



**Summary of important test results of Viro2Syl**

1. Highlight of NCP test performed in the US by Louisiana based Lab.

**Context:** Naively thinking that the emergency situation at the Mexican Gulf during the spill will enable us to be catapulted to center stage given initial tests conducted by the state of Florida (which was hit too at the coast line). Results of the tests were so magnificent that Mr. Ruscitto and Ms. Lockenbach, head of Petroleum cleanup department within the Florida EPA division stated:

destruction of petroleum hydrocarbons and other suitable contaminants in soil and groundwater, in situ and ex situ, via chemical oxidation. As indicated, VirO2Syl distinguishes itself from other products of this type in that a proprietary process is used to impart an extended stability and

The full document is attached at the end ([attachment 1](#))

Then, encouraged by that strong testing result, conducted in Tallahassee, we invested a bundle in getting Viro2Syl tested in order to be entered to the emergency list of approved products to face off the massive oil contamination coming out of the New Horizon Drilling (dubbed the NCP list).

The highlight of those tests, conducted by one of the EPA approved Labs at the State of Louisiana, are also attached at the end. While highly technical - and should be examined along with additional details elaborated in a 110 + pages of analysis, it is important to denote that the lab ***effectively found no toxicity levels whatsoever*** as none of the potential toxic elements had such low concentration level – that it was effectively untraceable by the conventional standards and test procedure required by the EPA. Mr. David Daniel, the director of the lab informed us that he had never experienced dealing with such an effective oxidizing agent without “... **finding even the slightest trace of metallic substances! I never saw such a thing in my life!** ”

He congratulated us that Viro2Syl eliminated pathogens and decomposed oil based pollutant in salty water leaving no discernable toxic residual observable by the lab equipment ([attachment 2](#)).



**2. Viro2Syl treatment of Nematodes**

Nematodes are microscopic worms “...which attack plants, and those that act as vectors spreading plant viruses between crop plants”. Initially we were asked to prove Viro2Syl can eliminate Nematodes, as the farmers believed they are the reason for the destruction of crop yields of their greenhouses (Cucumber, Green pepper and tomato). **Attachment 3** shows the lab results which prove Viro2Syl succeeded in eliminating the Nematodes – not an easy feat by itself. Today, however, we understand the real issue to be the viruses and other pathogens (e.g. **VIROSIS and Fusarium**) carried by the Nematodes. Thus we were able to reduce the quantity of Viro2Syl deployed in the Green Houses and achieve elimination of the pathogens catapulting the yield 100%. Please note that tests were conducted by FERSAN LAB. Fersan is a major distributor of agricultural product in the Dominican. Viro2Syl ability to eliminate Virosis is documented across different greenhouses in different location for green pepper and tomatoes.

**3. Chicken Coop (Pathogens)**

Viro2syl ability to eliminate key pathogens (e.g. Coliforms E-coli, chicken bronchitis etc.) is documented in the tests shown in **Attachment 4**. Please note Micro-Tech is an EPA approved lab providing health tests for products shipped from the Dominican to markets in the United States.

**4. Chicken Coop (Water)**

Separately, The Lab tested for the water quality under the assumption that water is the main source of pollution and contamination in the Dominican Fields. Again Viro2Syl eliminated the pathogens as shown in **Attachment 5**. It is the very treatment of water which led us to excel in solving the Aspergillus issue as shown later.

**5. Livestock (Horses, Hogs and Cows)**

In **attachment 6**, please review the strong reported results of lab testing conducted by the livestock growers association at the Dominican Republic.



**6. Fertilized Eggs and Aspergillus**

Following an effectively close to 100% reduction of fertilized eggs mortality – as well as the hatched chicks mortality – an additional testing was ordered by the client which exhibited effectively the elimination of Aspergillus among the chicks. As far as we know – Viro2Syl is the only product to practically eliminate Aspergillus, as shown in [Attachment 7](#).

**7. Water**

It is well documented and recognized that polluted water are the culprit, the ultimate vector for contamination and diseases in all habitats ranging from crops (greenhouses or open fields), livestock, to humans. While testing for nematodes and chicken coop and hatcheries, water testing was performed too. Results are shown in [attachment 3](#) and [attachment 6](#). Both tests conveyed effective eradication of water pollutants.

*In other words Viro2Syl proved it could convert polluted water to potable water in adverse habitats known to be irrevocably polluted for decades.*

**8. Sigatoka (Bananas main crop destroyer)**

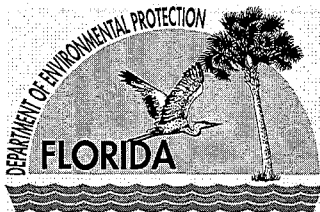
Viro2syl effectively eliminated sigatoka in a 10,000 meter<sup>2</sup> banana field. This is the only known substance on earth to do so! By the owner request we cannot disclose the lab results. Verbal testimonial and approval letter by the chief agronomist may be possible.

**9. Vinasa (Rum distillery industry)**

Tests performed by a known Rum producer show Viro2Syl to eliminate the toxicity of highly poisonous residual of the Rum distillery process, known as Vinasa. The Vinasa resulted in many shutdowns of distilleries and major fines levied worldwide on major Rum producers.

**10. Registration of Viro2Syl**

Please see [Attachment 8](#) for present registrations of Viro2Syl



**FLORIDA DEPARTMENT OF  
ENVIRONMENTAL PROTECTION**

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RICK SCOTT  
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March 7, 2013

Via Electronic Mail

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Sami Benhamou, CEO, and Orik Dagan  
Natural Solutions Group, Corp.  
5120 NW 165<sup>th</sup> Street, Building 103  
Miami Gardens, Florida 33014

Re: **VirO2Syl**

Dear Messrs. Benhamou and Dagan:

The Bureau of Petroleum Storage Systems (Bureau) hereby reaffirms its acceptance of VirO2Syl, an aqueous mix of hydrogen peroxide and colloidal silver, as a remediation product for the destruction of petroleum hydrocarbons and other suitable contaminants in soil and groundwater, in situ and ex situ, via chemical oxidation. As indicated, VirO2Syl distinguishes itself from other products of this type in that a proprietary process is used to impart an extended stability and shelf life, and that lower concentrations of it are needed to remediate contaminated sites. The peroxide and the silver are premixed, and the stabilization is such that it allows lower concentrations of the colloidal silver to be used. The decomposition of the peroxide does not accelerate until it makes contact with organic matter, and it does not kill all of the indigenous microorganisms at a cleanup site. Enough of them will survive and recover to do some polishing after the initial treatment.

Regulatory information regarding the use of VirO2Syl is provided as Enclosure 1, and Supplemental Information is provided as Enclosure 2. This letter supersedes the original November 8, 2010 acceptance of VirO2Syl. No major changes have been made, only minor updating of the contact information, the format, and minor changes in the wording for clarity. Underground Injection Control (UIC) notification is still required when VirO2Syl is injected, but a copy of the notification form is no longer provided as an attachment to product acceptance letters. Reviews of Remedial Action Plans proposing in situ, injection-type processes are now instructed to use the latest revision of the UIC notification memorandum published at the Bureau of Petroleum Storage Systems' web site.

The Bureau of Petroleum Storage Systems does not endorse specific or brand name remediation products or processes. It does, however, recognize the need to determine their acceptability in

March 7, 2013

Page 2

the context of environmental regulations, safety, and the protection of public health. For that reason, the Bureau issues an "acceptance" letter, not an approval. In no way shall an acceptance be construed as certification of performance, nor shall it be construed as approval for uses that are beyond the jurisdiction of the Bureau. Additionally, vendors, upon receipt of an acceptance, must market their product or process on its own merits regarding performance, cost, and safety in comparison to competing alternatives in the marketplace.

Remedial Action Plans that propose the use of an accepted product or process should include a copy of the acceptance letter in its entirety in the plan's appendix, and reference it in the text of the document. It is not a requirement that a particular remediation product or process have an official acceptance letter in order for it to be proposed in a site-specific Remedial Action Plan. The plan, however, must contain sufficient information about the product or process to show that it meets all applicable rules and regulations.

The Bureau reserves the right to revoke its acceptance of a product or process if it has been falsely represented. Additionally, Bureau acceptance of any product or process does not imply it has been deemed applicable for all cleanup situations, or that it is preferred over other treatment or cleanup techniques in any particular case. A site-specific evaluation of applicability and cost-effectiveness must be considered for any product or process, whether conventional or innovative, and adequate site-specific design details must be provided in a Remedial Action Plan submitted for Department review and approval. Please direct any questions about this acceptance to Rick Ruscito at telephone (850) 877-1133, extension 3722, or by e-mail at ruscito@ene.com.

Sincerely,



Rick Ruscito, P.E.  
Ecology and Environment, Inc.  
Bureau of Petroleum Storage Systems  
Petroleum Cleanup Section 6



Rebecca S. Lockenbach  
FDEP Section Leader  
Bureau of Petroleum Storage Systems  
Petroleum Cleanup Section 6

Enclosures: (1) Regulatory Information  
(2) Supplemental Information

c: Tom Conrardy - FDEP/Tallahassee

History:

ppl #417  
inn\_175.doc - 11/8/10

ppl #464  
ITR OI66455  
inn\_175a.doc - 3/7/13

## REGULATORY INFORMATION

- a. Regulations: Chapters of the Florida Administrative Code (F.A.C.) that may be applicable, either in part or in their entirety, include but are not necessarily limited to Chapter 62-550, F.A.C., for primary and secondary water quality standards; Chapter 62-520, F.A.C. for groundwater classes and standards; Chapter 62-522, F.A.C., for groundwater permitting and monitoring requirements; Chapter 62-528, F.A.C., for underground injection control, particularly Part V, for Class V, Group 4 aquifer remediation projects; Chapters 62-770, 62-780, 62-782, and 62-785, F.A.C., for cleanup criteria; and Chapter 62-777, F.A.C., for cleanup target levels.

Users of VirO2Syl shall comply with all applicable regulations. This includes meeting applicable groundwater cleanup target levels for the contaminants of concern, the residual concentrations of VirO2Syl ingredients, and any byproducts of concern produced by chemical and biological reactions induced by the ingredients during the timeframe of the cleanup project. For the "ingredients of concern" in VirO2Syl that are present in excess of their groundwater standards, the timeframe is that which is permitted for a temporary injection zone of discharge.

- b. Underground Injection Control permit: Per Rule 62-528.630(2)(c), F.A.C., Class V injection-type aquifer remediation wells are exempt from the permitting requirements of Rule 62-528.635, F.A.C., when authorized by a Department-approved Remedial Action Plan or other enforceable mechanism, provided the requirements of the rules governing the remediation project, as well as the construction, operation, and monitoring requirements of Chapter 62-528, F.A.C., are met. Per Rule 62-528.630(2)(c), F.A.C., the issuance of an enforceable, site-specific Remedial Action Plan Approval Order by the Department for injection-type aquifer remediation constitutes the granting of a Class V injection well construction/clearance permit.
- c. Underground Injection Control notification: Remedial Action Plans proposing in situ, injection-type aquifer remediation shall include information pursuant to Rules 62-528.630(2)(c)1 through 6, F.A.C., for the inventory purposes of the Underground Injection Control program. Reviewers of those plans, upon issuance of an enforceable Remedial Action Plan Approval Order by the Department, must submit a completed copy of the Underground Injection Control inventory notification memorandum.
- d. General information about temporary injection zones of discharge: For in situ aquifer remediation, the composition of the fluid to be injected (before it is diluted by the receiving groundwater) must meet the primary and secondary drinking water standards set forth in Chapter 62-550, F.A.C., and the general minimum groundwater criteria of Chapter 62-520, F.A.C., pursuant to underground injection control Rule 62-528.600(2)(d), F.A.C. Additional minimum groundwater criteria for specific chemicals are set forth in Chapter 62-777, F.A.C. Aquifer remediation fluids that do not meet these requirements must seek permission for a temporary injection zone of discharge. Depending on the chemical composition and the physical properties of the fluid, it will be necessary to obtain permission for an injection zone of discharge by either one or both of the following methods: by Rule 62-520.310(8)(c), F.A.C., or by variance from Rule 62-520.310(9), F.A.C.

Rule 62-520.310(8)(c), F.A.C., allows a temporary injection zone of discharge for closed-loop re-injection systems, the prime constituents of the reagents used to remediate site contaminants, and the secondary standards for groundwater, provided a Department-approved remedial action plan addresses the duration and size of the zone of discharge, and groundwater monitoring of the injected chemical species of concern.

In order to obtain permission for a temporary zone of discharge by way of Rule 62-520.310(8)(c), F.A.C., a site-specific Remedial Action Plan must indicate: (a) the chemical species of concern in the fluid to be injected that will be present in excess of their allowable concentrations; (b) the size of the zone that is needed; (c) the amount of time that the zone will be needed; and (d) a groundwater monitoring plan for the injected chemical species of concern. In most cases, monitoring on a quarterly basis should be sufficient. The size of the temporary injection zone of discharge in paragraph (b) above will usually be the injection radius of influence when the treatment system is a single injection point. For a multiple point system, the zone of discharge can usually be expressed and illustrated as the total area of the cluster formed by all the injection points, located side-by-side with overlapping radii of influence.

- e. Specific zone of discharge (ZOD) information for VirO2Syl: The Bureau of Petroleum Storage Systems, using information provided by the Natural Solutions Group Corporation, has identified pH and silver as parameters in need of permission for a temporary injection zone of discharge by way of Rule 62-520.310(8)(c), F.A.C., for which the groundwater must be monitored during the course of a cleanup. In order for temporary injection ZOD permission to be granted by way of Rule 62-520.310(8)(c), F.A.C., for pH and silver when VirO2Syl is injected, a site-specific Remedial Action Plan must: (a) identify pH and silver as parameters of the fluid to be injected that do not meet their injection standards; (b) specify the size of the ZOD needed for pH and silver; (c) specify the period of time for which a temporary ZOD is needed; and (d) provide for the monitoring of pH and silver in the groundwater during the course of the cleanup. In most cases, monitoring on a quarterly basis should suffice.
- f. Utilization of wells: If a remediation site happens to have an abundance of monitoring wells, then the Bureau has no objection to the use of some wells for the injection of remediation products. However, no "designated" monitoring well, dedicated to the tracking of remediation progress (by sampling) shall be used to inject remediation products. This will avoid premature conclusions that the entire site meets cleanup goals. By making sure that designated tracking wells are not also used as treatment points, there will be more assurance that the remediation product has permeated the entire site and that it did not remain localized to the area immediately surrounding each injection well.
- g. Avoidance of migration: For injection-type, in situ aquifer remediation projects, pursuant to Rule 62-528.630(3), F.A.C., the injection of VirO2Syl shall be performed in such a way, and at such a rate and volume, that no undesirable migration of either the VirO2Syl or the contaminants of concern in the aquifer results.
- h. Abandonment of wells: Upon issuance of a Site Rehabilitation Completion Order, injection wells shall be abandoned pursuant to Section 62-528.645, F.A.C., and the Underground Injection Control Section of the Department shall be notified so that the treatment wells can be removed from the injection well inventory-tracking list.

- i. Open-pit applications: While open-pit application of VirO2Syl is not an injection-type application, and notification of the Underground Injection Control Section therefore not required, the user must still be mindful of groundwater quality. For open-pit applications, the Bureau of Petroleum Storage Systems suggests that groundwater in the application area be sampled for the same parameters that would have been monitored had the application been an injection. Those parameters are pH and silver.
- j. "Soil-only" cleanups: For sites where VirO2Syl will be used in situ for the cleanup of only soil that is located above the water table, consideration should be given to the potential for its ingredients of concern to percolate to the underlying groundwater. The potential will have to be evaluated on a site-specific basis, and may at least have to take into account the depth to which the VirO2Syl will be applied in comparison to the depth of the groundwater, the amount of VirO2Syl applied, and the permeability of the soil. If it is determined that VirO2Syl has the potential to reach the water table, then the underlying groundwater should be monitored for pH and silver during the course of the cleanup, as if the VirO2Syl had been directly introduced below the water table.
- k. Soil and groundwater criteria for VirO2Syl ingredients of regulatory interest: The secondary groundwater standards for pH and silver, as indicated in the current issue of Chapter 62-550, F.A.C., are range 6.5-8.5 and 0.1 milligrams per liter (mg/L) respectively. These standards or their natural-occurring background values at the cleanup site, whichever is less stringent, must be met by the time that the temporary injection zone of discharge expires. For soil, the criteria for silver is the 17- milligram per kilogram (mg/Kg) maximum allowable leachability-based soil cleanup target level and the 410-mg/Kg direct residential exposure limit established in the current issue of Chapter 62-777, F.A.C. The lower value of the two (17-mg/Kg) has to be met in order for the site to qualify for an unconditional declaration of No Further Action. For additional information about alternate methods by which to demonstrate that soil meets unconditional cleanup target levels for leachability, see Rule 62-770.680(1)(c)2 in the current December 27, 2007 issue of Chapter 62-770, F.A.C.



## SUPPLEMENTAL INFORMATION

- a. Chemical composition: Premixed VirO2Syl, as-shipped, contains 27% hydrogen peroxide and 0.03% colloidal silver. Since information provided to the Bureau of Petroleum Storage Systems by Natural Solutions Group Corporation discusses the use of VirO2Syl at this as-shipped concentration, the Bureau has offered its advice on how to comply with injection zone of discharge requirements for this composition. Whether it is advisable to dilute the as-shipped product with additional water prior to application at a specific site for an in situ cleanup is a matter that should be discussed between the user and Natural Solutions Group Corporation before a site-specific Remedial Action Plan is prepared and submitted for review and approval. In regard to the silver, the Bureau indicates that it will be necessary to obtain permission for a temporary injection zone of discharge, for the fluid to be injected, for any dilution that involves the addition of less than 3,000 volumes water to 1 volume of as-shipped VirO2Syl prior to injection. Whether permission for a temporary injection zone of discharge will be necessary for pH for various dilutions of VirO2Syl prior to injection will depend on the resulting pH of the mixture, which will be influenced in part by the pH of the local dilution water.
- b. Pilot study: For petroleum cleanup, per Rule 62-770.700(2), F.A.C., it is required that a pilot study proposal be submitted for review, and that a pilot test be performed prior to the design of a full-scale treatment system. If conditions at a site do not warrant a pilot study, then a proposal explaining the rationale to forego it must be submitted for review.
- c. Dosage: The amount of VirO2Syl to be used for the remediation of groundwater and soil at a contaminated site depends on site-specific conditions. The Bureau of Petroleum Storage Systems therefore advises users of VirO2Syl to consult Natural Solutions Group Corporation to determine an appropriate dosage. For in situ applications, the Bureau also advises that no more than the necessary amount be introduced to the subsurface, in order to avoid a situation in which a lengthy period of time is needed for residual concentrations of the ingredients of concern to decrease to their soil and groundwater standards, or their natural-occurring background levels at the cleanup site, whichever is less stringent.

Attachment 2

Environmental Enterprises USA, Inc.

National Oil and Hazardous Substances Pollution Contingency Plan:  
3.0 Revised Dispersant Toxicity Tests Report  
*Menidia beryllina* & *Mysidopsis bahia*  
FR / Vol. 59, No. 178 / 47461 - 47464

prepared for

**Natural Solutions Group Corporation**

Services Requested By: Marcos Gonzalez

**VirO<sub>2</sub>Syl. EE USA Project No.: D-006-12**

Sample Received: March 6, 2012

Results:	<i>M. bahia</i> Survival		<i>M. beryllina</i> Survival	
	48-hr LC50	95% Confidence Interval	96-hr LC50	95% Confidence Interval
VirO <sub>2</sub> Syl	3.95 ppm	2.66 – 5.38 ppm	94.8 ppm	72.4 – 124 ppm
No. 2 Fuel Oil	6.43 ppm	5.68 – 7.28 ppm	40.5 ppm	38.0 – 43.2 ppm
10:1 No. 2 Fuel Oil / VirO <sub>2</sub> Syl	7.45 ppm	6.43 – 8.77 ppm	10.1 ppm	9.23 – 11.0 ppm
Reference Toxicant Sodium Dodecyl Sulfate (SDS)	8.68 ppm	7.49 – 10.1 ppm	2.33 ppm	2.12 – 2.56 ppm

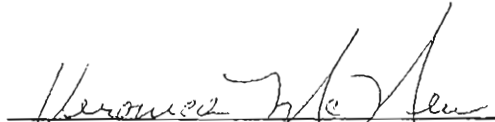
Report Date: March 26, 2012

by

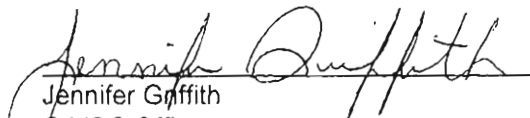
**ENVIRONMENTAL ENTERPRISES USA, INC.**

58485 PEARL ACRES ROAD, SUITE D  
SLIDELL, LOUISIANA 70461  
1-800-966-2788

*This report contains ten pages plus twelve appendices, A – L.  
This report must not be reproduced in part, only in whole. The results  
and conclusions presented in this report apply only to the sample(s) tested.  
All results included in this report are from valid tests.*

  
Veronica McNew  
Effluents Testing Supervisor

03/26/12  
DATE

  
Jennifer Griffith  
QA/QC Officer

03-26-12  
DATE

  
David L. Daniel  
Laboratory Director

3/26/12  
DATE

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**Menidia beryllina ACUTE, STATIC 96-hr REVISED STANDARD DISPERSANT TOXICITY TEST,**  
**FR / Vol. 59, No. 178 / 47461 – 47464.**

## **TEST OVERVIEW**

Four, 96-hr static definitive LC50 tests were conducted by Environmental Enterprises USA, Inc. (EE USA) using a Miscellaneous Oil Spill Control Agent (VirO<sub>2</sub>Syl supplied by Natural Solutions Group Corp., Appendix K), No. 2 Fuel Oil (obtained from Resource Technology Corporation, Lab #: D-020-10, Appendix L), a 10:1 mixture of No. 2 Fuel Oil to VirO<sub>2</sub>Syl, and Sodium Dodecyl Sulfate (SDS) (obtained from Sigma-Aldrich Chemical, Lot #: 019K0085, 92.5 – 100.5% based on total alkyl sulfate content, specific gravity of 0.37 g/ml). *Menidia beryllina* was cultured at EE USA and the test organisms were 7 days old when each test was initiated. Preliminary range-finding tests were set prior to the definitive LC50 tests (Appendix A). Synthetic seawater, hw-MARINEMIX + Bio-Elements and Crystal Sea Marinemix Bioassay Laboratory Formula sea salts (80:20), was used as the laboratory performance control solution and diluent. Each definitive test included three replicates of a laboratory performance control solution and either five or six test concentrations. This document presents methods, materials, and results of this testing. The definitive tests were conducted from March 14 – March 18, 2012, at the laboratory of EE USA.

## **MATERIALS AND METHODS**

Materials and methods for the work performed are stated in FR / Vol. 59, No.178 / 47461 – 47464: Revised Standard Dispersant Toxicity Test. Actual materials and methods are detailed below. The tests were performed with strict adherence to the method as presented in the Federal Register with the following exception(s):

- 1) during this test, recorded temperatures fell outside the required range by not more than 0.3°C on at least one occasion. This was a minor excursion and did not affect the results of this test.

*M. beryllina* were cultured and maintained at 24±1°C and 25±1ppt salinity. Several clutches from different females comprised the embryo pool from which the test organism population hatched. Prior to test initiation the test organisms were acclimated to 20±1ppt salinity. Test organisms were fed 200 µl of a standardized suspension of less than 24-hr old *Artemia* nauplii once daily. The standardized suspension is equal to 0.05 grams wet weight strained *Artemia* nauplii per ml synthetic seawater.

On March 6, 2012 VirO<sub>2</sub>Syl was received at EE USA from Natural Solutions Group Corp., (Appendix K). A 40-ml glass vial with a Teflon septum was completely filled with this sample and sealed. The remaining sample in the original product container was immediately resealed. A gas-tight syringe was used to prepare stock solutions (SSOLs) as required. The product was stored at ambient laboratory temperatures.

USEPA – API Reference Oil, No. 2 Fuel Oil, was purchased from RTC and was received at EE USA on June 29, 2010 (Appendix L). The No. 2 Fuel Oil arrived in two approximately 600 ml containers that were sealed and filled to approximately 500 ml. Twenty 40-ml glass vials with Teflon septums were completely filled with No. 2 Fuel Oil, sealed, and stored in a dark refrigerator at 0.1 – 6°C. Only one vial of No.2 Fuel Oil was used to complete these tests. A gas-tight syringe was used to deliver aliquots of No. 2 Fuel Oil.

**Range-finding Tests:**

On March 9, 2012 exploratory range-finding tests were initiated to estimate the LC50s of VirO<sub>2</sub>Syl, No. 2 Fuel Oil, a 10:1 mixture of No. 2 Fuel Oil to VirO<sub>2</sub>Syl, and SDS (Appendix A). Test chambers were labeled with test treatment, concentration, organism, replicate identification, and EE USA's project number. Test concentrations were prepared using aliquots of stock solutions (SSOLs) prepared from each neat material as received. Each SSOL and each 1-liter test concentration was prepared and mixed for five minutes using a reciprocal shaker table (EBERBACH 6010, 280 excursions/minute, 3.8 cm stroke, ID# SH1 & A43). One replicate of a concurrent laboratory performance control and at least five dilutions each of VirO<sub>2</sub>Syl, No. 2 Fuel Oil, a 10:1 mixture of No. 2 Fuel Oil to VirO<sub>2</sub>Syl, and SDS were prepared. One liter of each test concentration was transferred to replicate test chambers as appropriate, ten *M. beryllina* were randomly loaded, and each test chamber was put into an environmental chamber at 25 +/- 1°C.

LC50s obtained from exploratory range-finding tests were used to select a series of test concentrations for each definitive test (VirO<sub>2</sub>Syl, No. 2 Fuel Oil, a 10:1 mixture of No. 2 Fuel Oil to VirO<sub>2</sub>Syl, and SDS) that was expected to bracket the LC50. The SSOL concentration and volumes for each test were prepared following the examples given in the test method.

**Definitive Tests:**

On March 14, 2012, three replicates of a concurrent laboratory performance control and five dilutions each of VirO<sub>2</sub>Syl, No. 2 Fuel Oil, a 10:1 mixture of No. 2 Fuel Oil to VirO<sub>2</sub>Syl, and SDS were prepared and put into an environmental chamber at 25 +/- 1°C. Test chambers were labeled with test treatment, concentration, organism, replicate identification, and EE USA's project number. Test concentrations were prepared using aliquots of SSOLs prepared from each neat material as received. Each SSOL and each 3-liter test concentration was prepared and mixed for five minutes using a reciprocal shaker table (EBERBACH 6010, 280 excursions/minute, 3.8 cm stroke, ID# SH1 & A43). One liter of each test concentration was transferred to three replicate test chambers per treatment as appropriate. Appendices B, C, D, and E contain copies of the raw data recorded for each test.

Appendix #	Toxicant
B	VirO <sub>2</sub> Syl
C	No. 2 Fuel Oil
D	10:1 No.2 Fuel Oil to VirO <sub>2</sub> Syl
E	SDS, Standard Reference Toxicant

**VirO<sub>2</sub>Syl:**

An exploratory range-finding toxicity test indicated an estimated LC50 of 88.4 ppm VirO<sub>2</sub>Syl (Appendix A). The range-finding test resulted in an LC50 which requires a stock solution greater in volume than the 1000 ppm stock solution example given in the test method. The definitive test was prepared with an 1100 ml SSOL at 1,000 ppm: 1.1 ml of VirO<sub>2</sub>Syl plus 1098.9 ml synthetic seawater. The SSOL solution was mixed on a reciprocal shaker for five minutes. Test concentrations were prepared using aliquots of the SSOL and synthetic seawater and then mixed on the reciprocal shaker for five minutes (Appendix B, page 1).

**No. 2 Fuel Oil:**

An exploratory range-finding toxicity test indicated an estimated LC50 of 29.5 ppm No. 2 Fuel Oil (Appendix A). The definitive test was prepared with a 550 ml SSOL at 1000 ppm: 0.55 ml No. 2 Fuel Oil plus 549.45 ml synthetic seawater. The SSOL was mixed on a reciprocal shaker for five minutes. Test concentrations were prepared using aliquots of the SSOL and synthetic seawater and then mixed on the reciprocal shaker for five minutes (Appendix C, page 1).

**10:1 No. 2 Fuel Oil / VirO<sub>2</sub>Syl:**

An exploratory range-finding toxicity test indicated an estimated LC50 of 70.7 ppm 10:1 No. 2 Fuel Oil to VirO<sub>2</sub>Syl (Appendix A). This LC50 result was greater than 50 ppm, the highest concentration tested. The definitive test concentrations were selected using the estimated LC50 from the range-finding test, and test concentrations were selected at 62.5 and 125 ppm in order to bracket the estimated LC50 from the range-finding test. Six concentrations rather than five were tested to ensure that a definitive LC50 result was obtained. The definitive test was prepared with a stock solution greater in volume than the 1000 ppm stock solution example given in the test method, 1100 ml SSOL at 1000 ppm: 1.0 ml No. 2 Fuel Oil plus 0.1 ml VirO<sub>2</sub>Syl plus 1098.90 ml synthetic seawater. The SSOL was mixed on a reciprocal shaker for five minutes. Test concentrations were prepared using aliquots of the SSOL and synthetic seawater and then mixed on the reciprocal shaker for five minutes (Appendix D, page 1).

**Standard Reference Toxicant, SDS:**

Sensitivity of test organisms to a known toxicant was determined by performing a concurrent Standard Reference Toxicant (SRT) test with SDS. An exploratory range-finding toxicity test indicated an estimated LC50 of 2.30 ppm SDS (Appendix A). The definitive test was prepared with a 500 ml SSOL at 2000 ppm: 1.00 g SDS plus 497.3 ml synthetic seawater to a total volume of 500 ml. The SSOL was mixed on a reciprocal shaker for five minutes. Test concentrations were prepared using aliquots of the SSOL and synthetic seawater and then mixed on the reciprocal shaker for five minutes (Appendix E, page 1).

The initial temperature, dissolved oxygen [DO], and salinity in each treatment was measured and recorded. At the end of each 24-hour exposure period, the ending DO, temperature, salinity, and pH in each treatment was measured and recorded (Appendix #, pages 3 - 4). *M. beryllina* from the same lot of test organisms, lot#: MN-067-12, was used in each test (Appendix #, page 3). The tests were initiated from 1747 to 1934 on March 14, 2012: ten *M. beryllina* larvae were randomly distributed to each test chamber. At 24-hr intervals, the number of survivors in each replicate of each treatment was recorded (Appendix #, page 2). After 96 hours, the final survival data were recorded and these tests were terminated.

Summary of Experimental Conditions	
Test Organisms	7-day-old <i>Menidia beryllina</i> larvae
Dilution Water	Synthetic seawater, 20±1 ppt
Temperature	25 +/- 1°C
Photoperiod	16 hours light; 8 hours dark
Test Chambers	Rectangular Pyrex dish, 21cm x 11cm x 7cm
Total Chamber Volume	1.45 liters
Test Solution Volume	1000 ml
Test Solution Renewal	No
Aeration	No, DO levels remained ≥4.0 mg/L

**RESULTS AND CONCLUSION**

The response used in statistical analysis of survival data was the number of surviving test organisms per concentration. The 96-hr survival data were used to estimate the 96-hr LC50: a point estimate of the concentration expected to result in 50% mortality to exposed *M. beryllina* larvae after 96 hours of exposure. Survival in the concurrent laboratory performance control was 100.0%.

**VirO<sub>2</sub>Syl:**

Definitive test concentrations tested were 6.3, 12.5, 25, 50, and 100 ppm VirO<sub>2</sub>Syl. The 96-hr LC50 was 94.8 ppm with a 95% confidence interval of 72.4 to 124 ppm as determined by the Trimmed Spearman-Kärber method (Appendix B, page 5a).

**No. 2 Fuel Oil:**

Definitive test concentrations tested were 3.8, 7.5, 15.0, 30.0, and 60.0 ppm No. 2 Fuel Oil. The 96-hr LC50 was 40.5 ppm with a 95% confidence interval of 38.0 to 43.2 ppm as determined by the Trimmed Spearman-Kärber method (Appendix C, page 5a).

**10:1 No. 2 Fuel Oil / VirO<sub>2</sub>Syl:**

Definitive test concentrations were 3.9, 7.8, 15.6, 31.3, 62.5 and 125.0 ppm 10:1 No. 2 Fuel Oil to VirO<sub>2</sub>Syl. The 96-hr LC50 was 10.1 ppm with a 95% confidence interval of 9.23 to 11.0 ppm as determined by the Trimmed Spearman-Kärber method (Appendix D, page 5a).

**Standard Reference Toxicant, SDS:**

Definitive test concentrations were 1.0, 1.7, 2.9, 4.8, and 8.0 ppm SDS. The 96-hr LC50 was 2.33 ppm with a 95% confidence interval of 2.12 to 2.56 ppm as determined by the Trimmed Spearman-Kärber method (Appendix E, page 5a).

**Mysidopsis bahia ACUTE, STATIC 48-hr REVISED STANDARD DISPERSANT TOXICITY TEST,**  
**FR / Vol. 59, No. 178 / 47461 – 47464.**

## **TEST OVERVIEW**

Four, 48-hr static definitive LC50 tests were conducted by Environmental Enterprises USA, Inc. (EE USA) using a Miscellaneous Oil Spill Control Agent (VirO<sub>2</sub>Syl supplied by Natural Solutions Group Corp., Appendix K), No. 2 Fuel Oil (obtained from Resource Technology Corporation, Lab #: D-020-10, Appendix L), a 10:1 mixture of No. 2 Fuel Oil to VirO<sub>2</sub>Syl, and Sodium Dodecyl Sulfate (SDS) (obtained from Sigma-Aldrich Chemical, Lot #: 019K0085, 92.5 – 100.5% based on total alkyl sulfate content, density of 0.37 g/ml). *Mysidopsis bahia* was cultured at EE USA and the test organisms were 5 days old when each test was initiated. Preliminary range-finding tests were set prior to the definitive LC50 tests (Appendix F). Synthetic seawater, hw-MARINEMIX + Bio-Elements and Crystal Sea Marinemix Bioassay Laboratory Formula sea salts (80:20), was used as the laboratory performance control solution and diluent. Each definitive test included three replicates of a laboratory performance control solution and five test concentrations. This document presents methods, materials, and results of this testing. The definitive tests were conducted from March 13 – March 15, 2012, at the laboratory of EE USA.

## **MATERIALS AND METHODS**

Materials and methods for the work performed are stated in FR / Vol. 59, No.178 / 47461 - 47464: Revised Standard Dispersant Toxicity Test. Actual materials and methods are detailed below. The tests were performed with strict adherence to the method as presented in the Federal Register.

*M. bahia* were cultured and maintained at 24±1°C and 25±1 ppt salinity. Four days before initiating this test 12- to 24-hr-old mysids were collected from breeding cultures, moved to a holding system, and acclimated to 25±1°C. Prior to test initiation the test organisms were acclimated to 20±1 ppt salinity. Test organisms were fed 200 ul of a standardized suspension of less than 24-hr old *Artemia* nauplii once daily. The standardized suspension is equal to 0.05 grams wet weight strained *Artemia* nauplii per ml synthetic seawater.

On March 6, 2012 VirO<sub>2</sub>Syl was received at EE USA from Natural Solutions Group Corp. (Appendix K). A 40-ml glass vial with a Teflon septum was completely filled with this sample and sealed. The remaining sample in the original product container was immediately resealed. A gas-tight syringe was used to prepare stock solutions (SSOLs) as required. The product was stored at ambient laboratory temperatures.

USEPA – API Reference Oil, No. 2 Fuel Oil, was purchased from RTC and was received at EE USA on June 29, 2010 (Appendix L). The No. 2 Fuel Oil arrived in two approximately 600 ml containers that were sealed and filled to approximately 500 ml. Twenty 40-ml glass vials with Teflon septums were completely filled with No. 2 Fuel Oil, sealed, and stored in a dark refrigerator at 0.1 – 6°C. Only one glass vial of No.2 Fuel Oil was used to complete these tests. A gas-tight syringe was used to deliver aliquots of No. 2 Fuel Oil.

### **Range-finding Tests:**

On March 9, 2012 exploratory range-finding tests were initiated to estimate the LC50s of VirO<sub>2</sub>Syl, No. 2 Fuel Oil, a 10:1 mixture of No. 2 Fuel Oil to VirO<sub>2</sub>Syl, and SDS (Appendix F). Test chambers were labeled with test treatment, concentration, organism, replicate identification, and EE USA's project number. Test concentrations were prepared using aliquots of stock solutions (SSOLs) prepared from each neat material as received. Each SSOL was prepared and mixed for five seconds using a blender (OSTER, Model #: MG-W00, ID# A40) at approximately 7300 to 8300 rpm. One replicate of a concurrent laboratory performance control and at least five dilutions each of VirO<sub>2</sub>Syl, No. 2 Fuel Oil, a 10:1 mixture of No. 2 Fuel Oil to VirO<sub>2</sub>Syl, and SDS were prepared by dispensing aliquots of each SSOL by pipet into the appropriate test chambers and adding 800 ml of dilution water into each test chamber. Ten *M. bahia* and 200 ml of dilution water were randomly distributed to each test chamber to bring the total volume of each test chamber up to 1000 ml. Test chambers were put into an environmental chamber at 25 +/- 1°C.



LC50s obtained from exploratory range-finding tests were used to select a series of test concentrations for each definitive test (VirO<sub>2</sub>Syl, No. 2 Fuel Oil, a 10:1 mixture of No. 2 Fuel Oil to VirO<sub>2</sub>Syl, and SDS) that was expected to bracket the LC50. The SSOL concentration and volumes for each test were prepared following the examples given in the test method.

**Definitive Tests:**

On March 13, 2012, three replicates of a concurrent laboratory performance control and five dilutions of each product were prepared and put into an environmental chamber. Test chambers were labeled with test treatment, concentration, organism, replicate identification, and EE USA's project number. Test concentrations were prepared using aliquots of SSOLs prepared from each neat material as received. Each SSOL was prepared and mixed for five seconds using a blender (OSTER, Model #: MG-W00, ID# A40) at approximately 7300 to 8300 rpm. Aliquots of each SSOL were dispensed directly by pipet into the appropriate test chambers and then 800 ml dilution water were poured into each test chamber. Appendices G, H, I, and J contain copies of the raw data recorded for each test.

Appendix #	Toxicant
G	VirO <sub>2</sub> Syl
H	No. 2 Fuel Oil
I	10:1 No.2 Fuel Oil to VirO <sub>2</sub> Syl
J	SDS, Standard Reference Toxicant

**VirO<sub>2</sub>Syl:**

An exploratory range-finding toxicity test indicated an estimated LC50 of 6.28 ppm VirO<sub>2</sub>Syl (Appendix F). The definitive test was prepared with a 550 ml SSOL at 1,000 ppm: 0.55 ml of VirO<sub>2</sub>Syl plus 549.45 ml synthetic seawater. The SSOL was mixed with a blender for five seconds. The test solutions were mixed with aliquots of the SSOL and synthetic seawater (Appendix G, page 1).

**No. 2 Fuel Oil:**

An exploratory range-finding toxicity test indicated an estimated LC50 of 3.30 ppm No. 2 Fuel Oil (Appendix F). The definitive test was prepared with a 550 ml SSOL at 1000 ppm: 0.55 ml No. 2 Fuel Oil plus 549.45 ml synthetic seawater. The SSOL was mixed with a blender for five seconds. The test solutions were mixed with aliquots of the SSOL and synthetic seawater (Appendix H, page 1).

**10:1 No. 2 Fuel / VirO<sub>2</sub>Syl:**

An exploratory range-finding toxicity test indicated an estimated LC50 of 5.12 ppm 10:1 No. 2 Fuel Oil to VirO<sub>2</sub>Syl (Appendix F). The definitive test was prepared with a 550 ml SSOL at 1000 ppm: 0.50 ml No. 2 Fuel Oil plus 0.05 ml VirO<sub>2</sub>Syl plus 549.45 ml synthetic seawater. The SSOL was mixed with a blender for five seconds. The test solutions were mixed with aliquots of the SSOL and synthetic seawater (Appendix I, page 1).

**Standard Reference Toxicant, SDS:**

Sensitivity of test organisms to a known toxicant was determined by performing a concurrent Standard Reference Toxicant (SRT) test with SDS. An exploratory range-finding toxicity test indicated an estimated LC50 of 8.21 ppm SDS (Appendix F). The definitive test was prepared with a 500 ml SSOL at 2000 ppm: 1.00 g or 2.7 ml SDS plus 497.3 ml synthetic seawater. The SSOL was mixed with a blender for five seconds. The test solutions were mixed with aliquots of the SSOL and synthetic seawater (Appendix J, page 1).

The initial temperature, dissolved oxygen [DO], and salinity in each treatment was measured and recorded. At the end of each 24-hour exposure period, the ending DO, temperature, salinity, and pH in each treatment was measured and recorded (Appendix #, page 3). *M. bahia* from the same lot of test organisms, lot#: MB-151-12, was used in each test (Appendix #, page 2). The tests were initiated from 1737 to 1855 on March 13, 2012: ten *M. bahia* and 200 ml of dilution water were randomly distributed to each test chamber. The 200 ml of dilution water transferred with the mysids to each test chamber brought the total volume in each up to 1000 ml. At 24-hr intervals, the number of survivors in each replicate of each treatment was recorded (Appendix #, page 2). After 48 hours, the final survival data were recorded and these tests were terminated.

Summary of Experimental Conditions	
Test Organisms	5-day-old <i>Mysidopsis bahia</i>
Dilution Water	synthetic seawater, 20±1 ppt
Temperature	25 +/-1°C
Photoperiod	16 hours light; 8 hours dark
Test Chambers	Rectangular Pyrex dish, 21cm x 11cm x 7cm
Total Chamber Volume	1.45 liters
Test Solution Volume	1000 ml
Test Solution Renewal	No
Aeration	No, DO levels remained ≥4.0 mg/L

## RESULTS AND CONCLUSION

The response used in statistical analysis of survival data was the number of surviving test organisms per concentration. The 48-hr survival data were used to estimate the 48-hr LC50: a point estimate of the concentration expected to result in 50% mortality to exposed *M. bahia* after 48 hours of exposure. Survival in the concurrent laboratory performance control was 100.0%.

### **VirO<sub>2</sub>Syl:**

Definitive test concentrations were 1.6, 3.1, 6.3, 12.5, and 25.0 ppm VirO<sub>2</sub>Syl. The 48-hr LC50 was 3.95 ppm with a 95% confidence interval of 2.66 to 5.38 ppm as determined by the Probit method (Appendix G, page 4a).

### **No. 2 Fuel Oil:**

Definitive test concentrations were 0.8, 1.5, 3.0, 6.0, and 12.0 ppm No. 2 Fuel Oil. The 48-hr LC50 was 6.43 ppm with a 95% confidence interval of 5.68 to 7.28 ppm as determined by the Trimmed Spearman-Kärber method (Appendix H, page 4a).

### **10:1 No. 2 Fuel Oil / VirO<sub>2</sub>Syl:**

Definitive test concentrations were 0.6, 1.3, 2.5, 5.0, and 10.0 ppm 10:1 No. 2 Fuel Oil to VirO<sub>2</sub>Syl. The 48-hr LC50 was 7.45 ppm with a 95% confidence interval of 6.43 to 8.77 ppm as determined by the Probit method (Appendix I, page 4a).

### **Standard Reference Toxicant, SDS:**

Definitive test concentrations were 0.9, 1.8, 3.5, 7.0 and 14.0 ppm SDS. The 48-hr LC50 was 8.68 ppm with a 95% confidence interval of 7.49 to 10.1 ppm as determined by the Probit method (Appendix J, page 4a).

## REFERENCES

EE USA. May 2011. Quality Assurance Plan. EE USA, Slidell, LA 70461.

EE USA. March 2011. Standard Operating Procedures. EE USA, Slidell, LA 70461.

Federal Register. Thursday, September 15, 1994. Part II, Environmental Protection Agency, 40 CFR Parts 9 and 200 National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, "3.0 Revised standard dispersant toxicity test." FR / Vol. 59, No. 178 / 47461 - 47464.



Tidepool Scientific Software. 2007. ToxCalc™ Toxicity Data Analysis Software. Version 5.0.32. McKinleyville, CA.

U.S. Environmental Protection Agency. October 2002. Methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms. EPA-821-R-02-012. 5<sup>th</sup> Edition. Office of Water (4303T). Washington, DC 20460.

**Environmental Enterprises USA, Inc.**

**APPENDIX A**

## Attachment 3 – Eradicating Nematodes

**Instituto Dominicano de Investigaciones Agropecuarias y Forestales - IDIAF**  
**Centro de Tecnologías Agrícolas (CENTA)**  
La Duquesa, Apartado Postal No. 380-9. Santo Domingo, República Dominicana, D.N  
TEL. (809) 564-4401,02; Fax (809) 564-4400

**Protección Vegetal (PV)**  
**Resultados Diagnóstico Fitosanitario**

**Datos Generales**

Muestra No: 1 Código: PV-N-002 Fecha: 20/02/2014  
Propietario: Caribbean Dried Fruits Interesado: FERSAN Cultivo afectado: Suelo  
Procedencia: La Vega

**Tipo de Análisis**

Micología  Nematología  Entomología  Bacteriología   
Herbología  Virología

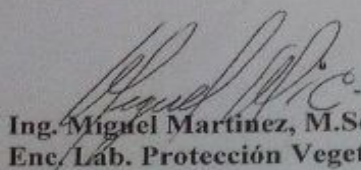
**Diagnóstico**


Muestra II

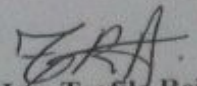
Suelo:	<i>Rotylenchus</i>	=	80/250mls
	<i>Aphelenchoides</i>	=	80/250mls

**Observaciones**

Los nematodos encontrados no son significativos para producir daño.

  
Ing. Miguel Martínez, M.Sc.  
Enc. Lab. Protección Vegetal



  
Ing. Teofila Reinoso  
Asistente Lab. Nematología

INSTITUTO DE INNOVACIÓN EN BIOTECNOLOGÍA E INDUSTRIA		Solicitud No.24437		
Calle Olof Palme Esq. Núñez de Cáceres, Tels. 809-566-8121/29, Apartado Postal No. 329-2, Santo Domingo, D.N. -RNC:430-00016-7		2014	10	10
INFORME DE RESULTADOS DEL LABORATORIO DE MICROBIOLOGIA		Año	Mes	Día

Datos del Solicitante	
Nombre del Cliente o Empresa: <b>AMIRAM LEV</b>	Tel.: (829) 599-7373
Nombre del contacto: Amiram Lev	
Dirección: Calle 25	

Datos del Servicio		
Fecha de recibo: 2014-09-30	Fecha de inicio: 2014-09-30	Fecha de entrega: 2014-10-10
Tipo de muestra: Agua potable ***	Muestra(s) No.:24437-1/1	
Condiciones de la(s) muestra(s): Recibida en envase plástico con tapa de rosca.		
Muestra aportada por: El cliente	Tipo de muestreo: No Aplica	
<b>Resultado(s):</b> En la(s) muestra(s) analizada(s)		

\*\*\* MUESTRA IDENTIFICADA COMO: Agua de la llave

DETERMINACIONES	RESULTADOS
* Recuento de microorganismos aerobios mesófilos (1)	2,4 x 10 <sup>3</sup> UFC/mL
* Determinación de coliformes totales (2)	23 NMP/100 mL
** Presencia de <i>Pseudomonas aeruginosa</i> (3)	Presente/100 mL

UFC = Unidades Formadoras de Colonias  
NMP = Número Más Probable

**"DEBAJO DE ESTA LINEA NO HAY MAS RESULTADOS DE ESTE ENSAYO"**

\* Ensayo Acreditado ISO/IEC 17025:2005. Ver alcance en [www.eca.or.cr](http://www.eca.or.cr)

\*\* Ensayo No Acreditado



Los resultados que se indican en este informe se refieren exclusivamente a la muestra analizada y no establece juicio alguno sobre la calidad del lote al que pertenece, ni la producción de la empresa.

Metodología(s) o Referencias: (1,2) Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF 22nd Edition. (3) USP 35 (Metodología Modificada)

Material(es) de Referencia(s): ATCC 25922- ATCC 10145

Equipo(s) utilizado(s): Los que aplican para los ensayos

Firmas:

Realizado por:	Aprobado por:	Verificado por:
 María Rosa Cruz Miriño Analista	 Ana Victoria Vargas Encargado del Laboratorio	 Supervisor Técnico

NOTA: Este informe no debe ser reproducido, excepto en su totalidad, sin la previa autorización del IIBI  
Original: Cliente Copia No.1: Servicio al Cliente Copia No. 2: Supervisor Técnico Copia No.3: Laboratorio responsable del ensayo

**DEBAJO DE ESTA LINEA NO HAY MAS DATOS DE ESTE INFORME**

A nuestros clientes:

1) Las cifras de mil se separarán con un espacio Ej. 10,000 o 1,428 se expresarán como 10 000 o 1 428 respectivamente.

2) El marcador decimal es sustituido por una coma Ej. 0.25 y 28.30 se expresarán 0,25 y 28,30 respectivamente.

Este cambio es atendiendo a los procedimientos del Ente de Acreditación.

INSTITUTO DE INNOVACIÓN EN BIOTECNOLOGÍA E INDUSTRIA		Solicitud No.24437		
Calle Olof Palme Esq. Núñez de Cáceres, Tels. 809-566-8121/29, Apartado Postal No. 329-2, Santo Domingo, D.N. -RNC:430-00016-7		2014	10	10
INFORME DE RESULTADOS DEL LABORATORIO DE MICROBIOLOGIA		Año	Mes	Día

Datos del Solicitante	
Nombre del Cliente o Empresa: <b>AMIRAM LEV</b>	Tel.: (829) 599-7373
Nombre del contacto: Amiram Lev	
Dirección: Calle 25	

Datos del Servicio		
Fecha de recibo: 2014-09-30	Fecha de inicio: 2014-09-30	Fecha de entrega: 2014-10-10
Tipo de muestra: Agua potable ***	Muestra(s) No.:24437-1/1	
Condiciones de la(s) muestra(s): Recibida en envase plástico con tapa de rosca.		
Muestra aportada por: El cliente	Tipo de muestreo: No Aplica	
Resultado(s): En la(s) muestra(s) analizada(s)		

\*\*\* MUESTRA IDENTIFICADA COMO: Agua de la llave

DETERMINACIONES	RESULTADOS
* Recuento de microorganismos aerobios mesófilos (1)	2,4 x 10 <sup>3</sup> UFC/mL
* Determinación de coliformes totales (2)	23 NMP/100 mL
** Presencia de <i>Pseudomonas aeruginosa</i> (3)	Presente/100 mL

UFC = Unidades Formadoras de Colonias  
NMP = Número Más Probable

**"DEBAJO DE ESTA LINEA NO HAY MAS RESULTADOS DE ESTE ENSAYO"**

\* Ensayo Acreditado ISO/IEC 17025:2005. Ver alcance en [www.eca.or.cr](http://www.eca.or.cr)

\*\* Ensayo No Acreditado



Los resultados que se indican en este informe se refieren exclusivamente a la muestra analizada y no establece juicio alguno sobre la calidad del lote al que pertenece, ni la producción de la empresa.

Metodología(s) o Referencias: (1,2) Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF 22nd Edition. (3) USP 35 (Metodología Modificada)

Material(es) de Referencia(s): ATCC 25922- ATCC 10145

Equipo(s) utilizado(s): Los que aplican para los ensayos

Firmas:

Realizado por:	Aprobado por:	Verificado por:
 María Rosa Cruz Miriño Analista	 Ana Victoria Vargas Encargado del Laboratorio	 Supervisor Técnico

NOTA: Este informe no debe ser reproducido, excepto en su totalidad, sin la previa autorización del IIBI  
Original: Cliente Copia No.1: Servicio al Cliente Copia No. 2: Supervisor Técnico Copia No.3: Laboratorio responsable del ensayo

**DEBAJO DE ESTA LINEA NO HAY MAS DATOS DE ESTE INFORME**

A nuestros clientes:

1) Las cifras de mil se separarán con un espacio Ej. 10,000 o 1,428 se expresarán como 10 000 o 1 428 respectivamente.

2) El marcador decimal es sustituido por una coma Ej. 0.25 y 28.30 se expresarán 0,25 y 28,30 respectivamente.

Este cambio es atendiendo a los procedimientos del Ente de Acreditación.

Attachment 4

HISOPADO MICROBIOLÓGICO



microtechmoca@gmail.com  
809-578-5876  
RNC 130-77728-4


Caso número: 14-10-09-1257-C  
Propietario/Compañía: Falahoz  
Proyecto: Ambiente Controlado CAC

Fecha: 09/10/2014  
Contacto: Domingo Tate

Hora: 09:10 AM

Investigación realizada	Muestras y resultados en UFC		
	P-N4 Derecha	P-N4 Izquierda	No aplica
Hongos	0	0	
<i>Staphylococcus spp</i>	0	0	
Coliformes totales	0	0	
<i>E. coli</i>	0	0	
<i>Pseudomona spp</i>	2	1	
<i>Salmonella spp</i>	0	0	
<i>Clostridium spp</i>	0	0	
<i>Vibrio spp</i>	0	0	
Otros-Mesófilos	12	1	

Observaciones y notas: Ninguna.

  
Lic. Jacqueline Ureña Hernández  
Bioanalista- Especialista en Patología Veterinaria



No se detallan valores de referencia por la diversidad de muestras (áreas, órganos, entre otros) que pueden ser sometidas a investigación. La interpretación técnica quedará bajo la responsabilidad de la persona o entidad solicitante del servicio, en relación a la naturaleza de la(s) muestra(s) objeto de estudio y a la condición bajo la cual fue(ron) tomada(s).





microtechmoca@gmail.com  
809-578-5876  
RNC 130-77728-4

**Caso número:** 14-10-09-1257-B  
**Propietario/Compañía:** Falahoz  
**Proyecto:** Ambiente Controlado CAC

**Fecha:** 09/10/2014  
**Contacto:** Domingo Tate


**Hora:** 09:10 AM

Investigación realizada	Muestras y resultados en UFC		
	T-N3 Izquierda	P-N4 Alante	P-N4 Atrás
Hongos	6	0	1
<i>Staphylococcus spp</i>	74	1	48
Coliformes totales	12	2	5
<i>E. coli</i>	3	1	3
<i>Pseudomona spp</i>	2	0	0
<i>Salmonella spp</i>	0	0	0
<i>Clostridium spp</i>	0	0	0
<i>Vibrio spp</i>	0	0	0
Otros-Mesófilos	>500	17	57

**Observaciones y notas:**

**Hongos T-N3 Izquierda:** 1 UFC *Aspergillus pp* y 5 UFC *Cándida spp*.

**Hongo P-N4 Atrás:** 1 UFC Moho

  
Lic. Jacqueline Ureña Hernández  
Bioanalista- Especialista en Patología Veterinaria



No se detallan valores de referencia por la diversidad de muestras (áreas, órganos, entre otros) que pueden ser sometidas a investigación. La interpretación técnica quedará bajo la responsabilidad de la persona o entidad solicitante del servicio, en relación a la naturaleza de la(s) muestra(s) objeto de estudio y a la condición bajo la cual fue(ron) tomada(s).



microtechmoca@gmail.com  
809-578-5876  
RNC 130-77728-4

**Caso número:** 14-10-09-1257-A  
**Propietario/Compañía:** Falahoz  
**Proyecto:** Ambiente Controlado CAC

**Fecha:** 09/10/2014  
**Contacto:** Domingo Tate

**Hora:** 09:10 AM


Investigación realizada	Muestras y resultados en UFC		
	T-N3 Alante	T-N3 Atrás	T-N3 Derecha
Hongos	3	1	2
<i>Staphylococcus spp</i>	26	50	95
Coliformes totales	9	270	86
<i>E. coli</i>	7	93	30
<i>Pseudomona spp</i>	2	105	63
<i>Salmonella spp</i>	0	0	0
<i>Clostridium spp</i>	0	0	0
<i>Vibrio spp</i>	0	0	0
Otros-Mesófilos	62	104	>500

**Observaciones y notas:**

**Hongos T-N3 Alante:** 2 UFC *Cándida spp* y 1 UFC *Aspergillus pp*.

**Hongo T-N3 Atrás:** 1 UFC Moho

**Hongos TN3 Derecha:** 1 UFC *Cándida spp* y 1 UFC *Aspergillus spp*.

  
Lic. Jacqueline Ureña Hernández  
Bioanalista- Especialista en Patología Veterinaria



No se detallan valores de referencia por la diversidad de muestras (áreas, órganos, entre otros) que pueden ser sometidas a investigación. La interpretación técnica quedará bajo la responsabilidad de la persona o entidad solicitante del servicio, en relación a la naturaleza de la(s) muestra(s) objeto de estudio y a la condición bajo la cual fue(ron) tomada(s).

<b>INSTITUTO DE INNOVACIÓN EN BIOTECNOLOGÍA E INDUSTRIA</b> Calle Olof Palme Esq. Núñez de Cáceres, Tels. 809-566-8121/29, Apartado Postal No. 329-2, Santo Domingo, D.N. -RNC 430-00016-7		Solicitud No. 24437		
<b>INFORME DE RESULTADOS DEL LABORATORIO DE MICROBIOLOGIA</b>		2014	10	10
		Año	Mes	Día

<b>Datos del Solicitante</b> Nombre del Cliente o Empresa: <b>AMIRAM LEV</b> Nombre del contacto: Amiram Lev Dirección: Calle 25		Tel.: (829) 599-7373
---	--	----------------------

<b>Datos del Servicio</b> Fecha de recibo: 2014-09-30      Fecha de inicio: 2014-09-30      Fecha de entrega: 2014-10-10 Tipo de muestra: Agua potable ***      Muestra(s) No.: 24437-1/1 Condiciones de la(s) muestra(s): Recibida en envase plástico con tapa de rosca Muestra aportada por: El cliente      Tipo de muestreo: No Aplica		
--	--	--

Resultado(s): En la(s) muestra(s) analizada(s)

\*\*\* MUESTRA IDENTIFICADA COMO: Agua de la llave

DETERMINACIONES	RESULTADOS
* Recuento de microorganismos aerobios mesófilos (1)	2,4 x 10 <sup>3</sup> UFC/mL
* Determinación de coliformes totales (2)	23 NMP/100 mL
** Presencia de <i>Pseudomonas aeruginosa</i> (3)	Presente/100 mL

UFC = Unidades Formadoras de Colonias  
 NMP = Número Más Probable

**\*DEBAJO DE ESTA LINEA NO HAY MAS RESULTADOS DE ESTE ENSAYO\***

\* Ensayo Acreditado ISO/IEC 17025:2005. Ver alcance en [www.eca.or.cr](http://www.eca.or.cr)  
 \*\* Ensayo No Acreditado



Los resultados que se indican en este informe se refieren exclusivamente a la muestra analizada y no establece juicio alguno sobre la calidad del lote al que pertenece, ni la producción de la empresa.

Metodología(s) o Referencias: (1,2) Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF 22nd Edition. (3) USP 35 (Metodología Modificada)

Material(es) de Referencia(s): ATCC 25922- ATCC 10145

Equipo(s) utilizado(s): Los que aplican para los ensayos

Firmas:

Realizado por:	Aprobado por:	Verificado por:
 Maria Rosa Cruz Miriño Analista	 Ana Victoria Vargas Encargado del Laboratorio	 Supervisor Técnico

NOTA: Este informe no debe ser reproducido, excepto en su totalidad, sin la previa autorización del IIBI

Original: Cliente      Copia No.1: Servicio al Cliente      Copia No. 2: Supervisor Técnico      Copia No.3: Laboratorio responsable del ensayo

**DEBAJO DE ESTA LINEA NO HAY MAS DATOS DE ESTE INFORME**

A nuestros clientes:

- 1) Las cifras de mil se separarán con un espacio Ej. 10,000 o 1,428 se expresarán como 10 000 o 1 428 respectivamente.
  - 2) El marcador decimal es sustituido por una coma Ej. 0.25 y 28.30 se expresarán 0,25 y 28,30 respectivamente.
- Este cambio es atendiendo a los procedimientos del Ente de Acreditación.



INSTITUTO DE INNOVACIÓN EN BIOTECNOLOGÍA E INDUSTRIA		Solicitud No. 24467		
Calle Ólaf Palme Esq. Núñez de Cáceres, Tels. 809-566-8121/29, Apartado Postal No. 329-2, Santo Domingo, D.N. -RNC:430-00016-7		2014	10	15
INFORME DE RESULTADOS DEL LABORATORIO DE MICROBIOLOGIA		Año	Mes	Día

**Datos del Solicitante**

Nombre del Cliente o Empresa: AMIRAM LEV	Tel.: (829) 599-7373
Nombre del Contacto: Amiram Lev	
Dirección: Calle 25	

**Datos del Servicio**

Fecha de recibo: 2014-10-06	Fecha de inicio: 2014-10-06	Fecha de entrega: 2014-10-15
Tipo de muestra: Agua Potable***	Muestra(s) No.: 24467- 1/1	
Condiciones de la(s) muestra(s): Recibida en envase plástico con tapa de rosca		
Muestra aportada por: El Cliente	Tipo de muestreo: No aplica	
Resultado(s): En la(s) muestra(s) analizada(s)		

\*\*\* MUESTRA IDENTIFICADA COMO: AGUA DE LA LLAVE EN LA GRANJA ( CON VIRULSYL)

DETERMINACIONES	RESULTADOS
* Recuento de microorganismos aerobios mesófilos (1)	< 1,0 x 10 UFC/mL
* Determinación de coliformes totales (2)	< 1,1 NMP/100 mL
* Determinación de <i>E. coli</i> (3)	< 1,1 NMP/100 mL
** Presencia de <i>Pseudomonas aeruginosa</i> (4)	Ausente/100 mL

UFC = Unidades Formadoras de Colonias

NMP = Número Más Probable

**"DEBAJO DE ESTA LINEA NO HAY MAS RESULTADOS DE ESTE ENSAYO"**

\* Ensayo Acreditado ISO/IEC 17025:2005. Ver alcance en [www.eca.or.cr](http://www.eca.or.cr)

\*\* Ensayo No Acreditado



Los resultados que se indican en este informe se refieren exclusivamente a la muestra analizada y no establece juicio alguno sobre la calidad del lote al que pertenece, ni la producción de la empresa.

Metodología(s) o Referencias: (1,2,3) Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF 22<sup>nd</sup> Edition. (4) USP 35 (Metodología Modificada)

Material(es) de Referencia(s): ATCC 25922 - ATCC 10145

Equipo(s) utilizado(s): Los que aplican para los ensayos

Firmas:

Realizado por:

Aprobado por:

Verificado por:

*Aina Ramírez*  
Aina Ramírez

*Ana Victoria Vargas*  
Ana Victoria Vargas

*[Firma]*

Analista

Encargado del Laboratorio

Supervisor Técnico

NOTA: Este informe no debe ser reproducido, excepto en su totalidad, sin la previa autorización del IBI

Original: Cliente      Copia No.1: Servicio al Cliente      Copia No. 2: Supervisor Técnico      Copia No.3: Laboratorio responsable del ensayo

**DEBAJO DE ESTA LINEA NO HAY MAS DATOS DE ESTE INFORME**

A nuestros clientes:

1) Las cifras de mil se separarán con un espacio Ej. 10,000 o 1,428 se expresarán como 10 000 o 1 428 respectivamente.

2) El marcador decimal es sustituido por una coma Ej. 0.25 y 28.30 se expresarán 0,25 y 28,30 respectivamente.

Este cambio es atendiendo a los procedimientos del Ente de Acreditación.

<b>INSTITUTO DE INNOVACIÓN EN BIOTECNOLOGÍA E INDUSTRIA</b> Calle Olof Palme Esq. Núñez de Cáceres, Telex: 809-568-8121/29, Apartado Postal No. 329-2, Santo Domingo, D.N. -RNC 430-0016-7		Solicitud No. 24437		
<b>INFORME DE RESULTADOS DEL LABORATORIO DE MICROBIOLOGIA</b>		2014	10	10
		Año	Mes	Día
<b>Datos del Solicitante</b>				
Nombre del Cliente o Empresa: <b>AMIRAM LEV</b>		Tel.: (829) 599-7373		
Nombre del contacto: Amiram Lev				
Dirección: Calle 25				
<b>Datos del Servicio</b>				
Fecha de recibo: 2014-09-30	Fecha de inicio: 2014-09-30	Fecha de entrega: 2014-10-10		
Tipo de muestra: Agua potable ***			Muestra(s) No.: 24437-1/1	
Condiciones de la(s) muestra(s): Recibida en envase plástico con tapa de rosca				
Muestra aportada por: El cliente				
Resultado(s): En la(s) muestra(s) analizada(s)		Tipo de muestreo: No Aplica		

\*\*\* MUESTRA IDENTIFICADA COMO: Agua de la llave

DETERMINACIONES	RESULTADOS
* Recuento de microorganismos aerobios mesófilos (1)	2,4 x 10 <sup>4</sup> UFC/mL
* Determinación de coliformes totales (2)	23 NMP/100 mL
** Presencia de <i>Pseudomonas aeruginosa</i> (3)	Presente/100 mL

UFC = Unidades Formadoras de Colonias  
 NMP = Número Más Probable

**DEBAJO DE ESTA LINEA NO HAY MAS RESULTADOS DE ESTE ENSAYO\***

\* Ensayo Acreditado ISO/IEC 17025:2005. Ver alcance en [www.eca.or.cr](http://www.eca.or.cr)  
 \*\* Ensayo No Acreditado



Los resultados que se indican en este informe se refieren exclusivamente a la muestra analizada y no establece juicio alguno sobre la calidad del lote al que pertenece, ni la producción de la empresa.

Metodología(s) o Referencias: (1,2) Standard Methods for the Examination of Water and Wastewater, APHA-AWWA-WEF 22nd Edition. (3) USP 35 (Metodología Modificada)

Materia(es) de Referencia(s): ATCC 25922- ATCC 10145

Equipo(s) utilizado(s): Los que aplican para los ensayos

Firmas:

Realizado por:	Aprobado por:	Verificado por:
<i>María Rosa Cruz Miriño</i> Analista	<i>Ana Victoria Vargas</i> Encargado del Laboratorio	<i>[Firma]</i> Supervisor Técnico

NOTA: Este informe no debe ser reproducido, excepto en su totalidad, sin la previa autorización del IIBI

Original: Cliente Copia No. 1: Servicio al Cliente Copia No. 2: Supervisor Técnico Copia No. 3: Laboratorio responsable del ensayo

**DEBAJO DE ESTA LINEA NO HAY MAS DATOS DE ESTE INFORME**

- A nuestros clientes:
- 1) Las cifras de mil se separarán con un espacio Ej. 10,000 o 1,428 se expresarán como 10 000 o 1 428 respectivamente.
  - 2) El marcador decimal es sustituido por una coma Ej. 0,25 y 28,30 se expresarán 0,25 y 28,30 respectivamente.
- Este cambio es atendiendo a los procedimientos del Ente de Acreditación.

Attachment 6



# Patronato Nacional de Ganaderos

Decreto No. 67-88

Santo Domingo, Dominican Republic  
March 27<sup>th</sup> 2014

Mr. Sami Benhamou, CEO  
Natural Solutions Group Corp - Viro2Syl  
5120 NW 165th St Miami Gardens FL 33014

RE: Decontamination of stables and livestock living area at the Patronato Nacional De Ganaderos of Viro2Syl conducted for the livestock association march 10<sup>th</sup> 2014

Dear Mr. Benhamou

I am delighted to inform you that our testing results for the remediation by Viro2Syl of livestock endangering organisms in their habitat showed that Viro2Syl has effectively decontaminated the area with no toxic residuals - as shown in the attached lab report done by our sanctioned laboratories.

Consequently we have decided to pass a new regulation requesting the livestock farmers to use only products like Viro2Syl with efficacy and toxicity profiles as shown in the attached report!

As we are working to pass this regulation soon given the potential risks present in our livestock habitat at the Dominican Republic - we thought it would be in order to provide you with sufficient time to prepare for our anticipated demand for Viro2Syl.

We expect to remain in frequent communication with you as additional information about Viro2Syl may be required as we engage in the drafting and passing of this new regulation

Thanking you in advance for you time and interest, we hope to hear from you soon.

Sincerely,



Dr. René Columna G.  
President



## CONTROL CALIDAD POLLITOS


**Microtech**  
 TECNOLOGÍA DIAGNÓSTICA Y DE CONTROL

microtechmoca@gmail.com

809-578-5876

RNC 130-77728-4

Caso número: 17-06-16-7777

Fecha: 16/06/2017

Hora: 09:58 AM

Propietario/Compañía: Endy Agroind.

Proyecto: Incubadora

Contacto: Renny R.

Lote: 26 (pesada)

Investigación	Resultados
Infección en saco vitelino	23/25
Aspergillus en pulmón	2/25
Investigación de Salmonella	0/25
Test de Cervantes- articulaciones	0/25

Prueba de sensibilidad antibiótica para: *E. coli*

Penicilina	R	Tetraciclina	R	Enrofloxacina	I
Amoxicilina	R	Sulfa/Trimet.	R	Norfloxacina	I
Eritromicina	R	Fosfomicina	S	Ciprofloxacina	I
Ampicilina	R	Gentamicina	R	Neomicina	R
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Streptomycin	R
Levofloxacina	R	Trimethoprim	R	-	-


## Prueba de sensibilidad antibiótica para: NA

Penicilina	-	Tetraciclina	-	Enrofloxacina	-
Amoxicilina	-	Sulfa/Trimet.	-	Norfloxacina	-
Eritromicina	-	Fosfomicina	-	Ciprofloxacina	-
Ampicilina	-	Gentamicina	-	Neomicina	-
Cefalexina	-	Lincomicina	-	Fosfomicina/tilosina	-
Oxacilina	-	Doxiciclina	-	Streptomycin	-
Levofloxacina	-	Trimethoprim	-	-	-

\*Interpretación de sensibilidad: S = Sensible I = Intermedio R = Resistente

NA= No aplica

Observaciones y notas: Ninguna.


 Lic. Jacqueline Ureña Hernández

Bioanalista- Especialista en Patología Veterinaria



microtechmoca@gmail.com  
809-578-5876  
RNC 130-77728-4

Caso número: 17-04-21-6614  
Propietario/Compañía: Endy Agroind.  
Contacto: Genilza S.

Fecha: 21/04/2017  
Proyecto: Incubadora  
Lote: 26

Hora: 10:40 AM

Investigación	Resultados
Infección en saco vitelino	18/25
Aspergillus en pulmón	20/25
Investigación de Salmonella	0/25
Test de Cervantes- articulaciones	0/25

**Prueba de sensibilidad antibiótica para: *E. coli***

Penicilina	R	Tetraciclina	R	Enrofloxacina	R
Amoxicilina	R	Sulfa/Trimet.	R	Norfloxacina	R
Eritromicina	R	Fosfomicina	S	Ciprofloxacina	R
Ampicilina	R	Gentamicina	R	Neomicina	R
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Ceftiofur	R
Levofloxacina	R	Cloranfenicol	R	Florfenicol	R
Streptomicina	S	-	-	-	-

**Prueba de sensibilidad antibiótica para: *Pseudomona aeruginosa***

Penicilina	R	Tetraciclina	S	Enrofloxacina	R
Amoxicilina	R	Sulfa/Trimet.	R	Norfloxacina	R
Eritromicina	R	Fosfomicina	R	Ciprofloxacina	R
Ampicilina	R	Gentamicina	R	Neomicina	R
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	R
Oxacilina	R	Doxiciclina	R	Ceftiofur	R
Levofloxacina	R	Cloranfenicol	S	Florfenicol	S
Streptomicina	S	-	-	-	-

\*Interpretación de sensibilidad: S = Sensible I = Intermedio R = Resistente  
NA= No aplica

Observaciones y notas: Ninguna.

Lic. Jacqueline Ureña Hernández  
Bioanalista- Especialista en Patología Veterinaria







microtechmoca@gmail.com  
809-578-5876  
RNC 130-77728-4

Caso número: 17-05-23-6689

Fecha: 23/05/2017

Hora: 10:08 AM

Propietario/Compañía: Endy Agroind.

Proyecto: Incubadora

Contacto: Genylza S.

Lote: 27

Investigación	Resultados
Infección en saco vitelino	14/25
Aspergillus en pulmón	12/25
Investigación de Salmonella	0/25
Test de Cervantes- articulaciones	0/25

**Prueba de sensibilidad antibiótica para: *E. coli***

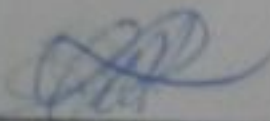
Penicilina	R	Tetraciclina	R	Enrofloxacina	S
Amoxicilina	R	Sulfa/Trimet.	S	Norfloxacina	S
Eritromicina	R	Fosfomicina	R	Ciprofloxacina	S
Ampicilina	R	Gentamicina	R	Neomicina	R
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	R
Oxacilina	R	Doxiciclina	R	Streptomycin	R
Levofloxacina	S	Trimethoprim	S	-	-

**Prueba de sensibilidad antibiótica para: *Pseudomonas aeruginosa***

Penicilina	R	Tetraciclina	S	Enrofloxacina	S
Amoxicilina	I	Sulfa/Trimet.	S	Norfloxacina	S
Eritromicina	R	Fosfomicina	R	Ciprofloxacina	S
Ampicilina	I	Gentamicina	I	Neomicina	R
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	R
Oxacilina	R	Doxiciclina	S	Streptomycin	R
Levofloxacina	S	Trimethoprim	S	-	-

\*Interpretación de sensibilidad: S = Sensible I = Intermedio R = Resistente  
NA= No aplica

Observaciones y notas: Ninguna.

  
Lic. Jacqueline Ureña Hernández  
Bioanalista- Especialista en Patología Veterinaria

**Microtech**  
TECNOLOGIA DIAGNOSTICA Y DE CONTROL

microtechmoca@gmail.com  
809-578-5876  
RNC 130-77728-4

Caso número: 17-06-16-7777

Fecha: 16/06/2017

Hora: 09:58 AM

Propietario/Compañía: Endy Agroind.

Proyecto: Incubadora

Contacto: Renny R.

Lote: 56 (liviana)

Investigación	Resultados
Infección en saco vitelino	11/25
Aspergillus en pulmón	1/25
Investigación de Salmonella	0/25
Test de Cervantes- articulaciones	0/25

**Prueba de sensibilidad antibiótica para: *E. coli***

Penicilina	R	Tetraciclina	R	Enrofloxacina	S
Amoxicilina	R	Sulfa/Trimet.	R	Norfloxacina	S
Eritromicina	R	Fosfomicina	S	Ciprofloxacina	S
Ampicilina	R	Gentamicina	R	Neomicina	R
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Streptomycin	R
Levofloxacina	S	Trimethoprim	R	-	-

**Prueba de sensibilidad antibiótica para: *Ps. aeruginosa***

Penicilina	R	Tetraciclina	S	Enrofloxacina	R
Amoxicilina	R	Sulfa/Trimet.	S	Norfloxacina	R
Eritromicina	R	Fosfomicina	R	Ciprofloxacina	R
Ampicilina	R	Gentamicina	R	Neomicina	R
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	R
Oxacilina	R	Doxiciclina	S	Streptomycin	R
Levofloxacina	S	Trimethoprim	S	-	-

\*Interpretación de sensibilidad: S = Sensible I = Intermedio R = Resistente  
NA= No aplica

Observaciones y notas: Ninguna.

Lic. Jacqueline Ureña Hernández  
Bioanalista- Especialista en Patología Veterinaria

Carson M. Urbani

Prueba Muestra



TECNOLOGÍA DIAGNÓSTICA Y DE CONTROL

microtechmoca@gmail.com  
809-578-5876  
RNC 130-77728-4

Caso número: 17-04-21-6614  
Propietario: Endy Agroind.  
Muestra: Gallinas 36 sem. Nave 10

Fecha: 21/04/2017  
Proyecto: Avícola

Hora: 10:40 AM  
Contacto: Genilza S.

**AISLAMIENTO E IDENTIFICACIÓN BACTERIANA**

Se aisló Mannheimia haemolytica y Pseudomonas aeruginosa de tráquea y senos nasales.

- Investigación de: Candida spp, positiva.
- Investigación de: Clostridium spp y Salmonella spp, negativa.

**Prueba de sensibilidad antibiótica para: M. haemolytica**

Penicilina	S	Tetraciclina	S	Enrofloxacina	S
Amoxicilina	S	Sulfa/Trimet.	S	Norfloxacina	S
Eritromicina	I	Fosfomicina	S	Ciprofloxacina	S
Ampicilina	S	Gentamicina	S	Neomicina	S
Cefalexina	S	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Ceftiofur	S
Levofloxacina	S	Cloramphenicol	I	Florfenicol	S
Streptomycin	S	-	-	-	-

**Prueba de sensibilidad antibiótica para: Ps. aeruginosa**

Penicilina	R	Tetraciclina	S	Enrofloxacina	S
Amoxicilina	S	Sulfa/Trimet.	S	Norfloxacina	S
Eritromicina	R	Fosfomicina	S	Ciprofloxacina	S
Ampicilina	S	Gentamicina	S	Neomicina	R
Cefalexina	S	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Ceftiofur	S
Levofloxacina	S	Cloramphenicol	S	Florfenicol	S
Streptomycin	S	-	-	-	-

\* Interpretación de sensibilidad: S = Sensible I = Intermedio R = Resistente

NA= No aplica

Observaciones y notas: Ninguna.

Lic. Jacqueline Ureña Hernández  
Bioanalista- Especialista en Patología Veterinaria





microtechmoca@gmail.com  
809-578-5876  
RNC 130-77728-4

Caso número: 17-04-21-6614      Fecha: 21/04/2017      Hora: 10:40 AM  
Propietario: Endy Agroind.      Contacto: Genilza S.      Muestra: Gallinas 36 sem. Nave 10

### HALLAZGOS

**Aspecto externo/signos/síntomas:**

Boqueo. Roco. Chua.

**Sistema músculo-esquelético:**

Sin lesiones.

**Sistema cardio-respiratorio:**

Senos nasales hiperémicos.

Tráquea hiperémica, con presencia de moco y material caseoso.

**Sistema uro-genital:**

Sin lesiones.

**Sistema digestivo o gastro-intestinal:**

Lesiones compatibles con candidiasis en buche.

Enteritis. Se observaron algunos oocitos en raspado intestinal. (Parasitos)

**Sistema inmune organizado:**

Sin lesiones.


**Observaciones y notas:**

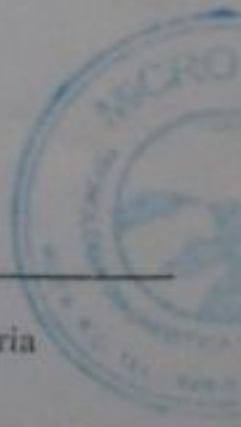
Candidiasis.

Proceso respiratorio.

Evaluar con veterinario posible presencia de virus de tropismo respiratorio.

NA= No aplica

  
Lic. Jacqueline Ureña Hernández  
Bioanalista- Especialista en Patología Veterinaria





microtechmoca@gmail.com  
809-578-5876  
RNC 130-77728-4

Caso número: 17-05-05-6648 B  
Propietario/Compañía: Endy Agroindustrial  
Contacto: Renny Reyes

Fecha: 05/05/2017 Hora: 11:02 AM  
Proyecto: Incubadora  
Lote: 56 Virodosil de pisos

Investigación	Resultados
Infección en saco vitelino	8/25
Aspergillus en pulmón	25/25
Investigación de Salmonella	0/25
Test de Cervantes- articulaciones	0/25

Prueba de sensibilidad antibiótica para: *E. coli*

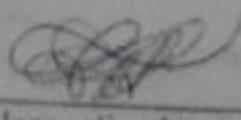
Penicilina	R	Tetraciclina	R	Enrofloxacina	S
Amoxicilina	R	Sulfa/Trimet.	S	Norfloxacina	S
Eritromicina	R	Fosfomicina	I	Ciprofloxacina	S
Ampicilina	R	Gentamicina	S	Neomicina	I
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Ceftiofur	S
Levofloxacina	S	Cloramphenicol	R	Florfenicol	R
Streptomycin	R	-	-	-	-

Prueba de sensibilidad antibiótica para: *Pseudomona aeruginosa*

Penicilina	R	Tetraciclina	R	Enrofloxacina	R
Amoxicilina	R	Sulfa/Trimet.	S	Norfloxacina	R
Eritromicina	R	Fosfomicina	S	Ciprofloxacina	R
Ampicilina	R	Gentamicina	R	Neomicina	R
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Ceftiofur	S
Levofloxacina	S	Cloranfenicol	R	Florfenicol	R
Streptomycin	R	-	-	-	-

\*Interpretación de sensibilidad: S = Sensible I = Intermedio R = Resistente  
NA= No aplica

Observaciones y notas: Ninguna.

  
Lic. Jacqueline Ureña Hernández  
Bioanalista- Especialista en Patología Veterinaria





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809-578-5876

RNC 130-77728-4

Caso número: 17-05-05-6648 C

Propietario/Compañía: Endy Agroindustrial

Contacto: Renny Reyes

Fecha: 05/05/2017

Hora: 11:02 AM

Proyecto: Incubadora

Lote: 56 Poliphen de piso

Investigación	Resultados
Infección en saco vitelino	20/25
Aspergillus en pulmón	22/25
Investigación de Salmonella	0/25
Test de Cervantes- articulaciones	0/25

Prueba de sensibilidad antibiótica para: *E. coli*

Penicilina	R	Tetraciclina	R	Enrofloxacina	S
Amoxicilina	S	Sulfa/Trimet.	R	Norfloxacina	S
Eritromicina	R	Fosfomicina	S	Ciprofloxacina	S
Ampicilina	S	Gentamicina	S	Neomicina	I
Cefalexina	S	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Ceftiofur	S
Levofloxacina	S	Cloramphenicol	R	Florfenicol	R
Streptomycin	S	-	-	-	-

Prueba de sensibilidad antibiótica para: *Pseudomona aeruginosa*

Penicilina	R	Tetraciclina	R	Enrofloxacina	R
Amoxicilina	R	Sulfa/Trimet.	R	Norfloxacina	R
Eritromicina	R	Fosfomicina	S	Ciprofloxacina	R
Ampicilina	R	Gentamicina	R	Neomicina	R
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Ceftiofur	S
Levofloxacina	S	Cloranfenicol	R	Florfenicol	R
Streptomycin	R	-	-	-	-

\*Interpretación de sensibilidad: S = Sensible I = Intermedio R = Resistente  
NA= No aplica

Observaciones y notas: Ninguna.

Lic. Jacqueline Ureña Hernández  
Bioanalista- Especialista en Patología Veterinaria



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809-578-5876  
RNC 130-77728-4

Caso número: 17-06-16-7777

Fecha: 16/06/2017

Hora: 09:58 AM

Propietario/Compañía: Endy Agroind.

Proyecto: Incubadora

Contacto: Renny R.

Lote: 28 (pesada)

Investigación	Resultados
Infección en saco vitelino	23/25
Aspergillus en pulmón	3/25
Investigación de Salmonella	0/25
Test de Cervantes- articulaciones	0/25

**Prueba de sensibilidad antibiótica para: *E. coli***

Penicilina	R	Tetraciclina	R	Enrofloxacina	R
Amoxicilina	R	Sulfa/Trimet.	R	Norfloxacina	R
Eritromicina	R	Fosfomicina	S	Ciprofloxacina	R
Ampicilina	R	Gentamicina	R	Neomicina	R
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Streptomycin	R
Levofloxacina	R	Trimethoprim	R	-	-

**Prueba de sensibilidad antibiótica para: NA**

Penicilina	-	Tetraciclina	-	Enrofloxacina	-
Amoxicilina	-	Sulfa/Trimet.	-	Norfloxacina	-
Eritromicina	-	Fosfomicina	-	Ciprofloxacina	-
Ampicilina	-	Gentamicina	-	Neomicina	-
Cefalexina	-	Lincomicina	-	Fosfomicina/tilosina	-
Oxacilina	-	Doxiciclina	-	Streptomycin	-
Levofloxacina	-	Trimethoprim	-	-	-

\*Interpretación de sensibilidad: S = Sensible I = Intermedio R = Resistente  
NA= No aplica

Observaciones y notas: Ninguna.

Lic. Jacqueline Ureña Hernández  
Bioanalista- Especialista en Patología Veterinaria



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 RNC 130-77728-4

Caso número: 17-05-23-6689

Fecha: 23/05/2017

Hora: 10:08 AM

Propietario/Compañía: Endy Agroind.

Proyecto: Incubadora

Contacto: Genylza S.

Lote: 25

Investigación	Resultados
Infección en saco vitelino	17/25
Aspergillus en pulmón	3/25
Investigación de Salmonella	0/25
Test de Cervantes- articulaciones	0/25

**Prueba de sensibilidad antibiótica para: *E. coli***

Penicilina	R	Tetraciclina	R	Enrofloxacina	R
Amoxicilina	I	Sulfa/Trimet.	R	Norfloxacina	R
Eritromicina	R	Fosfomicina	S	Ciprofloxacina	R
Ampicilina	R	Gentamicina	R	Neomicina	R
Cefalexina	I	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Streptomycin	R
Levofloxacina	R	Trimethoprim	R	-	-

**Prueba de sensibilidad antibiótica para: *Pseudomona aeruginosa***

Penicilina	R	Tetraciclina	R	Enrofloxacina	S
Amoxicilina	R	Sulfa/Trimet.	R	Norfloxacina	S
Eritromicina	R	Fosfomicina	I	Ciprofloxacina	S
Ampicilina	R	Gentamicina	S	Neomicina	R
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Streptomycin	S
Levofloxacina	S	Trimethoprim	R	-	-

\*Interpretación de sensibilidad: S = Sensible I = Intermedio R = Resistente  
 NA= No aplica

Observaciones y notas: Ninguna.

Lic. Jacqueline Ureña Hernández  
 Bioanalista- Especialista en Patología Veterinaria



# Microtech

TECNOLOGÍA DIAGNÓSTICA Y DE CONTROL

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809-578-5876

RNC 130-77728-4

Caso número: 17-04-21-6614  
 Propietario/Compañía: Endy Agroind.  
 Contacto: Genilza S.

Fecha: 21/04/2017  
 Proyecto: Incubadora  
 Lote: 25

Hora: 10:40 AM

Investigación	Resultados
Infección en saco vitelino	13/25
Aspergillus en pulmón	21/25
Investigación de Salmonella	0/25
Test de Cervantes- articulaciones	0/25

**Prueba de sensibilidad antibiótica para: *E. coli***

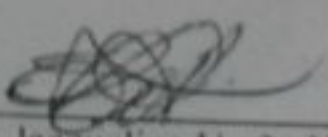
Penicilina	R	Tetraciclina	S	Enrofloxacina	S
Amoxicilina	S	Sulfa/Trimet.	R	Norfloxacina	S
Eritromicina	R	Fosfomicina	R	Ciprofloxacina	S
Ampicilina	S	Gentamicina	S	Neomicina	I
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	I
Oxacilina	R	Doxiciclina	S	Ceftiofur	R
Levofloxacina	S	Cloranfenicol	R	Florfenicol	R

**Prueba de sensibilidad antibiótica para: *Pseudomona aeruginosa***

Penicilina	R	Tetraciclina	R	Enrofloxacina	R
Amoxicilina	R	Sulfa/Trimet.	R	Norfloxacina	R
Eritromicina	R	Fosfomicina	I	Ciprofloxacina	R
Ampicilina	R	Gentamicina	R	Neomicina	R
Cefalexina	R	Lincomicina	R	Fosfomicina/tilosina	S
Oxacilina	R	Doxiciclina	R	Ceftiofur	R
Levofloxacina	S	Cloranfenicol	R	Florfenicol	R

\*Interpretación de sensibilidad: S = Sensible I = Intermedio R = Resistente  
 NA= No aplica

Observaciones y notas: Ninguna.

  
 Lic. Jacqueline Ureña Hernández  
 Bioanalista- Especialista en Patología Veterinaria





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 809-578-5876  
 RNC 130-77728-4

Caso número: 17-04-03-6572 E  
 Propietario/Compañía: Falahoz

Fecha: 03/04/2017  
 Contacto: Lina M.

Hora: 02:44 PM  
 Proyecto: NA

Investigación realizada	Muestras y resultados en UFC		
	1 KD 5 antes	1 KD 5 después	NA
Hongos	22	0	-
<i>Staphylococcus spp</i>	70	0	-
Coliformes totales	0	0	-
<i>E. coli</i>	0	0	-
<i>Pseudomona spp</i>	0	0	-
<i>Salmonella spp</i>	0	0	-
Mesófilos	170	76	-

NA= No aplica

**Observaciones y notas:**

Horas de toma de muestras, referidas por el técnico:

1 KD 5 antes: 10:58 AM

1 KD 5 después: 1:35 PM

Hongos aislados

Antes: 22/22 *Candida albicans*.

Lic. Jacqueline Ureña Hernández  
 Bioanalista- Especialista en Patología Veterinaria

No se detallan valores de referencia por la diversidad de muestras (áreas, órganos, entre otros) que pueden ser sometidas a investigación. La interpretación técnica quedará bajo la responsabilidad de la persona o entidad solicitante del servicio, en relación a la naturaleza de la(s) muestra(s) objeto de estudio y a la condición bajo la cual fue(ron) tomada(s).



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809-578-5876  
RNC 130-77728-4

Caso número: 17-04-21-6614      Fecha: 21/04/2017      Hora: 10:40 AM  
Propietario: Endy Agroind.      Contacto: Genilza S.      Muestra: Gallinas 36 sem. Nave 10

### HALLAZGOS

**Aspecto externo/signos/síntomas:**

Boqueo. Roco. Chua.

**Sistema músculo-esquelético:**

Sin lesiones.

**Sistema cardio-respiratorio:**

Senos nasales hiperémicos.

Tráquea hiperémica, con presencia de moco y material caseoso.

**Sistema uro-genital:**

Sin lesiones.

**Sistema digestivo o gastro-intestinal:**

Lesiones compatibles con candidiasis en buche.

Enteritis. Se observaron algunos oocitos en raspado intestinal. (Parasitos)

**Sistema inmune organizado:**

Sin lesiones.


**Observaciones y notas:**

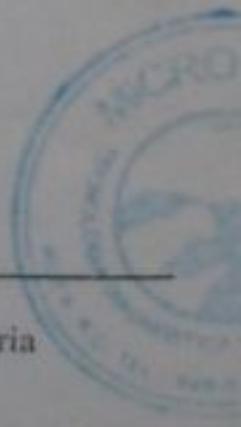
Candidiasis.

Proceso respiratorio.

Evaluar con veterinario posible presencia de virus de tropismo respiratorio.

NA= No aplica

  
Lic. Jacqueline Ureña Hernández  
Bioanalista- Especialista en Patología Veterinaria



# Microtech

LABORATORIO DE INVESTIGACIONES Y DE CONTROL

[www.microtech.com](http://www.microtech.com)

809-578-5876

RMC L36-77728-4

Caso número: 17-04-03-6572 B  
 Propietario/Compañía: Falaboz

Fecha: 03/04/2017  
 Contacto: Lina M.

Hora: 02:44 PM  
 Proyecto: NA

Investigación realizada	Muestras y resultados en UFC		
	1 KD 2 antes	1 KD 2 después	NA
Hongos	80	26	-
Staphylococcus spp	$1 \times 10^3$	164	-
Coliformes totales	0	0	-
E. coli	0	0	-
Pseudomonas spp	$1.6 \times 10^3$	7	-
Salmonella spp	0	0	-
Moulds	$96 \times 10^3$	156	-

NA= No aplica

**Observaciones y notas:**

Momento de toma de muestras referidas por el técnico:

1 KD 2 antes: 10:52 AM

1 KD 2 después: 1:37 PM

Hongos aislados:

Antes: 2/80 *Aspergillus fumigatus*

78/80 *Candida albicans*

Después: 1/26 *Aspergillus fumigatus*

25/26 *Candida albicans*

Lina M. Hernández  
 Microbióloga Especialista en Patología Veterinaria

Este es un informe de laboratorio que se genera por la actividad de los equipos de laboratorio. El presente informe no debe ser utilizado como evidencia legal. La responsabilidad de la información contenida en este informe es exclusiva de los clientes y no debe ser utilizada como evidencia legal. (MTC-001-2017)



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 809-578-5876  
 RNC 130-77728-4

Caso número: 17-04-03-6572 D  
 Propietario/Compañía: Falahoz

Fecha: 03/04/2017  
 Contacto: Lina M.

Hora: 02:44 PM  
 Proyecto: NA

Investigación realizada	Muestras y resultados en UFC		
	1 KD 4 antes	1 KD 4 después	NA
Hongos	2	0	-
<i>Staphylococcus spp</i>	65	0	-
Coliformes totales	0	0	-
<i>E. coli</i>	0	0	-
<i>Pseudomona spp</i>	24	0	-
<i>Salmonella spp</i>	0	0	-
Mesófilos	162	2	-

NA= No aplica

**Observaciones y notas:**

Horas de toma de muestras, referidas por el técnico:

1 KD 4 antes: 10:56 AM

1 KD 4 después: 1:35 PM

Hongos aislados

Antes: 2/2 *Aspergillus fumigatus*

Lic. Jacqueline Ureña Hernández  
 Bioanalista- Especialista en Patología Veterinaria

No se detallan valores de referencia por la diversidad de muestras (áreas, órganos, entre otros) que pueden ser sometidas a investigación. La interpretación técnica quedará bajo la responsabilidad de la persona o entidad solicitante del servicio, en relación a la naturaleza de la(s) muestra(s) objeto de estudio y a la condición bajo la cual fue(ron) tomada(s).

Caso número: 17-04-03-6572 A  
 Propietario/Compañía: Falahor

Fecha: 03/04/2017  
 Contacto: Lina M.

Hora: 02:44 PM  
 Proyecto: NA

Investigación realizada	Muestras y resultados en UFC		
	1 KD 1 antes	1 KD 1 después	NA
Hongos	130	31	-
Streptococcus spp	775	82	-
Coliformes totales	3	0	-
E. coli	1	0	-
Paradominosa spp	64	0	-
Salmonella spp	0	0	-
Morfología	110	183	-

NA= No aplica

**Observaciones y notas:**

Horas de toma de muestras indicadas por el técnico:

1 KD1 antes: 10:50 AM

1 KD1 después: sin especificar

Hongos aislados en ambas muestras:

Antes: Candida albicans 130/130

Después: Candida albicans 31/31

Caso número: 17-04-03-6572 D  
 Propietario/Compañía: Falahor

Fecha: 03/04/2017  
 Contacto: Lina M.

Hora: 02:44 PM  
 Proyecto: NA

Investigación realizada	Muestras y resultados en UFC		
	1 KD 4 antes	1 KD 4 después	NA
Hongos	2	0	-
Streptococcus spp	65	0	-
Coliformes totales	0	0	-
E. coli	0	0	-
Paradominosa spp	24	0	-
Salmonella spp	0	0	-
Morfología	162	2	-

NA= No aplica

**Observaciones y notas:**

Horas de toma de muestras, referidas por el técnico:

1 KD 4 antes: 10:50 AM

1 KD 4 después: 1:21 PM

Hongos aislados:

antes: 20 Aspergillus fumigatus

Lina M. Rodríguez  
 Propietaria/Compañía: Falahor

Caso número: 17-04-03-6572 E  
Propietario/Compañía: Falabou

Fecha: 03/04/2017  
Contacto: Lina M.

Hora: 02:44 PM  
Proyecto: NA

Investigación realizada	Muestras y resultados en UFC		
	1 KD 5 antes	1 KD 5 después	NA
Hongos	22	0	-
Aspergillus spp	20	0	-
Coliformes totales	0	0	-
E. coli	0	0	-
Pseudomonas spp	0	0	-
Salmonella spp	0	0	-
Morficos	170	76	-

NA= No aplica

**Observaciones y notas:**

Horas de toma de muestras, referidas por el técnico:  
1 KD 5 antes: 10:58 AM  
1 KD 5 después: 1:35 PM

Hongos aislados:

Antes: 22/22 *Candida albicans*

Caso número: 17-04-03-6572 C  
Propietario/Compañía: Falabou

Fecha: 03/04/2017  
Contacto: Lina M.

Hora: 02:44 PM  
Proyecto: NA

Investigación realizada	Muestras y resultados en UFC		
	1 KD 3 antes	1 KD 3 después	NA
Hongos	28	0	-
Aspergillus spp	273	1	-
Coliformes totales	0	0	-
E. coli	0	0	-
Pseudomonas spp	14	0	-
Salmonella spp	0	0	-
Morficos	66	2	-

NA= No aplica

**Observaciones y notas:**

Horas de toma de muestras, referidas por el técnico:  
1 KD 3 antes: 10:34 AM  
1 KD 3 después: 1:30 PM

Hongos aislados:

Antes: 20 *Aspergillus fumigatus*  
20 *Fusarium* spp  
24/28 *Candida albicans*

# Attachment 8



MA

Republica Dominicana

*Ministerio de Agricultura*

DEPARTAMENTO DE SANIDAD VEGETAL  
DIVISION DE REGISTRO DE PLAGUICIDAS

## CERTIFICADO DE REGISTRO PARA DISTRIBUIDOR

SE OTORGA EL PRESENTE CERTIFICADO A: N.S.G.C. VIRO2SYL GLOBAL SOLUTION CORP. BAJO EL No. D-172

LOCALIZACION: MUNICIPIO SANTO DOMINGO CESTE PROVINCIA SANTO DOMINGO

DE CONFORMIDAD CON LO DISPUESTO EN EL ART.3 DEL REGLAMENTO 322-88, PARA LA APLICACIÓN DE LA LEY 311-68, SOBRE USO Y CONTROL DE PLAGUICIDAS EN LA REPUBLICA DOMINICANA.

CON VIGENCIA DE CINCO (5) AÑOS, EL CUAL LO AUTORIZA A REGISTRAR, IMPORTAR Y DISTRIBUIR PLAGUICIDAS.

ESTE REGISTRO NO LOS EXCLUYE DE CUMPLIR CON LOS REQUISITOS ESTABLECIDOS POR OTRAS DEPENDENCIAS DEL ESTADO.

SANTO DOMINGO 03  
ING. AGRON. MANUEL A. GONZALEZ  
ENC. DIVISION DE REGISTRO DE PLAGUICIDAS  
MINISTERIO DE AGRICULTURA  
DEPTO. DE SANIDAD VEGETAL  
DIV. DE PLAGUICIDAS  
Santo Domingo, R.D.

DE NOVIEMBRE  
ING. EMIGDIO GOMEZ M.Sc.  
DIRECTOR, DEPTO. DE SANIDAD VEGETAL  
Santo Domingo, Rep. Dom.

DEL AÑO 2016  
ING. ENERICO A. BARRIENTOS  
SUBDIRECTOR DE REGISTROS  
MINISTERIO DE AGRICULTURA  
DEPTO. DE SANIDAD VEGETAL  
Santo Domingo, Rep. Dom.

YA.





ТАМОЖЕННЫЙ СОЮЗ

РЕСПУБЛИКИ БЕЛАРУСЬ, РЕСПУБЛИКИ КАЗАХСТАН И РОССИЙСКОЙ ФЕДЕРАЦИИ  
ГУ "РЕСПУБЛИКАНСКИЙ ЦЕНТР ГИГИЕНЫ, ЭПИДЕМИОЛОГИИ И ОБЩЕСТВЕННОГО ЗДОРОВЬЯ"

*(уполномоченный орган стороны)*

Главный врач ГУ "Республиканский центр гигиены, эпидемиологии и общественного здоровья"

*(руководитель уполномоченного органа)*

г. Минск

*(наименование административно-территориального образования)*

# СВИДЕТЕЛЬСТВО

о государственной регистрации

BY.70.06.01.015.E.003500.08.16

от 12.08.2016

**Продукция:**

Средство защиты виро2сил 5%, виро2сил 50%. Область применения: по назначению согласно рекомендаций фирмы изготовителя.

Изготовитель: NSGC Viro2Syl Global Solutions Corp, Доминиканская Республика (адрес: Zona Franca Industrial Los Alcarrizos Solar 2 Manzana E, Santo Domingo, Dominican Republic).

*(наименование продукции, нормативные и(или) технические документы, в соответствии с которыми изготовлена продукция, наименование и место нахождения изготовителя(производителя), получателя)*

**соответствует**

Единым санитарно-эпидемиологическим и гигиеническим требованиям к товарам, подлежащим санитарно-эпидемиологическому надзору (контролю), утв. Решением Комиссии таможенного союза от 28.05.2010 г., № 299. Глава II, раздел 5, подраздел I


прошла государственную регистрацию, внесена в Реестр свидетельств о государственной регистрации и разрешена для реализации и использования

**Настоящее свидетельство выдано на основании**

Протокола испытаний № 3-СГ-758-16 от 04.08.2016 г. ООО «ПОЛИМЕРТЕСТ», 195030, г. Санкт-Петербург, ул. Коммуны, д. 67. Заключения ГУ "РЦГЭиОЗ" № 18-30/2016/3306 от 15.08.2016 г.

Срок действия свидетельства о государственной регистрации устанавливается на весь период изготовления продукции или поставок подконтрольных товаров на территорию таможенного союза

Главный врач ГУ "Республиканский центр гигиены, эпидемиологии и общественного здоровья"

  
В.В. Гринь



BY № 0109532



Россия, 191123, Санкт-Петербург, ул. Чайковского, 46-48. Тел./факс: (812) 719-6644  
Russia, 191123, St. Petersburg, ul. Tchaikovskogo, 46-48. Tel./fax: (7-812) 719-6644

E-mail: spbcccl@spbcci.ru; Web: http://www.spbcccl.ru

## ЭКСПЕРТНОЕ ЗАКЛЮЧЕНИЕ № 002-11-03420

(письменная консультация)

1. Дата составления: 29.06.2016
2. Место составления: Санкт-Петербург
3. Исполнитель: Санкт-Петербургская торгово-промышленная палата, Департамент экспертизы и сертификации (ДЭС СПб ТПП)
4. Экспертное заключение составлено: Д.Х. Хуззатовой (аттестат эксперта системы «ТПП ЭКСПЕРТ» № 9552 от 07.12.2015)
5. Заказчик консультации: ООО «ЮПитер», Санкт-Петербург (РФ)
6. Основание: заявка заказчика от 27.06.2016
7. Право на осуществление Санкт-Петербургской ТПП экспертной деятельности определено:
  - 7.1. Законом РФ от 07.07.93 № 5340-1 «О торгово-промышленных палатах в РФ».
  - 7.2. Уставом Санкт-Петербургской торгово-промышленной палаты
8. Деятельность Санкт-Петербургской ТПП застрахована: договором страхования ответственности производителя за качество продукции, заключенного между СПб ТПП и ООО «Британский Страховой Дом» (страхование проведения экспертизы, контроля качества, количества и комплектности товаров). Страховой полис ОИ № 0001/780/15 от 04.09.2015
9. Наименование товара: продукт Viro2Syl (Hydrogen Peroxide (20-50%))
10. Вопрос консультации: определение идентификационных признаков товара для его классификации в соответствии с ТН ВЭД ЕАЭС
11. Документы, литература и информация, использованные при экспертизе:
  - Единая Товарная номенклатура внешнеэкономической деятельности Евразийского экономического союза (вступила в силу 23.08.2012). Пояснения к ТН ВЭД ЕАЭС.
  - Паспорт безопасности компании N.S.G.C. Viro2Syl Global Solutions Corp (Доминиканская Республика) на продукт Viro2Syl (Hydrogen Peroxide (20-50%)).
  - Химическая энциклопедия в пяти томах под ред. И.Л. Кнунянца и Н.С. Зефирова, том 1 ст. «Водорода пероксид», научное издательство «Большая российская энциклопедия», Москва, 1988.



Сертифицировано  
Русским Регистром



Certified by  
Russian Register



- Письмо заказчика экспертизы о природе инертных ингредиентов, входящих в состав продукта Viro2Syl.

- Сайт компании N.S.G.C. Viro2Syl Global Solutions Corp  
<http://www.viro2syl.com/m/Splash>

## 12. Ответ:

На основании изучения предъявленных документов, литературы и информации, размещенной на сайте, установлено:

Согласно описанию изготовителя продукт **Viro2Syl (Hydrogen Peroxide (20-50%))** по внешнему виду представляет собой прозрачную бесцветную жидкость без запаха, имеющую  $\text{pH} \leq 3,7$ , в зависимости от концентрации продукта (20% /31% /35%) температуру кипения  $103^\circ\text{C}$  / $107^\circ\text{C}$  / $108^\circ\text{C}$ , относительную плотность 1,07 /1,11 /1,13.

Продукт применяется в различных отраслях промышленности: в сельском хозяйстве (для дезинфекции загонов для скота, курятников, теплиц, открытых зерновых полей от патогенных микроорганизмов, грибков, бактерий, насекомых и вирусов, обработки яиц, обработки упаковочного оборудования, и т.п.); для обработки помещений от насекомых путём разрушения их жизненного цикла; для устранения последствий разлива нефти и нефтепродуктов путём их преобразования в инертные продукты, для очистки систем питьевой воды и др.

Согласно информации о химическом составе изготовителя продукт Viro2Syl (Hydrogen Peroxide (20-50%)) на 20-50% состоит из перекиси водорода ( $\text{H}_2\text{O}_2$ , CAS 7722-84-1) и 50-70% инертных компонентов.

Согласно письму заказчика экспертизы от 27.06.2016 инертные компоненты представляют собой воду и соли.

Согласно сведениям справочной литературы *пероксид водорода* выпускается в виде водных растворов (30% раствор, содержащий стабилизирующие добавки, называется пергидролем). Стабильность водных растворов пероксида водорода растёт с увеличением концентрации ионов  $\text{H}_3\text{O}^+$  и максимальна при  $\text{pH} = 3,5-4,5$ .

Концентрированные водные растворы пероксида водорода взрывоопасны. Для стабилизации технического  $\text{H}_2\text{O}_2$  в него добавляют пирофосфат или станнат Na; при хранении в алюминиевых емкостях используют ингибитор коррозии -  $\text{NH}_4\text{NO}_3$ .

Водорода пероксид имеет широкое применение, в том числе как дезинфицирующее средство в медицине; для обезвреживания бытовых и промышленных сточных вод и т.п.

Согласно примечанию 1 к группе 28 ТН ВЭД: «Если в контексте не оговорено иное, в товарные позиции этой группы включаются:

а) отдельные химические элементы и отдельные соединения определенного химического состава, содержащие или не содержащие примеси;

б) продукты, указанные выше в пункте (а), растворенные в воде;

г) продукты, указанные выше в пункте (а), (б) или (в), с добавлением

Департамент экспертизы  
и сертификации

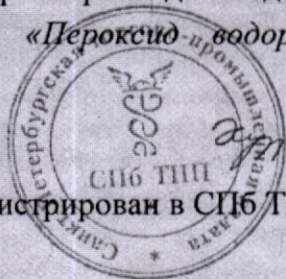
стабилизирующего вещества (включая агент против слеживания), необходимого для их сохранения или транспортировки».

Согласно пояснениям к коду 2847 00 000 0 ТН ВЭД пероксид водорода нестабилен, почти всегда содержит небольшие количества стабилизаторов для предотвращения разложения; такие смеси включаются в данную товарную позицию.

Таким образом, для продукта Viro2Syl (Hydrogen Peroxide (20-50%)) имеющего вышеуказанный состав, представляющего собой стабилизированный водный раствор пероксида водорода, рекомендуемый код 2847 00 000 0 по ТН ВЭД ЕАЭС: «Пероксид водорода, отвержденный или не отвержденный мочевиной».

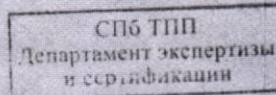
Эксперт:

Акт зарегистрирован в СПб ТПП:



Д.Х. Хуззатова

29.06.2016



ГЛАВНЫЙ ЭКСПЕРТ  
С.С. БРАТЦЕВА

Handwritten signature of S.S. Bratseva.

Петербург

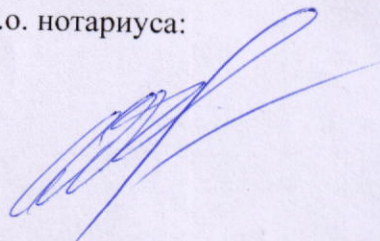
Российская Федерация, Санкт-Петербург  
Третьего июля две тысячи шестнадцатого года.

Я, Романова Светлана Николаевна, временно исполняющая обязанности Смагиной Людмилы Евгеньевны, нотариуса нотариального округа Санкт-Петербурга, свидетельствую верность этой копии с подлинником документа. В последнем подчисток, приписок, зачеркнутых слов и иных неоговоренных исправлений или каких-либо особенностей нет. Мною, лицу, обратившемуся за совершением нотариального действия, разъяснено, что при свидетельствовании верности копии документа не подтверждается законность содержания документа и соответствие изложенных в нем фактов действительности.

Зарегистрировано в реестре за № 1К-9826  
Взыскано по тарифу 30 рублей 00 копеек  
Вр.и.о. нотариуса:



ИТОГО: в настоящем  
документе  
3 (три) листа  
Вр.и.о. нотариуса:



**CHAMBER OF COMMERCE AND INDUSTRY OF THE RUSSIAN FEDERATION**

**SAINT-PETERSBURG CHAMBER OF COMMERCE AND INDUSTRY**

Russia, 191123, Saint Petersburg, ul. Tchaikovskogo, 46-48. Tel./fax: (7-812) 719-6644  
E-mail: [spbcci@spbcci.ru](mailto:spbcci@spbcci.ru); Web: <http://www.spbcci.ru>

**EXPERT REPORT No. 002-11-03420**

(consultation in writing)

1. Date of preparation: 29.06.2016
2. Place of preparation: Saint Petersburg
3. Prepared by: Saint Petersburg Chamber of Commerce and Industry, Examination and Certification Department (ECD SPb CCI)
4. The expert report was prepared by: D. H. Khuzzatova (certificate of "CCI EXPERT" system expert No. 9552 of 07.12.2015)
5. The consultation was ordered by: "JuPiter" LLC, Saint Petersburg (the Russian Federation)
6. Based on: customer's request of 27.06.2016
7. The right for realization by Saint Petersburg Chamber of Commerce and Industry of its expert activity is established by:
  - 7.1. The law of the Russian Federation of 07.07.93 No. 5340-1 "About Chamber of Commerce and Industry of the Russian Federation".
  - 7.2. The Charter of Saint-Petersburg Chamber of Commerce and Industry
8. Any activity of Saint Petersburg CCI is insured: the manufacturer's liability insurance contract for the quality of products, made between SPb CCI and "Britansky Strakhovoy Dom" LLC (insurance for expert evaluation, quality assurance, quantity and completeness of the goods). Insurance policy OI No. 0001/780/15 of 04.09.2015.
9. The goods name: Viro2Syl product (Hydrogen Peroxide (20-50 %))
10. Consultation question: determination of identification signs of the goods for its classification according to Commodity Nomenclature for Foreign Economic Activities of the Eurasian Economic Union
11. Documents, references and information used for the examination:
  - The uniform Commodity Nomenclature for Foreign Economic Activities of the Eurasian Economic Union (valid from 23.08.2012). Explanations to the Commodity Nomenclature for Foreign Economic Activities of the Eurasian Economic Union.
  - Materials safety data sheets by N.S.G.C. Viro2Syl Global Solutions Corp Company (the Dominican Republic) for Viro2Syl product (Hydrogen Peroxide (20-50 %)).
  - Chemical encyclopedia, five volumes edited by I. L. Knunyants and N. S. Zefirov, volume 1 art. "Hydrogen peroxide", scientific publishing house "Bolshaya Rossiiskaya Encyclopedia", Moscow, 1988.

Logo: /Register \* ISO 9001/

The letter of the examination customer on a nature of the inert components being a part of Viro2Syl product.

Website of N.S.G.C. Viro2Syl Global Solutions Corp Company <http://www.viro2syl.com/m/Splash>

12. Response:

After studying the documents provided, the references and the information shown on the website, it was established that:

According to the manufacturer's description **Viro2Syl product (Hydrogen Peroxide (20-50 %))** is a transparent colorless flavorless liquid with  $\text{pH} \leq 3.7$ , depending on concentration of the product (20 % /31 % /35 %) boiling temperature 103 °C/107 °C/108 °C, relative density 1.07/ 1.11/ 1.13.

The product can be used in various industries: in agriculture (for disinfection of cattle-pens, hen houses, hothouses, open grain fields against pathogenic microorganisms, fungi, bacteria, insects and viruses, for processing of eggs, for processing of the packing equipment, etc.); for processing of premises against the insects by the way of destruction of their life cycle; for elimination of consequences of oil and oil product spillage by their transformation to inert products, for purification of potable water systems, etc.

According to the information on the chemical composition provided by the manufacturer Viro2Syl product (Hydrogen Peroxide (20-50 %)) consists of 20-50% of hydrogen peroxide ( $\text{H}_2\text{O}_2$ , CAS 7722-84-1) and 50-70 % of inert components.

According to the letter of the examination's customer of 27.06.2016 the inert components are water and salts.

According to the information provided in the reference books the *hydrogen peroxide* is made in the form of water solutions (30 % of the solution contains stabilizing additives, called perhydrol). Stability of the water solutions of hydrogen peroxide increases in parallel with an increase in concentration of  $\text{H}_3\text{O}^+$  ions and is maximum at  $\text{pH} = 3.5-4.5$ .

Concentrated water solutions of hydrogen peroxide are explosive. For the purpose of stabilization of technical  $\text{H}_2\text{O}_2$  it is necessary to add pyrophosphate or Na stannate; in case of storage in aluminum capacities corrosion inhibitor  $\text{NH}_4\text{NO}_3$  should be used.

Hydrogen peroxide is widely used as a disinfectant in medicine; for neutralization of household and industrial sewage, etc.

According to the note 1 to the group **28** of Commodity Nomenclature for Foreign Economic Activities: "Unless otherwise noted, commodity items of the group are:

- a) Separate chemical elements and separate compounds of specific chemical composition contain impurities or does not contain them;
- b) The products stated above in item (a), dissolved in water;
- c) Products specified above in item (a), (b) or (c), with addition of stabilizing substances (including anti-caking agent), necessary for their preservation or transportation".

Stamp: Saint Petersburg Chamber of Commerce and Industry. Examination and Certification Department  
/signature/

According to explanations to 2847 00 000 0 code of Commodity Nomenclature for Foreign Economic Activities hydrogen peroxide is non-stable, it nearly always contains small amounts of stabilizers for prevention of decomposition; such mixes will be included in this commodity item.

Thus, for **Viro2Syl product (Hydrogen Peroxide (20-50 %))** with the above-stated composition, being a stabilized water solution of hydrogen peroxide, recommended code 2847 00 000 0 according to Commodity Nomenclature for Foreign Economic Activities of the Eurasian Economic Union is: "Hydrogen peroxide, solidified with urea or non-solidified with urea".

Expert: /signature/ D. H. Khuzzatova

The certificate is registered at Saint Petersburg Chamber of Commerce and Industry: 29.06.2016

Seal: Saint Petersburg Chamber of Commerce and Industry \* Spb CCI

Stamp: Saint Petersburg Chamber of Commerce and Industry. Examination and Certification

Department.

Stamp: Chief Expert S. S. Bratceva /signature/

SAINT

Petersburg

Russian Federation, Saint Petersburg

On the Third day of July in the year two thousand and sixteen.

I, Svetlana Nikolaevna Romanova, acting on behalf of Liudmila Evgenievna Smagina, Notary Public of Saint Petersburg Notarial District, do hereby certify that this is a true copy of the original document. The latter does not contain any erasures, additions, crossed out words, or any other improperly executed corrections or any peculiarities. I have explained to the person applying for notarisation that when certifying the copy of a document, neither validity of the document content nor the truth of the facts stated therein is confirmed.

Registered under No. 1K-9826

Fee charged: 30 rubles 00 kopeks

Acting Notary Public: /signature/

Official seal:

/NOTARY PUBLIC L. E. SMAGINA

LOCATION: SAINT PETERSBURG \*

NOTARIAL DISTRICT: SAINT PETERSBURG \*

29.07.93. No. 278-K/

Official seal:

/NOTARY PUBLIC L. E. SMAGINA

LOCATION: SAINT PETERSBURG \*

NOTARIAL DISTRICT: SAINT PETERSBURG \*

29.07.93. No. 278-K/

In total, this document contains

3 (three) sheets

Acting Notary Public: /signature/

-----End of translated document-----

-----Конец перевода документа-----

I, the undersigned certified translator Yurov Stanislav Igorevich, fluent in both Russian and English languages, confirm that the above is a true, accurate and complete translation of the attached document.

Я, дипломированный переводчик Юров Станислав Игоревич, владеющий русским и английским языками, подтверждаю, что выполненный мною перевод приложенного документа является правильным, точным и полным.

Переводчик Юров Станислав Игоревич

САНКТ-



Петербург

Российская Федерация, Санкт-Петербург  
Четвёртого июля две тысячи шестнадцатого года.

Я, Иванова Оксана Викторовна, временно исполняющая обязанности Ажойчик Аллы Викторовны, нотариуса нотариального округа Санкт-Петербурга, свидетельствую подлинность подписи, сделанной переводчиком Юровым Станиславом Игоревичем в моём присутствии. Личность его установлена.

Зарегистрировано в реестре за № 7-6606  
Взыскано по тарифу 100 (сто) рублей  
Вр.и.о. нотариуса:



ИТОГО: в настоящем  
документе  
6 (шесть) листов  
Вр.и.о. нотариуса:



REPUBLICA DOMINICANA

MINISTERIO DE AGRICULTURA

1833

"DIRECCION GENERAL DE GANADERIA"

SANIDAD ANIMAL

*Certificado de Registro*

Producto: VIRO2SYL.

Forma Farmacéutica: Líquido.

Especies de uso: Instalaciones pecuarias.

Presentación: Galones 55litros.

Fabricante: N.S.G.C. VIRO2SYL GLOBAL SOLUTIONS CORP.

Origen: EEUU.

Representante o Registrante: FALAHUZ, SRL

Categoría de comercialización: Grupo IV

Reg. No. 8335 Libro 18 Folio 62 en fecha 15/06/2015

Caducidad del registro: 15/06/2020

Este producto ha sido aprobado de conformidad a lo establecido en el decreto 521-06 sobre el Reglamento de Establecimiento y Medicamentos Veterinarios.

En Santo Domingo de Guzmán, Capital de la República Dominicana a los 17 días del mes de Junio. del año 202015

DRA. VIRGINIA QUINONES

DRA. LISSETTE GÓMEZ  
Director Sanidad Animal  
Santo Domingo, R.D.  
Dirección de Sanidad Animal

Enc. División de Registro Medicamentos y Establecimientos Veterinarios

LEER AL DORSO