

**Non-hazardous Biodegradable  
Decontamination Cleaning Product**

**DECON  IT**

**Non-Ionic Surface Cleaner**

**BIODEGRADABLE  
PHOSPHATE FREE**



**NON-IRRITATING  
NON-TOXIC**



**NON-CORROSIVE  
EASY RINSING**



**READILY DISPOSABLE  
CONCENTRATED**



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# How It All Began...



**EnviroSupply, an environmental equipment supplier was having difficulty cleaning field equipment returning from refinery sites, so asked IVEY if we had an Industrial Ivey-sol formulation to aid their cleaning. We shared a new formulation we were testing with oil and gas companies, it worked on above meter in < 30 seconds where all other cleaners tried failed. DECON-IT was born...**

# Cross Contamination = Legal Liability

**Environmental Cross Contamination:** The passing of organic contaminants (i.e. LNAPL or DNAPL), bacteria, microorganisms, or other harmful substances (i.e. pesticides, pharmaceuticals, etc.) indirectly from one patient or location to another through improper or unsterile equipment, procedures, or products...

*Its funny when you see a contaminant plume suddenly jump up-gradient and 90° to the groundwater flow direction...having you say; "I wonder how it go there?"*

**You are legally liable for the cross contamination and the erroneous path of wrong decisions that fall in its wake!**



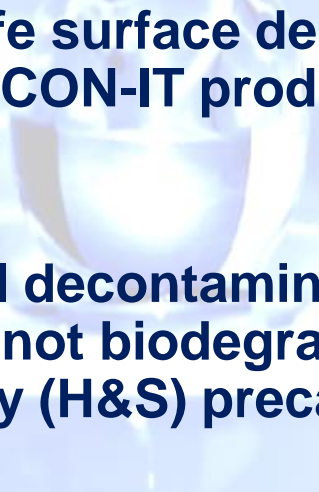




# **DECON-IT**

## **Biodegradable Decontamination Product**

### **Environmental – Commercial – Industrial Applications**

- 
- **The need for an environmentally safe surface decontamination cleaner was the basis for Ivey International Inc. developing the DECON-IT product, based on the award winning Ivey-sol® surfactant technology;**
  - **Many of the available environmental decontamination cleaning products on the market were: slow or ineffective, caustic (acidic), not biodegradable, had by-products present, and often required additional health and safety (H&S) precautions for workers to use to apply;**
  - **DECON-IT is pH neutral, non-caustic, biodegradable, easy to use, effective for decontaminating a broad range of contaminant off surfaces, and has minimal H&S requirements, meeting ASTM surface cleaning standards; and**
  - **DECONIT is a an environmentally green and sustainable product that can be used in environmental, commercial, industrial and residential work environments. Helps environmental field staff avoid cross contamination.**



**Mining Equipment Cleaned With DECONIT Prior To Painting. Used To Remove Residual Oils and Coal Dust. Successful Application**

**DECON-IT®**

## **Industrial and Commercial Cleaning Product Technology**

**Is comprised of a proprietary blend of surfactants that have a scientifically proven ability to desorb and liberate sorbed (adsorbed and absorbed) petroleum hydrocarbons (i.e. . Jet Fuel, Diesel, Motor Oil, Lubricants, Bunker-C) and related residues from a wide range of commercial equipment and working surfaces.**

**This product was a client driven development to meet a significant market need.**



# United States of America

United States Patent and Trademark Office

## DECON-IT

Reg. No. 3,959,575

Registered May 10, 2011

Int. Cl.: 1

TRADEMARK

PRINCIPAL REGISTER

IVEY, GEORGE (CANADA INDIVIDUAL)  
1397 STAG ROAD  
CAMPBELL RIVER, BC, CANADA V9W6E3

FOR: CHEMICAL PREPARATIONS FOR USE IN INDUSTRY, NAMELY, SOLVENT TYPE  
PROCESSING MIXTURE FOR USE IN DECONTAMINATING INDUSTRIAL EQUIPMENT,  
IN CLASS 1 (U.S. CLS. 1, 5, 6, 10, 20 AND 46).

FIRST USE 5-3-2010; IN COMMERCE 5-3-2010.

THE MARK CONSISTS OF STANDARD CHARACTERS WITHOUT CLAIM TO ANY PAR-  
TICULAR FONT, STYLE, SIZE, OR COLOR.

SN 85-018,740, FILED 4-20-2010.

BERYL GARDNER, EXAMINING ATTORNEY



David J. Kypas

Director of the United States Patent and Trademark Office

## TRADE MARK

In Early 2011 Ivey International Inc. Made The Trade Mark Application For DECON-IT After Completing An Initial Set Of Applied Field Equipment Tests With Equipment Rental Companies In The USA.

Based On These Early Positive Results, We Knew We Were On To Something, But Were Entering A New Market Area of *'Equipment Decontamination'*.

That Was *'New Market'* For Our Company As We Were The Company Who Developed The Award Winning Ivey-sol® Surfactant Technology for the Remediation of Contaminated Soil and Groundwater.



# DECON-IT® PHYSICAL DATA

<b>pH of 1% solution</b>	<i>7 (+/- 0.5)</i>
<b>Specific Gravity (g/ml)</b>	<i>0.99-1.04(water=0)</i>
<b>Density (lbs./gal.)</b>	<i>997.0479 kg/m<sup>3</sup></i>
<b>Vapor Pressure (mm Hg)</b>	<i>&lt;0.01mm Hg</i>
<b>Flash Point (degrees F)</b>	<i>Not Applicable</i>
<b>Phosphate Content (as Phosphorus)</b>	<i>Not applicable</i>
<b>Fragrance Content</b>	<i>Citrus - Grapefruit</i>
<b>Organic Carbon (% calculated w/w)</b>	<i>Not applicable</i>
<b>Surface Tension 1% solution (Dyne/cm)</b>	<i>&lt;30 dynes</i>
<b>Color:</b>	<i>Clear to Cloudy White</i>
<b>Form:</b>	<i>Liquid</i>
<b>Solubility in Water:</b>	<i>100%</i>
<b>Hard Water Effectiveness:</b>	<i>Highly Effective</i>
<b>Biodegradability:</b>	<i>&gt;90% in 28 Days</i>
<b>Foam Tendency:</b>	<i>Low to Moderate</i>
<b>Shelf Life:</b>	<i>&gt;1 year in a sealed container</i>

# DECON-IT® HEALTH SAFETY INFORMATION

<b>OSHA Hazardous Ingredients:</b>	None
<b>RCRA Hazard Class:</b>	Non-hazardous
<b>RPA Priority Pollutants:</b>	None
<b>DOT Hazard Class:</b>	Non-hazardous
<b>Flammability:</b>	Non-flammable
<b>Oral Toxicity:</b>	Not Applicable
<b>No ingredient defined as an oral toxicant by OSHA</b>	
<b>Eye Irritation:</b>	<i>Mild eye irritant if not rinsed</i>
<b>Inhalation Toxicity:</b>	<i>Non-irritating</i>
<b>Latex Content:</b>	<i>None</i>
<b>VOC Content:</b>	<i>0%</i>
<b>Carcinogenicity:</b>	<i>NTP = No IARC = No OSHA = No</i>
<b>All Ingredients in DECON-IT® are listed in TSCA inventory.</b>	



# DECON-IT® ADVANTAGES

- 
- Formulated To Cut Operating Costs
  - Eliminates Cross Contamination
  - No Fumes
  - Biodegradable
  - Non-Flammable
  - Non-Abrasive
  - Non-Corrosive Formulation (Neutral pH)
  - Phosphate Free – Chlorine Free
  - Contains No Toxic Or Hazardous Air Pollutants
  - Non-Ozone Depleting
  - Non-Irritating To Skin
  - Faster Than Conventional Products
  - Easy Rinsing With No Interfering Residues
  - Reduces Man-Hours And Effort Required To Complete A Project

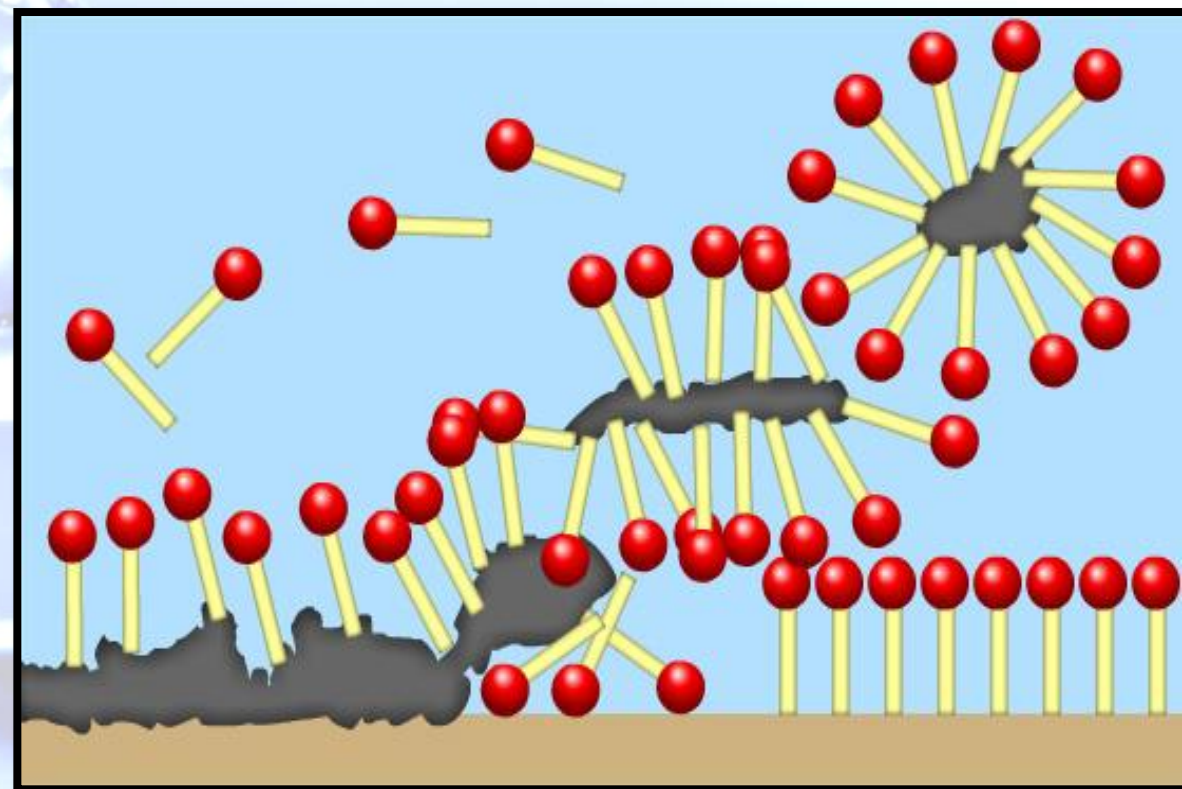
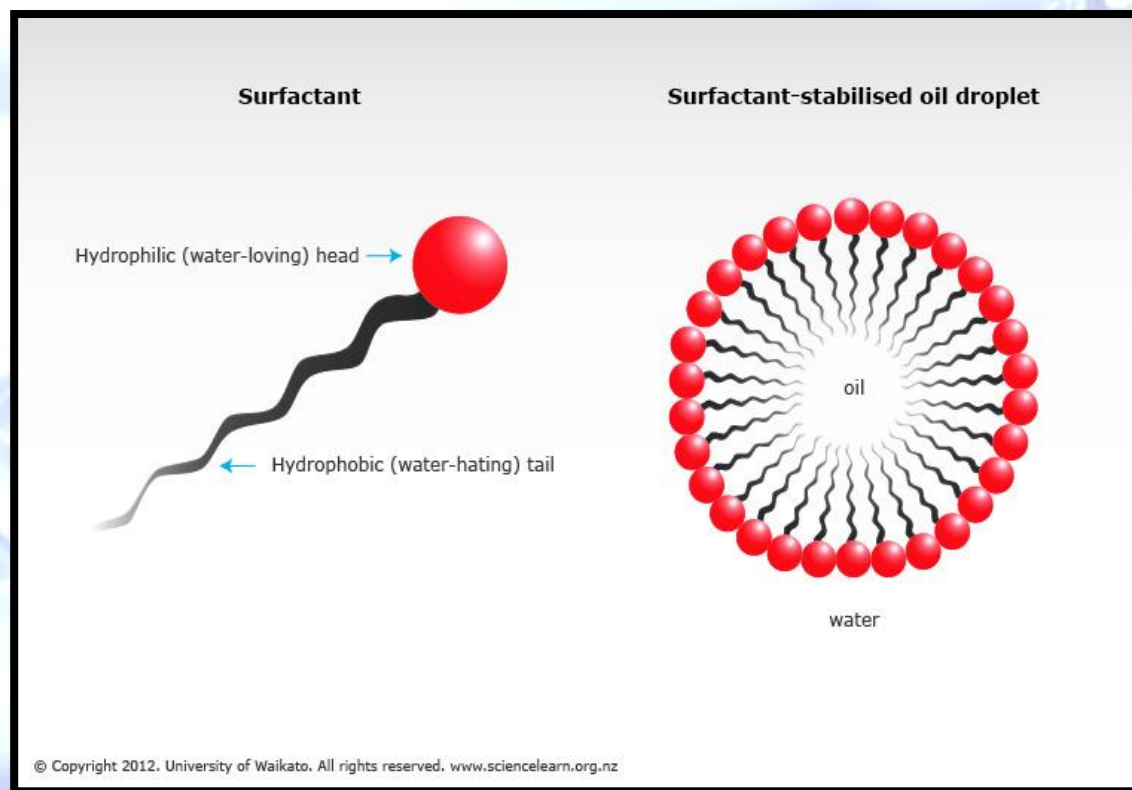
# DECON-IT<sup>®</sup> SUITABILITY

- **Healthcare and laboratory equipment**
- **Personal protective equipment (PPE)**
- **Industrial parts and machinery (CNC)**
- **Vapor Suppression (Spills & Tanks)**
- **Pipes, Tankers, Cargo Holds, Confined Spaces, etc.**
- **Decontaminating field sampling apparatus and probing equipment (Air, Soil and Groundwater)**
- **Spill Response Equipment Cleaning (Hosing, Pumps, Values, Nozzles, Etc.)**

**The list of applications is expanding annually...**



# DECON-IT<sup>®</sup> Compared To Conventional Surfactants



**How >95% of all surfactant behave with hydrophobic organic compounds**

# Once In A CMC Less Available Harder To Remove/Treat

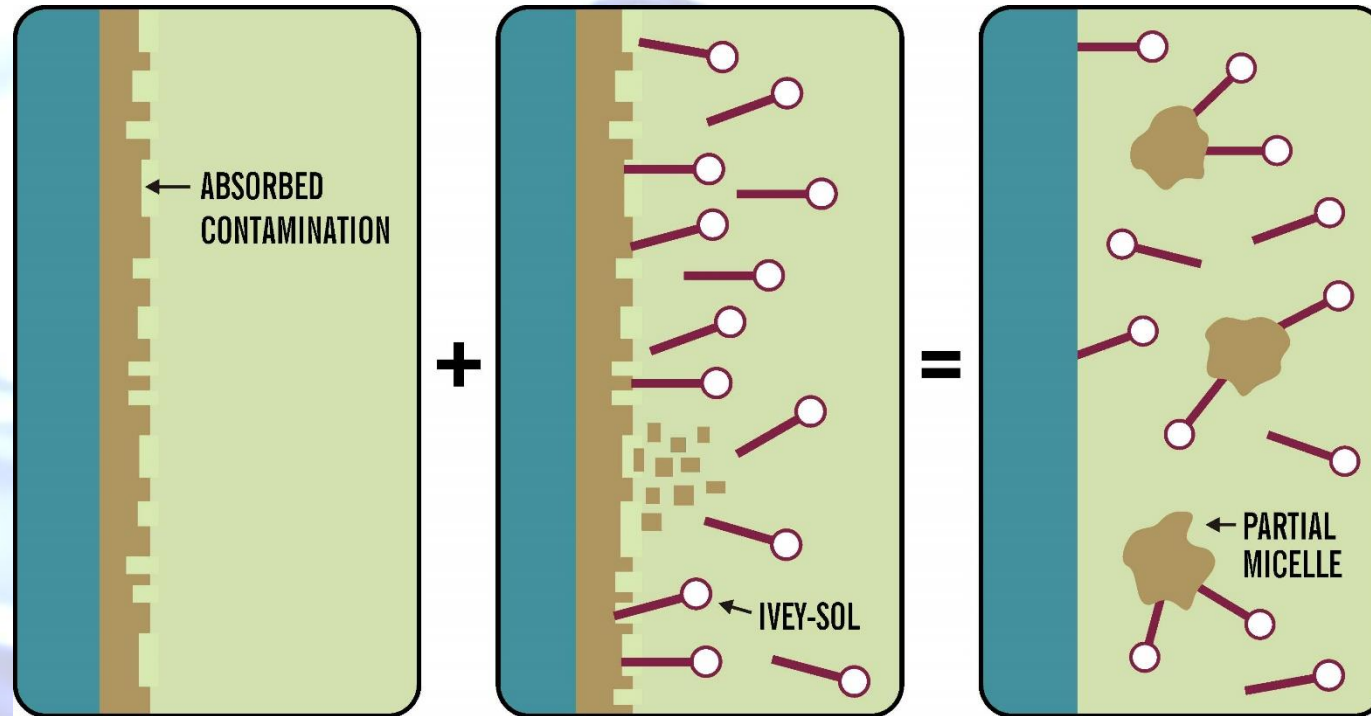


- ***Less Physically Available For Treatment***
- ***Less Biologically Available For Treatment***
- ***Less Chemically Available For Treatment***
- ***Harder To Treat By Conventional Groundwater/Waste-Water Treatment Systems***

***Imagine Being Enveloped by 500 Ping-Pong Balls***



# DECON-IT Mechanism



**DECON-IT<sup>®</sup> mechanism is selective and works below the CMC**  
Increasing Availability For Decontamination

# DECON-IT Facts

Designed To Be Selective To Classes of Contaminates

Works below the CMC (*No Emulsification*)

Can Desorb Sorbed LNAPL & DNAPL Range COC's

Lowers Water Surface Tension – From 73 Dynes to < 30 Dynes  
(*Getting Into Finer Texture Soil*)

Increasing Physical, Biological, Chemical '*Availability*'  
For Enhanced In-situ & Ex-situ Remediation

Journal Papers, Case Studies, Testimonials, Available On Request



# Decontamination of Field Gauging Equipment





# Decontamination of Drilling Equipment Augers Environmental and Geotechnical





# DECON-IT® SURFACE CLEANING APPLICATIONS

Concrete Cleaning Mechanical Maintenance Site



# DECON-IT® OFF-SHORE OIL BOOM CLEANING APPLICATIONS





# Decontamination of Gloves From Upstream Oil & Gas and Refinery Work Site



# DECON-IT® APPLICATION



**Heavy oil (bitumen)  
removed from hard hat  
PPE Decontamination**

- **DECON-IT®** has many applications that can help eliminate the hazards of contaminants in the workplace, from laboratories to research in the oil field.
- The product's non-corrosive formula, and its biodegradability factor makes it an ideal product for numerous cleaning needs from: glass, stainless steel and other metals, plastic, fiberglass, cement, porcelain, and ceramics.
- **DECON-IT®** is sprayable and can be used in steam injection cleaning, circulated or left to stand. **DECON-IT®** can also be applied by hand as a cleaner with sponge, brush or cloth.



## DECON-IT® STANDARDS

- DECON-IT® is suitable for use in accordance with ASTM D5088-02(2008) Standard Practice for Decontamination of Field Equipment Used at Waste Sites
- ASTM D5608-10 Standard Practices for Decontamination of Field Equipment Used at Low Level Radioactive Waste Sites.
- Exempt from EU REACH registration under Article 2(9).

***We are committed to working with all regulatory agencies to ensure compliance with applicable standards and will support efforts to demonstrate applicability and suitability to environmental standards.***

# DECON-IT

## Decontamination of Equipment and Supplies

- For Reuse;
- Safer Handling;
- Safer Disposal;
- Avoid Cross Contamination;
- Risk Reductions; and
- Aesthetics





# DECON-IT® BIODEGRADABILITY

DECON-IT has been validated using **OECD Procedures 301 E and 301 B** and deemed Biodegradable. OECD Guidelines for Testing of Chemicals, Section 3 “Degradation and Accumulation”, **Test 301E is technically equivalent to ISO 7827: 1984** while **AS 4351.2 (1996) is equivalent to ISO 7827:1994.**

DECON-IT has a CO<sub>2</sub> evolution after 28 days of 70%.

There is a mechanism under the UK Offshore Chemical Notification Scheme to cause the reformulation of chemical products which have a lesser rate of decomposition under Test 301E i.e. when between 20 and 70% carbon dioxide is evolved.

**In this case 70 % compliance is shown so the product would be expected to be highly degradable under said conditions as encountered project sites.**

*Note: The discussion on DECON-IT biodegradability was produced by Dr. Steven Nearhos, a Senior Microbiologist with Baseline (Australia) Pty. Ltd.*

# **DECON-IT Cleaning Engine Oil Spill On Concreate**

**Applicable For Contaminant Removal From A Broad Range of Surfaces**





## DECON-IT® MIXING DIRECTIONS

Start with a small test area using **DECON-IT** at full strength. Proceed with mixtures of **DECON-IT** diluted in cold, warm or hot water, until correct concentration for test area is determined. If available, warm water is preferred. Use cold water for blood stains. If the spill or stain is aged, you may apply the DECON-IT and allow it to have contact with the oils for a short period of time before physical removal by wiping it off, or high-pressure sprayer depending on application.

Clean by soaking, circulating, wiping or ultrasonic methods. **RINSE THOROUGHLY** - preferably with running water. For critical cleaning, do final or all rinsing in distilled, de-ionized or purified water. For food contact surfaces, rinse with potable water. Product can also be used in pressure spray wash applications – minor foaming may occur.

# Cleaning and Decontamination of Transformers



**Transformer maintenance activities may include: Cleaning, Visual Inspections, Leak Detection and Leak Repair. The removal of residual surface oils greatly improves Transformer visual inspections and maintenance activities.**



# DECON-IT® PRECAUTIONS

There are no specific and or special precautions to consider, except for good industrial hygiene and safety practices employed with any industrial chemical (see Container Directions).

**Do not allow to freeze.**

Material Safety Data Sheet (MSDS) and Global Harmonized System (GHS) Compliant Safety Data Sheets (SDS) are available and can be downloaded at:

[www.iveyinternational.com](http://www.iveyinternational.com) or by email request to [info@iveyinternational.com](mailto:info@iveyinternational.com)



# DECON-IT<sup>®</sup>

## Environmental Equipment Decontamination





## DECON-IT® CLIENT TESTIMONIALS

*"Deconit is a superior cleaning agent and decontamination product. For years, I used Alconox and Simple Green out in the field, and neither product can compare to the effectiveness and great smell of Deconit. Get some Deconit into a spray bottle and you are good to go!"*

**Fran Sosic | Murex Environmental**

*"I really liked it. There wasn't that much work in getting a water level meter clean and let me tell you it was NASTY! Usually I would have to scrub it, but with some warm water and the DeConIT, it came out great. I had Petroleum of 2 feet on the tape, from a monitoring well, I can actually see the numbers and it looks like nothing was on it before."*

**Nicole D. Motto | LiRo Engineers, Inc**

## DECON-IT® CLIENT TESTIMONIALS

"Everyone loves it and we will be purchasing more when we are running low."

**David Ring | Geotechnical Services, Inc**

"I loved the product. It was easy to use, left no film or residue behind, and made cleaning quick."

**Drew R. Priolo | SCS Engineers**

"We have used it to decon field equipment after use and it seems to work out well."

**Troy Fowler | Hart Crowser, Inc**



## TEST RESULTS

REPORTED TO PROJECT Ivey International Inc.  
Surfactant Testing

WORK ORDER REPORTED 7102201  
2018-01-23 12:33

Analyte	Result	RL	Units	Analyzed	Qualifier
Decon-It (Sample D) (7102201-02)   Matrix: Water   Sampled: 2017-10-24, Continued					
<i>Dioxins and Furans, Continued</i>					
Total HpCDDs	< 3	3	pg/L	2017-11-14	
OCDD	< 4	4	pg/L	2017-11-14	
2,3,7,8-TCDF	< 1	1	pg/L	2017-11-14	
Total TCDFs	< 1	1	pg/L	2017-11-14	
1,2,3,7,8-PeCDF	< 2	2	pg/L	2017-11-14	
2,3,4,7,8-PeCDF	< 2	2	pg/L	2017-11-14	
Total PeCDFs	< 2	2	pg/L	2017-11-14	
1,2,3,4,7,8-HxCDF	< 2	2	pg/L	2017-11-14	
1,2,3,6,7,8-HxCDF	< 2	2	pg/L	2017-11-14	
1,2,3,7,8,9-HxCDF	< 2	2	pg/L	2017-11-14	
2,3,4,6,7,8-HxCDF	< 2	2	pg/L	2017-11-14	
Total HxCDFs	< 2	2	pg/L	2017-11-14	
1,2,3,4,6,7,8-HpCDF	< 3	3	pg/L	2017-11-14	
1,2,3,4,7,8,9-HpCDF	< 3	3	pg/L	2017-11-14	
Total HpCDFs	< 3	3	pg/L	2017-11-14	
OCDF	< 4	4	pg/L	2017-11-14	

**DECON-IT was tested by  
CARO Analytical Services  
for Dioxins & Furans.  
Results were Non-  
Detectable to Parts Per  
Quadrillion (pg/L)!**

Decon-It (Sample D) (7102201-02) | Matrix: Water | Sampled: 2017-10-24

### Dioxins and Furans

2,3,7,8-TCDD	< 1	1	pg/L	2017-11-14
Total TCDDs	< 1	1	pg/L	2017-11-14
1,2,3,7,8-PeCDD	< 2	2	pg/L	2017-11-14
Total PeCDDs	< 2	2	pg/L	2017-11-14
1,2,3,4,7,8-HxCDD	< 2	2	pg/L	2017-11-14
1,2,3,6,7,8-HxCDD	< 2	2	pg/L	2017-11-14
1,2,3,7,8,9-HxCDD	< 2	2	pg/L	2017-11-14
Total HxCDDs	< 2	2	pg/L	2017-11-14
1,2,3,4,6,7,8-HpCDD	< 3	3	pg/L	2017-11-14

Caring About Results, Obviously.

# Petro-Wipes

## New Product Development



Petro-Wipes were developed to provide a portable, self contained decontamination product that can adsorb petroleum and chlorinated solvent free-product (LNAPL and DNAPL), as well as water soluble contaminant.

Hence it can be used on both oil and oil and water spills, even if it's raining outside.



# **CONTACT INFORMATION**

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