wastewater and acts as a preventative maintenance in lagoons, collection lines, for continued sludge management.

Acti-Zyme LS7 is an enhanced product for improved treatment and management of fat, oil and grease built up in lines, lift stations, and grease traps.

Acti-Zyme Products are specifically focused on digesting organic wastewater and removal of harmful nutrients and pathogens. The following are the percentage removal rates for top priority analytes based on averages of over 30 systems.

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DESCRIPTION OF THE RECEIVING ENVIRONMENT

It is proposed that Acti-Zyme will have be used in waste water treatment plants in treating sewage and making it safe to be released into the environment.

The use of Acti-Zyme will help waste water treatment plants to remove or significantly remove known pathogens such as E.Coli.

EXPECTED IMPACT

It is expected that Acti-Zyme will have the effect of remediating waste water treatment plants to the benefit of municipalities in the form of reduced operating costs and increased operating capacity as the Acti-Zyme reduces sludge build-up and sludge volumes.