



**BIO
CATALYST**
THE POWER IN NATURE

Agriculture Case Study - Oman

What is BOC?

☞ The bio-catalytic compositions (BOCs) of Bio-Organic Catalyst offer an entirely new technological breakthrough within the traditional water treatment and cleaning chemistries marketplace. BOCs are all based upon a breakthrough technological understanding of how to unlock the inherent transformation power of natural biological pathways. The BOC products contain no bacteria and are completely nontoxic and biodegradable.

☞ The functional mechanism of BOCs is attributed to molecules consisting of both a hydrophobic and a hydrophilic element. BOC's patented amphiphilic molecules will attach to components such as;

- ☞ Bacteria Organic
- ☞ Wastes Oxygen
- ☞ Foul Gases
- ☞ Byproducts of decaying organic matter
(sulfides, amines, mercaptans, skatole, and other contaminants)



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Patent Holding



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United States Patent [19]

Date of al.

[11] Patent Number: 5,820,758
[45] Date of Patent: Oct. 13, 1998

[54] COMPOSITION AND METHOD FOR CLARIFYING AND DEODORIZING A STANDING BODY OF WATER

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[73] Assignee: Nzyme International, Inc., Newport Beach, Calif.

[21] Appl. No.: 790,376

[22] Filed: Jan. 28, 1997

Related U.S. Application Data

[60] Provisional application No. 60/010,890 Jan. 31, 1996.

[51] Int. Cl.⁶ C02F 3/00; C12P 1/02;

C12N 9/00; C12N 1/16

[52] U.S. Cl. 210/601; 210/606; 435/171;

435/183; 435/252.2; 435/262

[58] Field of Search 435/183; 245-252.1;

435/252.2; 262; 262.5; 264; 171; 210/601;

465; 606

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[57]


ABSTRACT

A composition and method are provided for clarifying and deodorizing a standing body of water such as fresh and salt water pools and water of spas, cooling towers, lakes and ponds such as aquaculture ponds. The composition contains by weight about 20.26% of a fermentation supernatant from a *Saccharomyces cerevisiae* culture, about 0.1% sodium benzoate, about 0.01% imidazolidinyl urea, about 0.15% diazolidinyl urea and about 9% non-ionic surfactant. Preferably, anionic and cationic surfactants and urea are absent from the composition. The composition may also contain about 0.05%, by weight, calcium chloride. The method is carried out by adding a solution of the composition to a body of water to provide in the water by weight about 0.02% to about 0.1% of a fermentation supernatant from a *Saccharomyces cerevisiae* culture, about 0.00005% to about 0.0001% sodium benzoate, about 0.00002% to about 0.0001% imidazolidinyl urea, about 0.00003% to about 0.0001% diazolidinyl urea, about 0.0002% to about 0.0005% non-ionic surfactant, and about 0.00005% calcium chloride when present.

II Claims, No Drawings




**INTELLECTUAL
PROPERTY INDIA**
PATENT REGISTRAR GENERAL
BIOGRAPHICAL INDICATIONS



भारत सरकार
GOVERNMENT OF INDIA
पेटेंट ब्यूरो
THE PATENT OFFICE
पेटेंट प्रमाणपत्र
PATENT CERTIFICATE

दस्तावेज सं.: 044127730
SL No. 7



पेटेंट सं. / Patent No. 360576

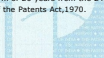
अर्जन सं. / Application No. 8620CHNP/2014

प्रमाण करने की तिथि / Date of Filing 24/05/2013

पेटेंट / Patented NEOZYME INTERNATIONAL INC.

प्रमाण किया जाता है कि पेटेंट के उपलब्ध अर्जन में वर्णित PROCESS FOR TREATING ORGANIC MATERIAL जल, अधिकांश में कि, पेटेंट अधिनियम, 1999 के उपबंधों के अनुसार जल तिथि 24th day of May 2013 से शेष बचें और जिनमें से कि पेटेंट अर्जन होता है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled PROCESS FOR TREATING ORGANIC MATERIAL as disclosed in the above mentioned application for the term of 20 years from the 24th day of May 2013 in accordance with the provisions of the Patents Act, 1970.



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GEOGRAPHICAL INDICATIONS

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Controller of Patents

टिप्पणी - इस पेटेंट के अर्जन में कि चीज, यह कि चीज को यह कि, 24th day of May 2013 से शेष बचें और जिनमें से कि पेटेंट अर्जन होता है।

Note - The term for renewal of this patent, if it is to be maintained will fall / has fallen due on 24th day of May 2013 and on the same day or every year thereafter.

Agriculture – Phyto-C3 Water & Soil Conditioner

Phyto-C3 is a highly concentrated liquid biocatalytic agent that increases crop yields and quality while offering breakthrough performance in keeping irrigation lines and greenhouses free of scale and slime.

Phyto-C3 is completely safe and green. Phyto-C3 immediately increases oxygen transfer, increases dissolved oxygen and breaks down biofilms.

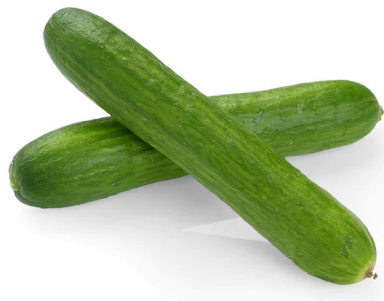
Phyto-C3 can be used for both indoor and outdoor farming.



The Bio-Organic Seal of Safety™ is our commitment to offering advanced green biocatalytic solutions that transform the treatment of our water. BOC product formulations have undergone rigorous independent testing, including leading recognized EPA certified laboratories.

Project Background

- **Client:** KV Group International - OMAN
- **Trial Duration:-** 106 Days from 25th November,2022 to March 10th,2023
- **Trial Location:-** GH-20 – Al-Hayema in Oman
- **Trial Area:-** Single Greenhouse Tunnel
- **Grow Conditions:-** Controlled Environment Agriculture in Greenhouse with Ground Soil
- **Trial crop:-** Salad Cucumber
- **Number of Plants:-** 850



Phase 1: Germination

- **Time Frame:** 25th November to 28th December
- No noticeable difference in plant growth during Germination period.
- **Plant height:** 30 cm

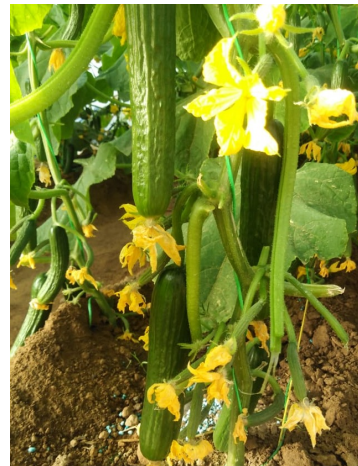
Phase 2: Flowering, Fruiting and Harvesting Stage

- **Time Frame:** December 28th,2022 to March 10th,2023
- **Benefits:**
 - Increased Height by 6 inches
 - Increased Flowering
 - Increased Nodes on Plants
 - Earlier Harvest by 5 days



Trial Summary

Control	Phyto C3	Difference	% Difference
2,970 Kgs	3,350 Kgs	380 Kgs	12%





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