بيان المرفقات

فتمايلي سرد لبيان المستندات الداعمة للطلب المشار إليها بالطلب وذلك كالتالي : -

١ - شهادة التحليل لمادة Sept-X

٢ - خطاب الشركة المصنعة بعنوان (Safety Declaration) ٠

٣ - شهادات (Toxicity) من المركز القومي المصري للبحوث ٠

٤ - شهادة من المركز القومي المصري للبحوث تفيد بعدم إحتواء المادة علي بكتيريا ممرضة ٠

٥ - شهادة من المركز القومي المصري للبحوث تفيد بأن المادة مثبطة للبكتيريا الممرضة ٠

٦ شهادة من المركز القومي المصري للبحوث عن مدة بقاء البكتيريا ٠

٧ - Safety Datasheet للمادة صادرة من هيئة CCS ٠

٨ - شهادة من المركز القومي المصري للبحوث عن إعادة عزل وإكثار السلالات ٠

٩ - تقرير مجمع من المركز القومي للبحوث عن كل الإختبارات المتممة عل مادة Sept-X والإفادة بالرأي العلمي النهائي ٠

١٠- شهادة منشأ المركب Sept-X من الغرفة التجارية الأمريكية ٠

١١- شهادة Free Sale Certificate من الغرفة التجارية الأمريكية للمركب Sept-X ٠

١٢- دراسة الحالة العملية علي محطة المعالجة بالمجمع السكني City View بطريق القاهرة الإسكندرية الصحراوي

43 Dagla St., El-Mohandeseen - 1st Floor- Office (14) - Giza - Egypt
Tel.: +202 - 33362857 - 33362658 Fax.: +202 - 33361865

BNA
BioNatural America
INSTITUTE

SEPT-X (Waste Water Treatment)
Certificate of Analysis

MATERIAL IDENTIFICATION AND MANUFACTURER	
Product Name	SEPT-X
Manufacturer	BioNatural American Institute, LLC USA
Address	BNA: 104 W. 4th St., Suite 212 Royal Oak, MI 48067 USA

COMPOSITION CONSTITUENTS	
Rice Bran Extract	66.0 % w/w
Rice Flour	12.0 %w/w
Soybean Meal Extract	13.0% w/w
Corn Protein	5.0 % w/w
Trace Nutrient	2.0 % w/w
Sodium Chloride	1.0 % w/w
Citric Acid	1.0 % w/w

Analysais	
Crude Protein	24.20 %
Moisture	8.70 %
Lipid (Crude Fat)	2.45 %
Crude Fiber	4.70 %
Ash	13.50 %

Probiotic bacteria	
Pediococcus Acidilactici	3.0×10^5 cfu / g
Pediococcus Pentosaceus	4.0×10^3 cfu / g
Acetobacter Aceti	2.0×10^5 cfu / g
Bacillus Amyloliquefaciens	4.0×10^4 cfu / g

Pathogen Microorganismes	
Escherichia coli/g	Negative
Salmonella/25 g	Negative

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SEPT-X (Waste Water Treatment)
Certificate of Analysis

HEALTH HAZARD DATE	
Dangerous contents:	None
Dangerous impurities	None
Oral Toxicity	LD 50 > 2,000 mg/kg
Dermal Toxicity	N/D
Inhalation Toxicity	N/D

FIRST AID MEASURES	
Ventilation:	Use local ventilation to control dust at its source
Respiratory	Approved dust mask (as required)
Gloves	Rubber
Eye Protection:	Chemical goggles or face shield
Other Protection	N/D

FIRE AND EXPLOSION HAZARD DATA	
Flash Point	N/A
Ignition Temperature	N/A
Flammable Limits	N/A
Special Fire Fighting Procedure: Full protective clothing and NIOSH-approved self-contained breathing apparatus should be worn. Use water to cool exposed containers	
Extinguishing Media: Use Dry Chemical, CO_2, or Chemical Foam	

ACCIDENTAL RELEASE MEASURES
Rinse mouth and throat with water if ingested. Wash affected area of skin with soap and remove contaminated clothing. In case of inhalation, remove from area of exposure; if allergic symptoms occur in 0-48 hours, seek medical attention. If eye contact occurs rinse thoroughly with water for several minutes, seek medical attention if irritation occurs.

HANDLING AND STORAGE
Special Precautions: Avoid excessive storage temperatures and direct sunlight. Storage in dry area, keep material dry and container tightly closed. KEEP OUT OF REACH OF CHILDREN

STABILITY AND REACTIVITY	
Stability	Stable
Polymerization	Will not occur
Condition to Avoid	Excessive heat and contamination of any kind
Materials to Avoid	None Known
Hazardous Decomposition Products	No uniquely hazardous decomposition products are expected. If the product is burned, as with any nitrogen containing organic material, oxides or nitrogen, carbon dioxide, and water can be produced. Partial combustion may produce, in addition to the above, soot and various oxides of carbon.

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TOXICITY INFORMATION	
Oral Toxicity	LD 50 > 2,000 mg/kg in rats
Oral Toxicity	LD 50 > 2,000 mg/kg in fish

ECOLOGICAL INFORMATION	
Chemical Fate Information	No data found for product

ISPOSAL CONSIDERATIONS
Waste Disposal: Dispose of in a sanitary chemical landfill which complies with all local, state, and federal regulations.
Spill or Leakage Procedures: Wear suitable clothing and protective equipment. Sweep up bulk material without releasing dust and reuse wherever possible; where contaminated or unusable, dispose of by land filling.

TRANSPORTATION INFORMATION
Precautions to be taken in handling and storing: Maintain good housekeeping, avoid creating aerosols. For maintenance of product quality, store in dry cool (under 110 °F) warehouse conditions

REGULATORY INFORMATION
Inventory Status USA STATUS Y

OTHER INFORMATION
Other Handling: N/D

EXPOSURE CONTROLS/PERSONAL PROTECTION	
Permissible Concentrations	Not established
Respiratory Protection	Wear suitable NIOSH-approved dust masks or respiratory protector where local ventilation exhaust is not available or dusty situations are likely to result.
Ventilation	Provide ventilation to keep exposure below Nuisance Dust Limits. Local exhaust ventilation preferred.
OTHER PROTECTIVE EQUIPMENT	Eye wash facility
Storage and Handling	Maintain good housekeeping, avoid creating aerosol. Keep out of direct sunlight and in cool dry place as deterioration of product and loss of activity may occur under above conditions.
Eye Protection	ANSI approved safety glasses with side protection. It is generally recognized that contact lenses should not be worn when working with chemicals because contact lenses may contribute to the severity of an eye injury.
Skin Protection	Long sleeved shirt, trousers, safety shoes, and gloves.
Hygienic Practices	Wash hands after handling, as well as any other affected skin areas. Avoid contact with food or food preparatory surfaces. If this occurs wash the area thoroughly with suitable detergent and water. Remove and wash contaminated clothing.

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Product Information

Mechanism of Action
Pediococcus Acidilactici: -Produce Lactic acid and Pediocins -Inhibit growth of gram negative bacteria as: Vibrio Cholera, E. Coli, Salmonella Sp. Etc. -Inhibit growth of gram positive bacteria as: Clostridium botulinum,C. Perfiengs, Sataphylococcus aureus etc.
Pediococcus Pentosaceus : -Produces Lactic acis and Pediocins -Inhibit growth of gram negative bacteria as : Vibrio Cholera, E. Coli, Salmonella Sp. Etc. -Inhibit growth of gram positive bacteria as: Clostridium botulinum,C. Perfiengs, Sataphylococcus aureus etc.
Acetobacter Aceti : -Produces Acetic acid
Bacillus Amyloliquefaciens : -Produces Iturins (Antifungal Agent) to inhibit growth of fungi as : Aspergilus, Fusarium, Candida, Phytopthera Collectotricum, Rhizoctonia etc. and produces enzymes as : Amylase, Lipase, Protease, Peptidase, Sucrase

Characteristic
Powder

PHYSICAL PROPERTIES	
Physical state	Natural cocktail of powder
Color	Mild Yellow Brown (natural rice bran extract color)
Odor	Rice bran smell
Temperature	Melting point: 155.0° C
Distillation	N/A
Decay	N/A
Vapor Density	N/A
Viscosity	N/A
pH	5.9
Solubility	1-25 % in water
Stream pressure	N/A
Density	0.726 g / cm3

Packing
-100g/3.5oz -1kg/2.2lb -5kg/11b -10kg/22lb

BNA: 104 W. 4th St., Suite 212 Royal Oak, MI 48067 USA Tel.:248.845.8354 Fax: 248.246.2121

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FORMULAR:

1. GRINDING RICE BRAN EXTRACT, SOYBEAN MEAL EXTRACT

▼

2. MIXING Rice Bran Extract66.0 %w/w, Rice Flour 12.0 %w/w, Soybean Meal Extract 13.0 %w/w, Corn Protein 8.0%,Sodium chloride 1.0 %w/w Trace element 2.0%w/w

▼

3.STERILIZATION 121 DEGREE CELSIUS, 30 MINUTES

▼

4. FERMENTATION 40~42 DEGREE CELSIUS, LIGHT, PRESSURE, 14 DAYS With Lactic acid Bacteria and Yeasts

▼

5. DRYING HOT AIR VACUMN DRYER 42 DEGREE CELSIUS

▼

6. GRINDING COOLING JACKET & AIR

▼

7. MIXING ALL ITEMS FROM ITEM 7-9

▼

8. PACKAGING ALUMINUM FOIL

▼

9. PACKING PAPER BOX

ASPECT: POWDER

Signature:
BioNatural America Institute, LLC

BNA: 104 W. 4th St., Suite 212 Royal Oak, MI 48067 USA Tel.:248.845.8354 Fax: 248.246.2121

BNA
BioNatural America
INSTITUTE

104 W. 4th Street
Suite 212
Royal Oak, MI 48067 USA
info@bionaturalamerica.com

Safety Declaration

To Whom it May Concern,

We, BNA (BioNatural America Institute), hereby certify that the bacterial strains constituting the Sept-X Product are all safe, non-toxic, natural occurring, non-genetically engineered or modified strains and are safe to use in Waste Water Treatment. We also hereby certify that the Sept-X product is classified as BIO-SAFETY LEVEL 1 and is permitted by the federal authorities for sale inside the United States in of America.

On behalf of BNA, I sign below affirming that the information provided herein is accurate.

D Fick

Dayna Fick
Product Marketing and Development

Notary Affidavit

The foregoing instrument was acknowledged before me by Dayna Fick for BioNatural America Institute, on behalf of the corporation.

State of Michigan
County of Oakland
Affirmed before me this 25 day of May, 2012.

Personally Known to me _____ OR Produced Identification V
Type of Identification Produced State of Michigan Identification Card
Name of Notary: Kaitlin A. Woodworth Signature: Kaitlin A Woodworth

KAITLIN A WOODWORTH
Notary Public - Michigan
Oakland County
My Commission Expires Feb 11, 2018
Acting in the County of Oakland

BNA
Natural America
INSTITUTE

104 W. 4th Street
Suite 212
Royal Oak, MI 48067

The SEPT-X™ Metabolism Process

This document provides an overview of the metabolism process that is used by **SEPT-X** to fully digest organic waste.

SEPT-X is the most advanced microbial enzyme technology available to degrade waste organic matter.

Decomposition is a naturally occurring process that returns finite elements such as carbon to nature such that new life forms can be created. Decomposition by natural bacteria is also natures' cleaning mechanism to remove waste organic materials.

Microbes & Enzymes:

As natures cleaners, bacteria or microbes actually eat or digest waste matter. When full natural digestion has taken place, waste matter is reduced to its final elements such as Nitrogen (N), Carbon Dioxide (CO_2), Oxygen (O_2), Water (H_2O). This biochemical transformation also releases energy in the form of heat.

To digest waste matter, microbes excrete minute proteins called enzymes which break down the waste matter to a size where it can be absorbed through the cell wall of the microbe and digested.

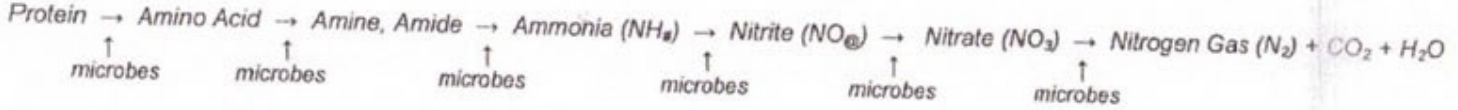
The process of decomposition however is rarely a single step process and is typically a cascade of various steps before full digestion or decomposition is achieved. One microbe's product becomes the substrate for the next until the final transformation is the end products listed above. These intermediate steps are when the process of decomposition produces strong odours, dangerous contaminants, pathogenic bacteria and generally poses risk to the environmental and humans.

SEPT-X™

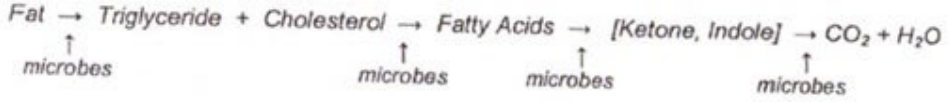
Using **SEPT-X™** products provides a massive acceleration to the process of decomposition. As a result the odourous intermediates are largely eliminated and molecule by molecule waste matter is fully digested to its end products by the **SEPT-X™** microbes and enzymes.

Below are some examples of the metabolic pathways taken by **SEPT-X™** to digest the 3 most common waste sources:

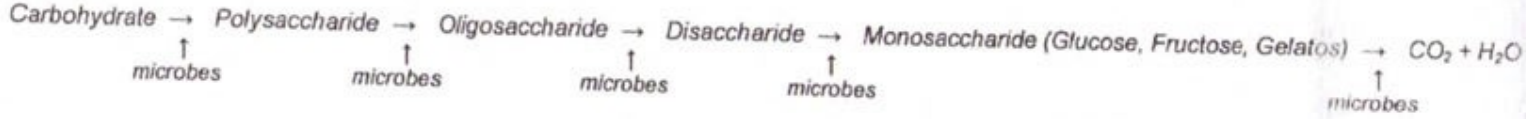
Proteins



Lipids (Fats, Oils, Grease)



Carbohydrate



Microbes:

And within 7 days all microbes disappear from media after they produce required enzymes

The performance of **SEPT-X™** is based on its proprietary formulation and manufacturing process which gives it the following characteristics:

1. A wide spectrum of enzymes
2. Super Catalase – High speed digestive enzyme in high concentrations
3. Rapid microbial replication
4. Rapid microbial adaption to different wastes
5. Co-enzymes and co-factors which exponentially accelerate catalysis

6. Bio-Vitamins B complex
7. Bio-Minerals Zn, Cu, Fe, Mn, Mg, Co, Se
8. Bacteriocines (Pediocins) which provide anti-microbial capability against pathogenic bacteria
9. Iturins which provide anti-fungal capability
10. Killer Toxins which control and denature yeasts and toxins formed from fungi as aflatoxins, sealarenone, Vomit toxins T2 etc

How is **SEPT-X™** different to naturally occurring (or competitor) microbes and enzymes?

Natural bacteria and their enzymes can degrade and digest matter. In fact the overall process is the same as that achieved by **SEPT-X™**. The difference is the speed. The outcome of speed of **SEPT-X™** is that the damaging or odourous intermediate products of Ammonia, Amines, Amides, Ketones, Indoles, Organic Acids are transformed so rapidly to their final products that they are nc longer odourous or damaging to the environment.

The speed of **SEPT-X™** to degrade and fully digest wastes at the molecular level can be hundreds of thousands or even millions of times faster.

This capability means **SEPT-X**:

1. Works more rapidly
2. Provides more rapid break-down of waste and sanitization
3. Provides wider range of benefits
4. Can be used in lower dosages
5. Can be applied less frequently than competing technologies
6. Is easier to use and requires less manpower

B: Dayna Fick

Date: 04/06/12

Shanari Williams

SHANARI WILLIAMS
Notary Public - Michigan
Oakland County
My Commission Expires Jun 21, 2018
Acting in the County of OAKLAND

BNA
Bio Natural America
INSTITUTE

104 W. 4th Street

Suite 212

Royal Oak, MI 48067

Declaration/Certificate

We declare/certify that our product SEPT-X is biological product manufactured by Bio Natural America Institute (BNA) under Good Manufacture Practice (GMP) regulations in accordance with hygienic requirements in the USA and is authorized for free sale in USA for the purpose of Waste Water treatment. As signed below by Dayna Fick, as representative for BNA.

D Fick 04/06/12

Dayna Fick
Administrative Manager
Bio Natural American Institute

Shanari Williams

SHANARI WILLIAMS
Notary Public - Michigan
Oakland County
My Commission Expires Jun 21, 2018
Acting in the County of OAKLAND

المركز القومى للبحوث
الوحدة الأستشارية لبحوث الفيروسات
والأختبارات الحيوية

National Research Centre
Consulting Service For
Virus Researches and
Bioassays

تقرير السميه

شركة بيونوفا للتكنولوجيا الحيويه والبيئية
العينة: SEPT-X والمنتجة بالولايات المتحده الامريكيه من شركة BNA والواردة من الوكيل شركة بيونوفا للتكنولوجيا

العينة SEPT-X بتركيز ١% (W/V)غير سامة باستخدام Cytotoxicity للعينة تركيز ١% الذائبة في distilled water علي خلايا Hep2.

المشرف على التحليل
أ.د.م/ وليد مرسي السنوسي

رئيس الوحدة
أ.د. جميله الطويل
٢٠١٤/١/١٥

المركز القومى للبحوث
الوحدة الأستشارية لبحوث الفيروسات
والأختبارات الحيوية

National Research Centre
Consulting Service For
Virus Researches and
Bioassays

تقرير السميه

شركة بيونوفا للتكنولوجيا الحيويه والبيئية
العينة: SEPT-X والمنتجة بالولايات المتحده الامريكيه من شركة BNA والواردة من الوكيل شركة بيونوفا للتكنولوجيا

العينة SEPT-X بتركيز ١% (W/V)غير سامة باستخدام Microtox analyzer 500

المشرف على التحليل

أ.د. محمد محمد كامل

رئيس الوحدة

أ.د. جميله الطويل
٢٠١٤/١/١٥

المركز القومى للبحوث
إدارة
الوحدات ذات الطابع

National Research Centre
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Bioassays

المركز القومى للبحوث
الوحدة الأستشارية لبحوث الفيروسات
والأختبارات الحيوية

Bacteriological report

شركة بيونوفا للتكنولوجيا الحيويه والبيئية
العينة: SEPT-X والمنتجة بالولايات المتحده الامريكيه من شركة BNA والواردة من الوكيل شركة بيونوفا للتكنولوجيا

Sample	Colony forming unit / 100 ml		
	Staph. aureus	*Ps. aeruginosa*	*Salmonella spp*
SEPT-X	ND	ND	ND

ND= Not detected

المشرف على التحليل

أ.د. محمد محمد كامل

رئيس الوحدة

أ.د. جميله الطويل

٢٠١٢/ ١/ ١٥

المركز القومى للبحوث
إدارة
الوحدات ذات الطابع الخاص

National Research Centre
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Bioassays

المركز القومى للبحوث
الوحدة الأستشارية لبحوث الفيروسات
والأختبارات الحيوية

Antimicrobial report

شركة بيونوفا للتكنولوجيا الحيويه والبينية
العينة: SEPT-X والمنتجة بالولايات المتحده الامريكيه من شركة BNA والواردة من الوكيل شركة بيونوفا للتكنولوجيا

Sample	*Listeria monocytogenes*	*Staph. aureus*	*Ps. aeruginosa*	*E.coli*	*Salmonella spp*	Microbial biofilm of kitchen discharge
SEPT-X	++	++	+	+	+	+

(+) ذات تاثير اقل علي الميكروبات
(++) ذات تاثير متوسط علي الميكروبات
الماده SEPT-X بتركيز ١% لها تأثير مثبط علي الميكروبات المدونة في الجدول اعلاه.

رئيس الوحدة
أ.د. جميله الطويل
٢٠١٤/١/١٥

المشرف على التحليل
أ.د. محمد محمد كامل

المركز القومى للبحوث
إدارة
الوحدات ذات الطابع الخاص

onal Research Centre-
Consulting Service for Virus
Researches and Bioassays

المركز القومي للبحوث
الوحدة الاستشارية لبحوث الفيروسات والاختبارات الحيوية

Bacteriological analysis

Survival of bacterial load in 1 gram SEPT-x from Bionova Company رقم العينة: per 1 liter different types of sterilized water.

Sterilized water types	Total bacterial load (CFU / 1 ml)								
	13/4/ 2012	14/4/ 2012	15/4/ 2012	16/4/ 2012	17/4/ 2012	18/4/ 2012	19/4/ 2012	20/4/ 2012	21/4/ 2012
Distilled water	116	110	85	37	24	17	6	3	2
Tap water	122	115	92	34	22	16	7	3	2
Nile water	144	140	96	44	28	18	9	4	3
Wastewater	180	170	114	54	44	31	28	14	7

Report

The results showed that the total bacterial counts were decreased to (1-7) CFU / 1 ml after nine days, thus, the survival of bacterial load was nine days in different types of water.

رئيس الوحدة

أ.د/ جميلة السيد الطويل

المشرف علي التحاليل

أ.د/ سحمد محمد كامل

المركز القومي للبحوث
إدارة
الوحدات ذات الطابع الخاص

٣٣ ش البحوث - الدقي القاهرة ج.م.ع. ت: ٣٣٣٣٥٤٦١/٣٣٣٧١٤٩٩/٣٣٣٧١٤٣٣ فاكس: ٣٣٣٣٢٤٢١

onal Research Centre-
Consulting Service for Virus
Researches and Bioassays

المركز القومي للبحوث
الوحدة الاستشارية لبحوث الفيروسات والأختبارات الحيوية

Bacteriological analysis

Survival of bacterial load in 1 gram SEPT-x from Bionova Company :اسم العينة
per 1 liter different types of sterilized water.

Sterilized water types	Total bacterial load (CFU / 1 ml)							
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Distilled water	116	110	85	37	24	17	6	3
Tap water	122	115	92	34	22	16	7	3
Nile water	144	140	96	44	28	18	9	4
Wastewater	180	170	114	54	44	31	28	14

التقرير

يتضح من النتائج ان اعداد البكتيريا تتناقص الي (١-٧) وحدة مكونة للمستعمرات / ١ مل بعد تسعة ايام. لـ[illegible] فترة بقاء الحمل البكتيري لهذه المادة (١ جرام / لتر في انواع مختلفة من المياه المعقمة مسبقا) هو تسعة ايام.

المشرف علي التحاليل

أ.د/ احمد محمد كامل

رئيس الوحدة

أ.د/ جميلة السيد الطويل

المركز القومي للبحوث
إدارة
الوحدات ذات الطابع الخاص

٣٣ ش الجيوت- الدقي القاهرة ج.م.ع. ت:٣٣٣٣٥٤٦١/٣٣٣٧١٤٩٩/٣٣٣٧١٤٣٣ فاكس: ٣٣٣٢٢٤٢١

SAFETY DATA SHEET - SDS

BNA
Bio Natural America
INSTITUTE
104 W. 4th St., Suite 212
Royal Oak, MI 48067 USA

Sept-X
Natural Waste Water
Treatment

TRANSPORTATION EMERGENCY
CALL BNA: 1-248-845-8354

NON TRANSPORTATION:
EMERGENCY TELEPHONE: 1-248-845-8354
INFORMATION TELEPHONE: 1-248-845-8354
INFORMATION: e-mail info@septx.com

Sept-X
H 1*
F 1
R 0
PERSONAL PROTECTION X
See Section 15 (HMIS rating) for explanation

SECTION 1: Product and Company Identification

Product Name:	Sept-X
Material Number:	301
Chemical Name:	NA
Packaging:	Packed in 0.1, 1.0, 5.0 and 10.0 kg vacuum sealed bags

SECTION 2: Composition/Information on Ingredients

HAZARDS AND EMERGENCY OVERVIEW:

CAUTION!
This product is not expected to produce chemical or physical hazards during its use. High dust levels created may cause physical irritation to the eyes, nose, throat or upper respiratory tract. Not for human consumption. Keep out of reach of children. Prolonged and repeated exposure to any natural product may cause allergic responses in the short term or over time in susceptible people. Wash face and hands after handling this product. Store in a cool dry place away from sunlight.

During the intended use (waste water treatment - odor control) of this product, the following potentially hazardous ingredients could be generated:

HAZARDOUS INGREDIENTS:

Ingredient Name/	CAS Number	Contents W%	Exposure Limits OSHA	Exposure Limits ACGIH
Particulate Matter	None	100	15.0 mg/m3 Total Dust TWA 5.0 mg/m3 Respirable	10.0 mg/m3 Dust TLV

NON-HAZARDOUS INGREDIENTS:

Beneficial Bacteria	None	Not Regulated	No Data

207 Hoosier Drive, Suite 4 • Angola, Indiana 46703
Telephone (260) 668-7770 • Fax (260) 668-7950 • Cell (260) 668-5990
Web Page: www.compliance-cs.com • E-mail: peter@compliance-cs.com

EMERGENCY OVERVIEW

CAUTION: Non-regulated. **Color:** Yellow brown to light amber **Form:** Flowable powder. Dried material is light and flowable and can be easily scooped or poured. **Odor:** Rice or grain bran odor. Material may be harmful to lungs if inhaled in large quantities or to digestive tract if intentionally ingested. Material may trigger asthma symptoms in susceptible individuals. Dust may cause lung damage if respiratory protection is not used when large quantities are inhaled over long periods of time. Material may also cause mechanical eye irritation if dust is blown into eye. Material may burn at temperatures above 155°C.

POTENTIAL HEALTH EFFECTS:

Route(s) of Entry: Inhalation, skin contact, eye contact, ingestion

HUMAN EFFECTS AND SYMPTONS OF OVEREXPOSURE:

GENERAL EFFECTS OF EXPOSURE:

Acute Hazards: May cause mild eye, skin and respiratory tract irritation. Ingestion of large quantities may cause intestinal upset. Air borne material may trigger asthma symptoms in susceptible individuals.

Chronic Effects of Exposure: Repeated or prolonged inhalation of dust quantities in excess of the PEL may cause lung damage.
Note: PEL (OSHA Permissible Exposure Level for total dust) is estimated to be exceeded when dust can be seen continuously between your eyes and your extended palm.

Since this is a natural product, people with sensitivity to grains, molds or yeasts may be (or may become) allergic over time. Allergy symptoms including asthma could develop over time.

Carcinogenic Components:

NTP: None

IARC: None

OSHA: None

Medical Conditions Aggravated by Exposure: Persons with pre-existing allergies to grains, yeast and fermented grain extracts may be more susceptible to the effects of this product.

Section 4: First Aid Measures

First Aid for Eye: In case of contact, flush eyes with plenty of lukewarm water. Get medical attention if irritation develops or persists.

First Aid for Skin: Wash irritated areas with soap and water and keep dry. Wash clothing before reuse. Get medical attention if irritation develops or persists.

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First Aid for Inhalation:	If shortness of breath occurs from the dust being inhaled, remove to fresh air. If breathing is difficult, give oxygen. Call a physician immediately.
First Aid for Ingestion:	Give two glasses of water for dilution. Never give anything by mouth to an unconscious person. Call a physician immediately.

SECTION 5: Fire Fighting Measures

Flash Point:	**>400 F**
Flammable Limits:	
Upper Explosion Limit (UEL %):	Not applicable
Lower Explosion Limit (LEL %):	Not applicable
Auto-Ignition Temperature:	**NA**
Extinguishing Media:	
Suitable:	Any suitable extinguishing agent for surrounding material that may be on fire. ABC, CO2, Foam, etc.
Unsuitable:	Not applicable
Special Fire Fighting Procedures:	Any fire beyond the incipient (beginning) stage should be handled by professional fire fighters equipped with self-contained breathing apparatus to protect against potentially irritating fumes. During a fire, irritating gases and aerosols may be generated by thermal decomposition or by surrounding material that may be burning.

SECTION 6: Accidental Release Measures

Spill or Leak Procedures:	Dry powder material: Scrape up and dispose of properly. Dust: Vacuum, wet wipe or squeegee up material and place in appropriate container. Avoid using brooms to prevent generation of dust. If dust is generated, use appropriate respiratory protection. Collect remaining material for approved disposal. Keep dry material from entering sewer, surface, or ground water.

SECTION 7: Handling and Storage

Storage Temperature:	Minimum: Room temperature recommended (20-25°C) Maximum: (40°C)
Shelf Life:	Two years in tightly closed containers.
Special Sensitivity:	Keep away from direct sunlight to preserve functionality.
Handling/Storage Precautions:	Avoid breathing dust. Avoid contact with eyes. Wash thoroughly after handling. Store containers in a cool dry place away from excessive heat. Reseal containers immediately after use. Keep away from children.

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SECTION 8: Exposure Controls/Personal Protection

PERSONAL PROTECTION EQUIPMENT

Eye Protection Requirements:	ANSI approved safety glasses with side protection or goggles recommended. It is generally recognized that contact lenses should not be worn when working with dusts or chemicals because contact lenses may contribute to the severity of an eye injury.
Skin Protection Requirements:	Long sleeved shirts and pants are recommended. Latex or nitrile gloves are recommended to minimize skin contact. Employees should wash their hands and face after use and before eating, drinking or using tobacco products.
Ventilation Requirements:	Use local exhaust ventilation, if airborne dust is a problem, to maintain air levels below the recommended exposure limit. (Visible dust between your eye and your outstretched palm)
Respirator Requirements:	If dust is frequently visible, ambient concentrations should be tested. If the recommended exposure limits are exceeded, a NIOSH approved HEPA tight fitting dust respirator should be worn.
Additional Protective Measures:	Emergency eye wash stations should be available. Educate and train employees in the safe use and handling of this product.

SECTION 9: Physical and Chemical Properties

Physical Form:	Dry powder
Density	0.720 g / cm3
Appearance:	Granular material (32 – 60 microns)
Color:	Light yellow/brown
Odor:	Grain extract odor
pH	5.0 - 8.0
Freezing Point:	NA (Material is dry)
Viscosity:	Not determined
Solubility in Water:	1- 25%

SECTION 10: Stability and Reactivity

Vapor Density:	NA
Stability:	Stable
Hazardous Polymerization:	Will not occur

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Substances to Avoid:	None known
Conditions to Avoid:	None known
Decomposition Temperature:	155°C
Decomposition Products:	Criteria pollutants typical of carbon based combustion.

SECTION 11: Toxicological Information

TOXICITY DATA

Acute Oral Toxicity:	Acute: > LD 50 > 2,000 mg/kg (Rat), LD 50 > 2,000 mg/kg in fish
Acute Dermal Toxicity:	> 2,000 mg/kg (Rat)
Acute Inhalation Toxicity:	No data available
Eye Toxicity:	No data available
Skin Toxicity:	No data available
Other Chronic Effects:	No data available
Sensitization:	Same as cereal grain products

SECTION 12: Ecological Information

Ecological Data	No data available for this product
Ecological Note:	This product contains naturally occurring beneficial bacteria.

SECTION 13: Disposal Considerations

Waste Disposal Method:	Incidental amounts of material or dust may be disposed of in permitted landfills if properly contained. For larger disposal quantities, contact the local landfill for appropriate analyticals or approvals. Disposal must be in compliance with federal, state, and local environmental regulations.

SECTION 14: Transportation Information

Technical Shipping Name:	Non-Hazardous
Freight Class	
Bulk:	Non-Hazardous
Package:	Non-Hazardous

US Domestic Surface Transportation (DOT)

Hazard Class of Division:	Non-Regulated
Signal Word	**CAUTION**

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Marine Transportation (IMO / IMDG)
Hazard Class Division Number: Non-Regulated

Air Transportation (ICAO / IATA)
Hazard Class Division Number: Non-Regulated
Radioactive: Non-Regulated

SECTION 15: Regulatory Information

UNITED STATES FEDERAL REGULATIONS

OSHA Hazcom Standard: Hazardous (May Cause Mechanical Irritation)

HMIS Rating: 1* - Slight health with possible sensitizer
1 - Slight fire hazards
0 - No reactive hazards
X - Personal Protection Equipment - See your supervisor for recommended personal protection for hazards not controlled by local engineering controls.

TSCA Inventory List: Not subject to reporting

CERCLA Hazardous Substance:

Component(s)	Reportable Quantity
None	None

CWA: None — None

CAA: Particulate Matter — Air Emissions - 5 pounds per hour/25 pounds per day air discharge limit for particulates (There may be lower local limits.)

SARA Title III
SARA Section 302 Extremely Hazardous Substances:

Component(s)/ CAS Number	Reporting Threshold	Concentration Min.	Concentration Max.
None			

SARA Section 311/312 Hazard

Component(s)/ CAS Number	Reporting Threshold	Concentration Min.	Concentration Max.
None			

Categories: Immediate Health Hazard, Delayed Health Hazard

SARA Section 313 Toxic Chemicals:

Component(s)/ CAS Number	Reporting Threshold	Concentration Min.	Concentration Max.
None			

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RCRA (Waste) Status: Uncontaminated material is non-hazardous. It is the responsibility of the product user to determine whether a mixture containing this product or derived from this product should be classified as a hazardous waste. (40CFR 261.20-24) At a minimum, material should be tested for RCRA metals and any other hazardous contaminates that may have been introduced to the process.

The following chemicals are specifically listed by individual states. Other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your country or state.

USA State Right-To-Know Information

Components(s)/ CAS Number	State Code	Concentration Min.	Max
Grain Extracts and Probiotic Bacteria None	NA		

USA Federal and State Regulations: TSCA 8(b) inventory: None
Other Regulations: EINECS: This product is not on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:
WHMIS (Canada): Not controlled under WHMIS (Canada)
DSCL (EEC):
R36- Irritating to eyes.
S2- Keep out of the reach of children.
HMIS (U.S.A.):
Health Hazard: 1* (Minimal- Flash point greater than 200°F)
Fire Hazard: 1 (Minimal)
Reactivity: 0
Personal Protection: X (Gloves, long pants and shirts, and safety glasses are recommended. A respirator is also recommended if there is insufficient ventilation. (See supervisor for guidance, otherwise use a NIOSH approved particulate respirator under the guidance of a written respirator program as designed by a qualified professional.)

National Fire Protection Association (U.S.A.):
Health: 1
Flammability: 1 (Flash point greater than 200°F)
Reactive: 0

SECTION 16: Other Information

This product is safe and effective for its stated intended use. It does not contain any genetically modified bacteria. It does not contain any pathogenic bacteria. It promotes beneficial bacterial growth in waste water so the addition of this product will reduce undesirable bacteria and odors.

Contact: Dayna Fick
Telephone: 1-248-845-8354
SDS Number: 301
Version Date: 9/5/2012
SDS Version: 1.1

This information is accurate to the best knowledge of BioNatural America Institute. The data on this sheet relates only to the specific material designated herein. BioNatural America Institute assumes no legal responsibility for improper use or disposal of this product.

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National Research Centre
Consulting Service For
Virus Researches and Bioassays

المركز القومى
الوحدة الأستشارية لبحوث الفيروسات
والأختبارات الحيوية

نتائج تحليل عينات مياه مخلفات سائله بعد اضافة الكائنات الدقيقه الموجوده بمادة SEPT-X

شركة بيوتوفا – الماده تحت الدراسه SEPT-X

تاريخ ورود العينه: 2012/7/1

تم عزل اجناس بكتيريه من الماده SEPT-X مثل *Bacillus, Pedicoccus* واجناس خميره *Pichia* وتم اكثارها حتي 10^6 CFU /ml لكل جنس وخلطها في محلول Ringer واضافتها بواقع 10% لمياه مجاري ذات معالجه اوليه لمدة يوم كامل مع التهويه .

وكانت نتيجة تحليل هذه المياه كالتالي:

Parameters	Primary WW (inlet)	After mixing with microorganism isolated from SEPT-X and multiplication (outlet)
pH	7.5	7.7
COD mg O_2/l	65	12.5
TSS mg O_2/l	10	3
T.P mg P/l	ND	ND
H_2S mg /l	8	ND
T.K.N mg /l	28.8	7.8
Phenol mg /l	ND	ND
NO_3 mg /l	0.003	ND
NO_2 mg /l	ND	ND
MPN-index/100ml Faecal coliform	$2.1x10^4$	70
E.coli	$1.3x10^3$	60
Salmonella	$1.1x10^2$	ND

المشرف علي التحليل
ا.د/محمد محمد كامل

رئيس الوحدة
أ.د/ جميلة السيد الطويل
٢٠١٢/٧/١٥

أ. د.م /إيناس أبو طالب

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تقريـــر عن مادة Sept-X من الشركة الدولية للتكنولوجيا الحيويه- بيونوفا

من واقع الإختبارات والتحاليل التى تمت على العينات الواردة من الشركة الدولية للتكنولوجيا الحيوية - بيونوفا ، يخلص الرأى إلى الأتى :

أولاً : بيانات عامة

إسم المركب : Sept – X
الشركة المنتجة : BNA - الولايات المتحده الأمركية
العبوات : وردت المادة فى عبوات من أكياس مفضضة (Metalized) محكمة الغلق بوزن صافى ١٠٠جرام و ١٠٠٠جرام عليها ملصق باللغة الأنجليزية شارح للمواصفات العامة والمكونات وخطوات الإستخدام .

ثانياً المكونات

بناء على الشرح الوارد على الملصق الخارجى للعبوات

• Rice Bran Extract	66%
• Rice flour	12%
• Soybean Meal Extract	13%
• Corn Protein	5%
• Trace Nutrient	2%
• Sodium chloride	1%
• Citric Acid	1%

و أن المركب يحتوى على السلالات البكتيرية التالية التفصيل :

• Pediococcus Acidi Pactici	3.0×10^{5} cfu/gm
• *Pediococcus Pentosaceus*	4.0×10^{4} cfu/gm
• *Acetobacter Aceti*	2.0×10^{5} cfu/gm
• *Baci llus Amylolique Faciens*	4.0×10^{4} cfu/gm

ثالثاً : إختبارات الأمان

تم إتخاذ إجراءات السلامة والأمان اللازمة عند فتح العبوات وتم عمل الأختبارات اللازمة للتأكد من سلامة المركب فى التعامل البشرى المباشر معه وكان ذلك كالتالى :

إختبارات السمية

تم عمل إختبارات السمية اللازمة وكانت النتائج كالتالى :

- Non –Toxic using Cytotoxicity test on Hep2 cells.
- Non – toxic using Microtox Analyzer 500.

مدير
١٢/٩/٢٠٠٢

المركز القومى للبحوث
إدارة
الوحدات ذات الطابع الخاص

أ.د. رئيس المجلس

المركز القومى للبحوث
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إختبارات بكتيريولوجى

- ثبت أن المركب لايحتوى على أى سلالات بكتيريا ممرضة .
- ثبت أن المركب مثبط للبكتيريا الممرضة .

رابعاً : مدة البقاء

تم عمل إختبارات على المركب لتحديد Survival Time للسلالات المكونة للمركب فى مختلف أنواع المياه وذلك كالتالى :

- مياه مقطرة معقمة .
- مياه من نهر النيل معقمة .
- مياه صرف الصحى غير معالجة.

وجاءت النتيجة أن مدة البقاء للبكتيريا فى مختلف أنواع المياه هى لاتزيد عن عشرة أيام.

خامساً : التجربة العملية :

تم عمل تجربة عملية على معالجة مياه المخلفات السائله باستخدام مركب Sept – X واسفرت النتائج ان نسبة الازالة COD, BOD بأكثر من ٧٥% ونسبة الازالة لبكتيريا القولون البرازيه وبكتيريا *E.coli* وبكتيريا السالمونيلا بنسبة اكثر من ٩٩%

سادساً : العزل والإكثار

تم عمل تجربة معملية لعزل السلالات Bacillus & Pediococcus من مركب **Sept – X**
تم إكثارها حتى 10^6 cfu/ ml لكل جنس ثم خلطها فى محلول Ringer وإضافتها بواقع ١٠% لمياه مجارى ذات معاجة أولية لمدة يوم كامل مع التهوية ووجد فى تلك التجربة الأتى :

السلالات :

وجد أن السلالات التى تم إكثارها مطابقة في معالجتها للسلالات الأصلية المكونة للمركب .
حيث جاءت نسبة الإزالة شبه مطابقة للتجربة السابقه .

الملخص

بناء على ما تم من إختبارات وتحاليل وفى ضوء المستندات الصادرة من الشركة المصنعة يخلص الرأى الفنى فى الأتى :

- المادة غير سامة وغير ممرضة بناء عليه لاتوجد إجراءات خاصة فى التعامل معها ولايوجد خطورة فى تداولها وإستخدامها .
- المادة مثبطة للبكتيريا الممرضة ولذلك يمكن استخدامها في المعالجة والتطهير .
- مدة بقاء البكتريا فى المياه بمختلف أنواعها لا تتخطى ٩ – أيام .
- المادة لها أثار إيجابية بنسب إزالة فعالة فى معالجة مياة الصرف الصحى والمادة ذات فاعلية في معالجة مياه الصرف الصحي.
- جميع السلالات المكونة للمركب هى سلالات طبيعية وتوجد بالبيئة المصرية.

وبناء على ما سبق وفى ضوء الإختبارات والتحاليل والمستندات المقدمة من الشركة لاتوجد خطورة من إستخدام مركب Sept – x فى معالجة مياه الصرف الصحى فى البيئة المصرية.

المشـــرف
أ.د./ محمد محمد كامل

رئيس الوحـــده
أ.د./ جميله الطـــويل
٩/١٢/٢٠١٢

المركز القومى للبحوث
إدارة

ROYAL OAK
CHAMBER OF COMMERCE

CERTIFICATE OF Origin (US)

TO WHOM IT MAY CONCERN:

The Royal Oak Chamber of Commerce in the state of Michigan, USA certifies that to the best of its knowledge and belief, the ***Sept-X*** *product of Bionatural America Institute orginated in the United States of America.*

Certified this August *day of* 30 *2102*

Mike Gairaud

Membership Assistant
Royal Oak Chamber of Commerce

ROYAL OAK
200 S. Washington Ave.
Royal Oak, MI 48067
www.royaloakchamber.com

ROYAL OAK
CHAMBER OF COMMERCE

CERTIFICATE OF FREE SALE

TO WHOM IT MAY CONCERN:

*We hereby certify that the **Sept-X** product of Bionatural America Institute is allowed for free sale and use inside the United States of America for Waste Water Treatment.*

*We hereby certify that the **Sept-X** product of Bionatural America Institute is not banned or limited for usage inside the United States of America for Waste Water Treatment*

Mike Gairaud

Membership Assistant
Royal Oak Chamber of Commerce

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