

## Material Safety Data Sheet

Date of Issue: January 2015

Kit Name: MSDS *Lawsonia intracellularis* PCR Detection Kit

### 1. Identification of the substance:

Component name: vetPCR™ LAW.INT PCR Premixture

### 2. Details of the supplier of the safety data sheet:

- Manufacturer/Supplier: Bioingentech Ltd.
- Address: Bernardo O'higgins 1186, of 1307, Concepción, Chile.
- Phone: (56)-41-2790435
- Mobile: (56)-09-90802078

### 3. Hazardous Identification:

Harmful by inhalation, contact with skin and if swallowed.

### 4. First aid:

In case of eye contact: Immediately flush eyes with large amounts of water for at least 20 minutes adequate flushing is achieved by separating eyelids with clean fingers.

In case of skin contact: Immediately wash skin with soap and copious amounts of water.

If inhaled: Remove to an area with fresh air. Give artificial respiration if not breathing and call medical emergency services. Oxygen may be required if respiration is difficult.

If swallowed: Call a Physician immediately.

### 5. Fire-Fighting Measures:

Extinguishing media: Carbon dioxide, dry chemical powder or appropriate foam.

Special Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

### 6. Accidental Release Measures:

Precautionary Measures: Wear self-contained breathing apparatus, protective eyewear/goggles, rubber boots and thick rubber gloves.

Clean-Up Procedure: Absorb on vermiculite or sand. Place in closed containers for disposal.

Finally ventilate area and wash spills when pick-up is complete.

### 7. Handling and Storage:

Storage: Store tightly closed at 22-25°C.

### 8. Exposure Controls:

Rubber gloves, protective eyewear, NIOSH/MSHA-approved respirator, safety shower and eye wash bottle.

Mechanical exhaust required. Keep tightly closed. Wash hands thoroughly after handling. Do not get into eyes, on skin or on clothing. Do not breathe vapor. Severe eye irritant.

### 9. Physical and Chemical Properties:

Physical State:	liquid
Color:	colorless
Odor:	odorless
pH:	(25°C) 8.0
Viscosity:	(25°C) N/A

Melting Point:	N/A
Boiling Point:	N/A
Ignition Temp:	N/A
Flashpoint:	N/A
Explosion Level:	Lower: N/A

Explosion Level:	Upper: N/A
Vapor Pressure:	(25°C) N/A
Specific Gravity:	(25°C) N/A
Water Solubility:	(25°C) Soluble

### 10. Stability and Reactivity:

Substances to avoid: N/A

Hazardous combustion or decomposition products: nature of decomposition products not known.

### 11. Toxicological Data:

Toxicity Data N/A Acute Effects of:	
Inhalation:	May be harmful by inhalation.
Eye Contact:	Causes severe irritation.
Skin Contact:	Causes skin irritation Harmful by skin absorption
Ingestion:	Harmful if swallowed.
Prolonged exposure:	N/A
Chronic Effects:	N/A
RTECS Numbers:	N/A

Additional Information Handle with normal caution according to chemicals. Other harmful properties cannot be ruled out.

### 12. Ecological Data:

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: These products have not been tested for mobility in soil.

PERSISTENCE AND BIODEGRADABILITY: These products have not been tested for persistence or biodegradability. It is expected that the constituents of these products will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known.

BIO-ACCUMULATION POTENTIAL: These products have not been tested for bio-accumulation potential. No information is available for constituents.

ECOTOXICITY: These products have not been tested for aquatic or animal toxicity. All releases to terrestrial, atmospheric and aquatic environments should be avoided.

OTHER ADVERSE EFFECTS: These products do not contain any constituents with known ozone depletion potential.

### 13. Disposal:

Small amounts can be flushed down a sink with a large quantity of water. Make sure to observe all federal, state and local laws and requirements.

### 14. Transportation Information:

U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS: These products are NOT classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

These products are NOT classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION/ICAO (IATA/ICAO): These products are NOT classified as dangerous goods, per rules of IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO): These products are NOT classified as dangerous goods, per the rules of IMO.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): These products are NOT classified by the United Nations Economic Commission for Europe to be dangerous goods.

AUSTRALIAN FEDERAL OFFICE OF ROAD SAFETY CODE FOR THE TRANSPORTATION OF DANGEROUS GOODS BY ROAD OR RAIL: These products are NOT classified as dangerous goods, per regulations of the Office of Road Safety.

### 15. Regulatory Data:

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The constituents in the components of these products are not subject to Sections 302, 304, and 313 reporting requirements under the Superfund Amendment and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the constituents in the components of these products. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: These products are regulated by the Food and Drug Administration; they are exempt from the requirements of TSCA.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No constituent in the components of these products is on the California Proposition 65 lists.

ANSI LABELING (Z129.1; Provided to Summarize Occupational Hazard Information): CAUTION! MAY CAUSE SKIN AND EYE IRRITATION. MAY CAUSE DISCOMFORT IF SWALLOWED OR INHALED. Do not taste or swallow. Avoid skin or eye contact. Avoid prolonged or repeated skin contact. Avoid breathing mists or sprays. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Wear gloves and goggles.

FIRST-AID: In case of contact, immediately flush skin or eyes with plenty of water. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention if necessary. IN CASE OF FIRE: Use water fog, dry chemical, CO<sub>2</sub>, or "alcohol" foam. IN CASE OF SPILL: Absorb spill with polypads and place in suitable container. Consult Material Safety Data Sheet for additional information.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: The constituents in the components of these products are listed on the DSL Inventory or are exempt.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITY SUBSTANCES LISTS: The constituents in the components of these products are not on the CEPA Priority Substances Lists.

CANADIAN WHMIS CLASSIFICATION AND SYMBOLS: Not applicable.

ADDITIONAL EUROPEAN UNION REGULATIONS:

LABELING AND CLASSIFICATION: The following classifications are based on European Union Council Directive 67/548/EEC and subsequent Directives.

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

LABELING AND CLASSIFICATION FOR CONSTITUENTS: Official classifications for these substances have not been published in Commission Directives 93/72EEC, 94/69/EC, 96/56/EC, or 98/98/EC.

ADDITIONAL AUSTRALIAN REGULATIONS:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: The constituents in the components of these products which are listed in Section 3 (Composition and Information on Ingredients) are on the AICS. Hydrates of listed compounds and biological materials are exempt from listing. Any chemical not included in AICS is regarded as a new industrial chemical unless it is outside the scope of the Industrial Chemicals (Notification and Assessment) Act 1989 OR is otherwise exempt from notification. New industrial chemicals must be notified and assessed before being manufactured or imported into Australia.

HAZARDOUS SUBSTANCES INFORMATION SYSTEM (HSIS): No constituent in the components of these products is listed in the HSIS.

LABELING AND CLASSIFICATION: The following classifications are based on the Australian National Occupational Health and Safety Commission [NOHSC(1008:2004)].

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

POISONS SCHEDULE NUMBER: None.

ADDITIONAL LABELING: Not applicable.

ADDITIONAL JAPANESE REGULATIONS:

JAPANESE ENCS: The constituents in the components of these products are on the ENCS Inventory as indicated in composition tables in Section 3 (Composition and Information on Ingredients).

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: No constituent in the components of these products is listed as a Deleterious Substance under the Poisonous and Deleterious Substances Control Law.

### 16. Other Data:

The above information is believed to be correct but does not purport to be all-inclusive and should be used only as a guide. Bioingentech shall not be held liable for consequences resulting from handling of or contact with the above product.

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Please visit our web site for more information: Visit [www.kitpcr.com/](http://www.kitpcr.com/) or email [sales@kitpcr.com](mailto:sales@kitpcr.com). To reorder, visit [www.bioingentech.com](http://www.bioingentech.com) or email [info@bioingentech.com](mailto:info@bioingentech.com).

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**Material Safety Data Sheet**

**Date of Issue: January 2015**

**Kit Name: MSDS Lawsonia intracellularis PCR Detection Kit**

**1. Identification of the substance:**

Component name: PCR Internal control

**2. Details of the supplier of the safety data sheet:**

- Manufacturer/Supplier: Bioingentech Ltd.
- Address: Bernardo O'higgins 1186, of 1307, Concepción, Chile.
- Phone: (56)-41-2790435
- Mobile: (56)-09-90802078

**3. Hazardous Identification:**

Harmful by inhalation, contact with skin and if swallowed.

**4. First aid:**

In case of eye contact: Immediately flush eyes with large amounts of water for at least 20 minutes adequate flushing is achieved by separating eyelids with clean fingers.

In case of skin contact: Immediately wash skin with soap and copious amounts of water.

If inhaled: Remove to an area with fresh air. Give artificial respiration if not breathing and call medical emergency services. Oxygen may be required if respiration is difficult.

If swallowed: Call a Physician immediately.

**5. Fire-Fighting Measures:**

Extinguishing media: Carbon dioxide, dry chemical power or appropriate foam.

Special Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

**6. Accidental Release Measures:**

Precautionary Measures: Wear self-contained breathing apparatus, protective eyewear/goggles, rubber boots and thick rubber gloves.

Clean-Up Procedure: Absorb on vermiculite or sand. Place in closed containers for disposal.

Finally ventilate area and wash spills when pick-up is complete.

**7. Handling and Storage:**

Storage: Store tightly closed at 22-25°C.

**8. Exposure Controls:**

Rubber gloves, protective eyewear, NIOSH/MSH A-approved respirator, safety shower and eye wash bottle.

Mechanical exhaust required. Keep tightly closed. Wash hands thoroughly after handling. Do not get into eyes, on skin or on clothing. Do not breathe vapor. Severe eye irritant.

**9. Physical and Chemical Properties:**

Physical State:	liquid
Color:	colorless
Odor:	odorless
pH:	(25°C) 8.0
Viscosity:	(25°C) N/A

Melting Point:	N/A
Boiling Point:	N/A
Ignition Temp:	N/A
Flashpoint:	N/A
Explosion Level:	Lower: N/A

Explosion Level:	Upper: N/A
Vapor Pressure:	(25°C) N/A
Specific Gravity:	(25°C) N/A
Water Solubility:	(25°C) Soluble

**10. Stability and Reactivity:**

Substances to avoid: N/A

Hazardous combustion or decomposition products: nature of decomposition products not known.

**11. Toxicological Data:**

Toxicity Data N/A Acute Effects of:	
Inhalation:	May be harmful by inhalation.
Eye Contact:	Causes severe irritation.
Skin Contact:	Causes skin irritation Harmful by skin absorption
Ingestion:	Harmful if swallowed.
Prolonged exposure:	N/A
Chronic Effects:	N/A
RTECS Numbers:	N/A

Additional Information Handle with normal caution according to chemicals. Other harmful properties cannot be ruled out.

**12. Ecological Data:**

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: These products have not been tested for mobility in soil.

PERSISTENCE AND BIODEGRADABILITY: These products have not been tested for persistence or biodegradability. It is expected that the constituents of these products will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known.

BIO-ACCUMULATION POTENTIAL: These products have not been tested for bio-accumulation potential. No information is available for constituents.

ECOTOXICITY: These products have not been tested for aquatic or animal toxicity. All releases to terrestrial, atmospheric and aquatic environments should be avoided.

OTHER ADVERSE EFFECTS: These products do not contain any constituents with known ozone depletion potential.

### 13. Disposal:

Small amounts can be flushed down a sink with a large quantity of water. Make sure to observe all federal, state and local laws and requirements.

### 14. Transportation Information:

U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS: These products are NOT classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

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EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): These products are NOT classified by the United Nations Economic Commission for Europe to be dangerous goods.

AUSTRALIAN FEDERAL OFFICE OF ROAD SAFETY CODE FOR THE TRANSPORTATION OF DANGEROUS GOODS BY ROAD OR RAIL: These products are NOT classified as dangerous goods, per regulations of the Office of Road Safety.

### 15. Regulatory Data:

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U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the constituents in the components of these products. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: These products are regulated by the Food and Drug Administration; they are exempt from the requirements of TSCA.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No constituent in the components of these products is on the California Proposition 65 lists.

ANSI LABELING (Z129.1; Provided to Summarize Occupational Hazard Information): CAUTION! MAY CAUSE SKIN AND EYE IRRITATION. MAY CAUSE DISCOMFORT IF SWALLOWED OR INHALED. Do not taste or swallow. Avoid skin or eye contact. Avoid prolonged or repeated skin contact. Avoid breathing mists or sprays. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Wear gloves and goggles.

FIRST-AID: In case of contact, immediately flush skin or eyes with plenty of water. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention if necessary. IN CASE OF FIRE: Use water fog, dry chemical, CO<sub>2</sub>, or "alcohol" foam. IN CASE OF SPILL: Absorb spill with polypads and place in suitable container. Consult Material Safety Data Sheet for additional information.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: The constituents in the components of these products are listed on the DSL Inventory or are exempt.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITY SUBSTANCES LISTS: The constituents in the components of these products are not on the CEPA Priority Substances Lists.

CANADIAN WHMIS CLASSIFICATION AND SYMBOLS: Not applicable.

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HAZARDOUS SUBSTANCES INFORMATION SYSTEM (HSIS): No constituent in the components of these products is listed in the HSIS.

LABELING AND CLASSIFICATION: The following classifications are based on the Australian National Occupational Health and Safety Commission [NOHSC(1008:2004)].

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

POISONS SCHEDULE NUMBER: None.

ADDITIONAL LABELING: Not applicable.

ADDITIONAL JAPANESE REGULATIONS:

JAPANESE ENCS: The constituents in the components of these products are on the ENCS Inventory as indicated in composition tables in Section 3 (Composition and Information on Ingredients).

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: No constituent in the components of these products is listed as a Deleterious Substance under the Poisonous and Deleterious Substances Control Law.

### 16. Other Data:

The above information is believed to be correct but does not purport to be all-inclusive and should be used only as a guide. Bioingentech shall not be held liable for consequences resulting from handling of or contact with the above product.

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Please visit our web site for more information: Visit [www.kitpcr.com/](http://www.kitpcr.com/) or email [sales@kitpcr.com](mailto:sales@kitpcr.com). To reorder, visit [www.bioingentech.com](http://www.bioingentech.com) or email [info@bioingentech.com](mailto:info@bioingentech.com).

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**Material Safety Data Sheet**
**Date of Issue: January 2015**
**Kit Name: MSDS Lawsonia intracellularis PCR Detection Kit**
**1. Identification of the substance:**

Component name: DNase / Rnase-free water

**2. Details of the supplier of the safety data sheet:**

- Manufacturer/Supplier: Bioingentech Ltd.
- Address: Bernardo O'higgins 1186, of 1307, Concepción, Chile.
- Phone: (56)-41-2790435
- Mobile: (56)-09-90802078

**3. Hazardous Identification:**

Harmful by inhalation, contact with skin and if swallowed.

**4. First aid:**

In case of eye contact: Immediately flush eyes with large amounts of water for at least 20 minutes adequate flushing is achieved by separating eyelids with clean fingers.

In case of skin contact: Immediately wash skin with soap and copious amounts of water.

If inhaled: Remove to an area with fresh air. Give artificial respiration if not breathing and call medical emergency services. Oxygen may be required if respiration is difficult.

If swallowed: Call a Physician immediately.

**5. Fire-Fighting Measures:**

Extinguishing media: Carbon dioxide, dry chemical powder or appropriate foam.

Special Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

**6. Accidental Release Measures:**

Precautionary Measures: Wear self-contained breathing apparatus, protective eyewear/goggles, rubber boots and thick rubber gloves.

Clean-Up Procedure: Absorb on vermiculite or sand. Place in closed containers for disposal.

Finally ventilate area and wash spills when pick-up is complete.

**7. Handling and Storage:**

Storage: Store tightly closed at 22-25°C.

**8. Exposure Controls:**

Rubber gloves, protective eyewear, NIOSH/MSHA-approved respirator, safety shower and eye wash bottle.

Mechanical exhaust required. Keep tightly closed. Wash hands thoroughly after handling. Do not get into eyes, on skin or on clothing. Do not breathe vapor. Severe eye irritant.

**9. Physical and Chemical Properties:**

Physical State:	liquid
Color:	colorless
Odor:	odorless
pH:	(25°C) 8.0
Viscosity:	(25°C) N/A

Melting Point:	N/A
Boiling Point:	N/A
Ignition Temp:	N/A
Flashpoint:	N/A
Explosion Level:	Lower: N/A

Explosion Level:	Upper: N/A
Vapor Pressure:	(25°C) N/A
Specific Gravity:	(25°C) N/A
Water Solubility:	(25°C) Soluble

**10. Stability and Reactivity:**

Substances to avoid: N/A

Hazardous combustion or decomposition products: nature of decomposition products not known.

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ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: The constituents in the components of these products are listed on the DSL Inventory or are exempt.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITY SUBSTANCES LISTS: The constituents in the components of these products are not on the CEPA Priority Substances Lists.

CANADIAN WHMIS CLASSIFICATION AND SYMBOLS: Not applicable.

ADDITIONAL EUROPEAN UNION REGULATIONS:

LABELING AND CLASSIFICATION: The following classifications are based on European Union Council Directive 67/548/EEC and subsequent Directives.

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Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

POISONS SCHEDULE NUMBER: None.

ADDITIONAL LABELING: Not applicable.

ADDITIONAL JAPANESE REGULATIONS:

JAPANESE ENCS: The constituents in the components of these products are on the ENCS Inventory as indicated in composition tables in Section 3 (Composition and Information on Ingredients).

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### 16. Other Data:

The above information is believed to be correct but does not purport to be all-inclusive and should be used only as a guide. Bioingentech shall not be held liable for consequences resulting from handling of or contact with the above product.

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All rights reserved. Products may be covered by pending or issued patents or may have certain limitations.

Please visit our web site for more information: Visit [www.kitpcr.com/](http://www.kitpcr.com/) or email [sales@kitpcr.com](mailto:sales@kitpcr.com). To reorder, visit [www.bioingentech.com](http://www.bioingentech.com) or email [info@bioingentech.com](mailto:info@bioingentech.com).

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Visit [www.kitpcr.com/](http://www.kitpcr.com/) or email [sales@kitpcr.com](mailto:sales@kitpcr.com). To reorder, visit [www.bioingentech.com](http://www.bioingentech.com) or email [info@bioingentech.com](mailto:info@bioingentech.com).

## Material Safety Data Sheet

Date of Issue: January 2015

Kit Name: MSDS Lawsonia intracellularis PCR Detection Kit

### 1. Identification of the substance:

Component name: LAW.INT PCR Positive control

### 2. Details of the supplier of the safety data sheet:

- Manufacturer/Supplier: Bioingentech Ltd.
- Address: Bernardo O'higgins 1186, of 1307, Concepción, Chile.
- Phone: (56)-41-2790435
- Mobile: (56)-09-90802078

### 3. Hazardous Identification:

Harmful by inhalation, contact with skin and if swallowed.

### 4. First aid:

In case of eye contact: Immediately flush eyes with large amounts of water for at least 20 minutes adequate flushing is achieved by separating eyelids with clean fingers.

In case of skin contact: Immediately wash skin with soap and copious amounts of water.

If inhaled: Remove to an area with fresh air. Give artificial respiration if not breathing and call medical emergency services. Oxygen may be required if respiration is difficult.

If swallowed: Call a Physician immediately.

### 5. Fire-Fighting Measures:

Extinguishing media: Carbon dioxide, dry chemical powder or appropriate foam.

Special Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

### 6. Accidental Release Measures:

Precautionary Measures: Wear self-contained breathing apparatus, protective eyewear/goggles, rubber boots and thick rubber gloves.

Clean-Up Procedure: Amsorb on vermiculite or sand. Place in closed containers for disposal.

Finally ventilate area and wash spills when pick-up is complete.

### 7. Handling and Storage:

Storage: Store tightly closed at 22-25°C.

### 8. Exposure Controls:

Rubber gloves, protective eyewear, NIOSH/MSH A-approved respirator, safety shower and eye wash bottle.

Mechanical exhaust required. Keep tightly closed. Wash hands thoroughly after handling. Do not get into eyes, on skin or on clothing. Do not breathe vapor. Severe eye irritant.

### 9. Physical and Chemical Properties:

Physical State:	liquid
Color:	colorless
Odor:	odorless
pH:	(25°C) 8.0
Viscosity:	(25°C) N/A

Melting Point:	N/A
Boiling Point:	N/A
Ignition Temp:	N/A
Flashpoint:	N/A
Explosion Level:	Lower: N/A

Explosion Level:	Upper: N/A
Vapor Pressure:	(25°C) N/A
Specific Gravity:	(25°C) N/A
Water Solubility:	(25°C) Soluble

### 10. Stability and Reactivity:

Substances to avoid: N/A

Hazardous combustion or decomposition products: nature of decomposition products not known.

### 11. Toxicological Data:

Toxicity Data N/A Acute Effects of:	
Inhalation:	May be harmful by inhalation.
Eye Contact:	Causes severe irritation.
Skin Contact:	Causes skin irritation Harmful by skin absorption
Ingestion:	Harmful if swallowed.
Prolonged exposure:	N/A
Chronic Effects:	N/A
RTECS Numbers:	N/A

Additional Information Handle with normal caution according to chemicals. Other harmful properties cannot be ruled out.

### 12. Ecological Data:

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: These products have not been tested for mobility in soil.

PERSISTENCE AND BIODEGRADABILITY: These products have not been tested for persistence or biodegradability. It is expected that the constituents of these products will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known.

BIO-ACCUMULATION POTENTIAL: These products have not been tested for bio-accumulation potential. No information is available for constituents.

ECOTOXICITY: These products have not been tested for aquatic or animal toxicity. All releases to terrestrial, atmospheric and aquatic environments should be avoided.

OTHER ADVERSE EFFECTS: These products do not contain any constituents with known ozone depletion potential.

### 13. Disposal:

Small amounts can be flushed down a sink with a large quantity of water. Make sure to observe all federal, state and local laws and requirements.

### 14. Transportation Information:

U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS: These products are NOT classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

These products are NOT classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION/ICAO (IATA/ICAO): These products are NOT classified as dangerous goods, per rules of IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO): These products are NOT classified as dangerous goods, per the rules of IMO.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): These products are NOT classified by the United Nations Economic Commission for Europe to be dangerous goods.

AUSTRALIAN FEDERAL OFFICE OF ROAD SAFETY CODE FOR THE TRANSPORTATION OF DANGEROUS GOODS BY ROAD OR RAIL: These products are NOT classified as dangerous goods, per regulations of the Office of Road Safety.

### 15. Regulatory Data:

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The constituents in the components of these products are not subject to Sections 302, 304, and 313 reporting requirements under the Superfund Amendment and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the constituents in the components of these products. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: These products are regulated by the Food and Drug Administration; they are exempt from the requirements of TSCA.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No constituent in the components of these products is on the California Proposition 65 lists.

ANSI LABELING (Z129.1; Provided to Summarize Occupational Hazard Information): CAUTION! MAY CAUSE SKIN AND EYE IRRITATION. MAY CAUSE DISCOMFORT IF SWALLOWED OR INHALED. Do not taste or swallow. Avoid skin or eye contact. Avoid prolonged or repeated skin contact. Avoid breathing mists or sprays. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Wear gloves and goggles.

FIRST-AID: In case of contact, immediately flush skin or eyes with plenty of water. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention if necessary. IN CASE OF FIRE: Use water fog, dry chemical, CO<sub>2</sub>, or "alcohol" foam. IN CASE OF SPILL: Absorb spill with polypads and place in suitable container. Consult Material Safety Data Sheet for additional information.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: The constituents in the components of these products are listed on the DSL Inventory or are exempt.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITY SUBSTANCES LISTS: The constituents in the components of these products are not on the CEPA Priority Substances Lists.

CANADIAN WHMIS CLASSIFICATION AND SYMBOLS: Not applicable.

ADDITIONAL EUROPEAN UNION REGULATIONS:

LABELING AND CLASSIFICATION: The following classifications are based on European Union Council Directive 67/548/EEC and subsequent Directives.

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

LABELING AND CLASSIFICATION FOR CONSTITUENTS: Official classifications for these substances have not been published in Commission Directives 93/72/EEC, 94/69/EC, 96/56/EC, or 98/98/EC.

ADDITIONAL AUSTRALIAN REGULATIONS:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: The constituents in the components of these products which are listed in Section 3 (Composition and Information on Ingredients) are on the AICS. Hydrates of listed compounds and biological materials are exempt from listing. Any chemical not included in AICS is regarded as a new industrial chemical unless it is outside the scope of the Industrial Chemicals (Notification and Assessment) Act 1989 OR is otherwise exempt from notification. New industrial chemicals must be notified and assessed before being manufactured or imported into Australia.

HAZARDOUS SUBSTANCES INFORMATION SYSTEM (HSIS): No constituent in the components of these products is listed in the HSIS.

LABELING AND CLASSIFICATION: The following classifications are based on the Australian National Occupational Health and Safety Commission [NOHSC(1008:2004)].

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

POISONS SCHEDULE NUMBER: None.

ADDITIONAL LABELING: Not applicable.

ADDITIONAL JAPANESE REGULATIONS:

JAPANESE ENCS: The constituents in the components of these products are on the ENCS Inventory as indicated in composition tables in Section 3 (Composition and Information on Ingredients).

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: No constituent in the components of these products is listed as a Deleterious Substance under the Poisonous and Deleterious Substances Control Law.

### 16. Other Data:

The above information is believed to be correct but does not purport to be all-inclusive and should be used only as a guide. Bioingentech shall not be held liable for consequences resulting from handling of or contact with the above product.

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**Material Safety Data Sheet**

**Date of Issue: January 2015**

**Kit Name: MSDS Lawsonia intracellularis PCR Detection Kit**

**1. Identification of the substance:**

Component name: PCR Negative control

**2. Details of the supplier of the safety data sheet:**

- Manufacturer/Supplier: Bioingentech Ltd.
- Address: Bernardo O'higgins 1186, of 1307, Concepción, Chile.
- Phone: (56)-41-2790435
- Mobile: (56)-09-90802078

**3. Hazardous Identification:**

Harmful by inhalation, contact with skin and if swallowed.

**4. First aid:**

In case of eye contact: Immediately flush eyes with large amounts of water for at least 20 minutes adequate flushing is achieved by separating eyelids with clean fingers.

In case of skin contact: Immediately wash skin with soap and copious amounts of water.

If inhaled: Remove to an area with fresh air. Give artificial respiration if not breathing and call medical emergency services. Oxygen may be required if respiration is difficult.

If swallowed: Call a Physician immediately.

**5. Fire-Fighting Measures:**

Extinguishing media: Carbon dioxide, dry chemical powder or appropriate foam.

Special Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

**6. Accidental Release Measures:**

Precautionary Measures: Wear self-contained breathing apparatus, protective eyewear/goggles, rubber boots and thick rubber gloves.

Clean-Up Procedure: Absorb on vermiculite or sand. Place in closed containers for disposal.

Finally ventilate area and wash spills when pick-up is complete.

**7. Handling and Storage:**

Storage: Store tightly closed at 22-25°C.

**8. Exposure Controls:**

Rubber gloves, protective eyewear, NIOSH/MSH A-approved respirator, safety shower and eye wash bottle.

Mechanical exhaust required. Keep tightly closed. Wash hands thoroughly after handling. Do not get into eyes, on skin or on clothing. Do not breathe vapor. Severe eye irritant.

**9. Physical and Chemical Properties:**

Physical State:	liquid
Color:	colorless
Odor:	odorless
pH:	(25°C) 8.0
Viscosity:	(25°C) N/A

Melting Point:	N/A
Boiling Point:	N/A
Ignition Temp:	N/A
Flashpoint:	N/A
Explosion Level:	Lower: N/A

Explosion Level:	Upper: N/A
Vapor Pressure:	(25°C) N/A
Specific Gravity:	(25°C) N/A
Water Solubility:	(25°C) Soluble

**10. Stability and Reactivity:**

Substances to avoid: N/A

Hazardous combustion or decomposition products: nature of decomposition products not known.

**11. Toxicological Data:**

Toxicity Data N/A Acute Effects of:	
Inhalation:	May be harmful by inhalation.
Eye Contact:	Causes severe irritation.
Skin Contact:	Causes skin irritation Harmful by skin absorption
Ingestion:	Harmful if swallowed.
Prolonged exposure:	N/A
Chronic Effects:	N/A
RTECS Numbers:	N/A

Additional Information Handle with normal caution according to chemicals. Other harmful properties cannot be ruled out.

**12. Ecological Data:**

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: These products have not been tested for mobility in soil.

PERSISTENCE AND BIODEGRADABILITY: These products have not been tested for persistence or biodegradability. It is expected that the constituents of these products will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known.

BIO-ACCUMULATION POTENTIAL: These products have not been tested for bio-accumulation potential. No information is available for constituents.

ECOTOXICITY: These products have not been tested for aquatic or animal toxicity. All releases to terrestrial, atmospheric and aquatic environments should be avoided.

OTHER ADVERSE EFFECTS: These products do not contain any constituents with known ozone depletion potential.

### 13. Disposal:

Small amounts can be flushed down a sink with a large quantity of water. Make sure to observe all federal, state and local laws and requirements.

### 14. Transportation Information:

U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS: These products are NOT classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

These products are NOT classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION/ICAO (IATA/ICAO): These products are NOT classified as dangerous goods, per rules of IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO): These products are NOT classified as dangerous goods, per the rules of IMO.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): These products are NOT classified by the United Nations Economic Commission for Europe to be dangerous goods.

AUSTRALIAN FEDERAL OFFICE OF ROAD SAFETY CODE FOR THE TRANSPORTATION OF DANGEROUS GOODS BY ROAD OR RAIL: These products are NOT classified as dangerous goods, per regulations of the Office of Road Safety.

### 15. Regulatory Data:

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The constituents in the components of these products are not subject to Sections 302, 304, and 313 reporting requirements under the Superfund Amendment and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the constituents in the components of these products. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: These products are regulated by the Food and Drug Administration; they are exempt from the requirements of TSCA.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No constituent in the components of these products is on the California Proposition 65 lists.

ANSI LABELING (Z129.1; Provided to Summarize Occupational Hazard Information): CAUTION! MAY CAUSE SKIN AND EYE IRRITATION. MAY CAUSE DISCOMFORT IF SWALLOWED OR INHALED. Do not taste or swallow. Avoid skin or eye contact. Avoid prolonged or repeated skin contact. Avoid breathing mists or sprays. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Wear gloves and goggles.

FIRST-AID: In case of contact, immediately flush skin or eyes with plenty of water. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention if necessary. IN CASE OF FIRE: Use water fog, dry chemical, CO<sub>2</sub>, or "alcohol" foam. IN CASE OF SPILL: Absorb spill with polypads and place in suitable container. Consult Material Safety Data Sheet for additional information.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: The constituents in the components of these products are listed on the DSL Inventory or are exempt.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITY SUBSTANCES LISTS: The constituents in the components of these products are not on the CEPA Priority Substances Lists.

CANADIAN WHMIS CLASSIFICATION AND SYMBOLS: Not applicable.

ADDITIONAL EUROPEAN UNION REGULATIONS:

LABELING AND CLASSIFICATION: The following classifications are based on European Union Council Directive 67/548/EEC and subsequent Directives.

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

LABELING AND CLASSIFICATION FOR CONSTITUENTS: Official classifications for these substances have not been published in Commission Directives 93/72EEC, 94/69/EC, 96/56/EC, or 98/98/EC.

ADDITIONAL AUSTRALIAN REGULATIONS:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: The constituents in the components of these products which are listed in Section 3 (Composition and Information on Ingredients) are on the AICS. Hydrates of listed compounds and biological materials are exempt from listing. Any chemical not included in AICS is regarded as a new industrial chemical unless it is outside the scope of the Industrial Chemicals (Notification and Assessment) Act 1989 OR is otherwise exempt from notification. New industrial chemicals must be notified and assessed before being manufactured or imported into Australia.

HAZARDOUS SUBSTANCES INFORMATION SYSTEM (HSIS): No constituent in the components of these products is listed in the HSIS.

LABELING AND CLASSIFICATION: The following classifications are based on the Australian National Occupational Health and Safety Commission [NOHSC(1008:2004)].

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

POISONS SCHEDULE NUMBER: None.

ADDITIONAL LABELING: Not applicable.

ADDITIONAL JAPANESE REGULATIONS:

JAPANESE ENCS: The constituents in the components of these products are on the ENCS Inventory as indicated in composition tables in Section 3 (Composition and Information on Ingredients).

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: No constituent in the components of these products is listed as a Deleterious Substance under the Poisonous and Deleterious Substances Control Law.

### 16. Other Data:

The above information is believed to be correct but does not purport to be all-inclusive and should be used only as a guide. Bioingentech shall not be held liable for consequences resulting from handling of or contact with the above product.

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**Material Safety Data Sheet**
**Date of Issue: January 2015**
**Kit Name: MSDS Lawsonia intracellularis PCR Detection Kit**
**1. Identification of the substance:**

Component name: Mineral Oil solution

**2. Details of the supplier of the safety data sheet:**

- Manufacturer/Supplier: Bioingentech Ltd.
- Address: Bernardo O'higgins 1186, of 1307, Concepción, Chile.
- Phone: (56)-41-2790435
- Mobile: (56)-09-90802078

**3. Hazardous Identification:**

Harmful by inhalation, contact with skin and if swallowed.

**4. First aid:**

In case of eye contact: Immediately flush eyes with large amounts of water for at least 20 minutes adequate flushing is achieved by separating eyelids with clean fingers.

In case of skin contact: Immediately wash skin with soap and copious amounts of water.

If inhaled: Remove to an area with fresh air. Give artificial respiration if not breathing and call medical emergency services. Oxygen may be required if respiration is difficult.

If swallowed: Call a Physician immediately.

**5. Fire-Fighting Measures:**

Extinguishing media: Carbon dioxide, dry chemical power or appropriate foam.

Special Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

**6. Accidental Release Measures:**

Precautionary Measures: Wear self-contained breathing apparatus, protective eyewear/goggles, rubber boots and thick rubber gloves.

Clean-Up Procedure: Absorb on vermiculite or sand. Place in closed containers for disposal.

Finally ventilate area and wash spills when pick-up is complete.

**7. Handling and Storage:**

Storage: Store tightly closed at 22-25°C.

**8. Exposure Controls:**

Rubber gloves, protective eyewear, NIOSH/MSHA-approved respirator, safety shower and eye wash bottle.

Mechanical exhaust required. Keep tightly closed. Wash hands thoroughly after handling. Do not get into eyes, on skin or on clothing. Do not breathe vapor. Severe eye irritant.

**9. Physical and Chemical Properties:**

Physical State:	liquid
Color:	colorless
Odor:	odorless
pH:	(25°C) 8.0
Viscosity:	(25°C) N/A

Melting Point:	N/A
Boiling Point:	N/A
Ignition Temp:	N/A
Flashpoint:	N/A
Explosion Level:	Lower: N/A

Explosion Level:	Upper: N/A
Vapor Pressure:	(25°C) N/A
Specific Gravity:	(25°C) N/A
Water Solubility:	(25°C) Soluble

**10. Stability and Reactivity:**

Substances to avoid: N/A

Hazardous combustion or decomposition products: nature of decomposition products not known.

**11. Toxicological Data:**

Toxicity Data N/A Acute Effects of:	
Inhalation:	May be harmful by inhalation.
Eye Contact:	Causes severe irritation.
Skin Contact:	Causes skin irritation Harmful by skin absorption
Ingestion:	Harmful if swallowed.
Prolonged exposure:	N/A
Chronic Effects:	N/A
RTECS Numbers:	N/A

Additional Information Handle with normal caution according to chemicals. Other harmful properties cannot be ruled out.

**12. Ecological Data:**

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: These products have not been tested for mobility in soil.

PERSISTENCE AND BIODEGRADABILITY: These products have not been tested for persistence or biodegradability. It is expected that the constituents of these products will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known.

BIO-ACCUMULATION POTENTIAL: These products have not been tested for bio-accumulation potential. No information is available for constituents.

ECOTOXICITY: These products have not been tested for aquatic or animal toxicity. All releases to terrestrial, atmospheric and aquatic environments should be avoided.

OTHER ADVERSE EFFECTS: These products do not contain any constituents with known ozone depletion potential.

### 13. Disposal:

Small amounts can be flushed down a sink with a large quantity of water. Make sure to observe all federal, state and local laws and requirements.

### 14. Transportation Information:

U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS: These products are NOT classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

These products are NOT classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION/ICAO (IATA/ICAO): These products are NOT classified as dangerous goods, per rules of IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO): These products are NOT classified as dangerous goods, per the rules of IMO.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): These products are NOT classified by the United Nations Economic Commission for Europe to be dangerous goods.

AUSTRALIAN FEDERAL OFFICE OF ROAD SAFETY CODE FOR THE TRANSPORTATION OF DANGEROUS GOODS BY ROAD OR RAIL: These products are NOT classified as dangerous goods, per regulations of the Office of Road Safety.

### 15. Regulatory Data:

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The constituents in the components of these products are not subject to Sections 302, 304, and 313 reporting requirements under the Superfund Amendment and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the constituents in the components of these products. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: These products are regulated by the Food and Drug Administration; they are exempt from the requirements of TSCA.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No constituent in the components of these products is on the California Proposition 65 lists.

ANSI LABELING (Z129.1; Provided to Summarize Occupational Hazard Information): CAUTION! MAY CAUSE SKIN AND EYE IRRITATION. MAY CAUSE DISCOMFORT IF SWALLOWED OR INHALED. Do not taste or swallow. Avoid skin or eye contact. Avoid prolonged or repeated skin contact. Avoid breathing mists or sprays. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Wear gloves and goggles.

FIRST-AID: In case of contact, immediately flush skin or eyes with plenty of water. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention if necessary. IN CASE OF FIRE: Use water fog, dry chemical, CO<sub>2</sub>, or "alcohol" foam. IN CASE OF SPILL: Absorb spill with polypads and place in suitable container. Consult Material Safety Data Sheet for additional information.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: The constituents in the components of these products are listed on the DSL Inventory or are exempt.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITY SUBSTANCES LISTS: The constituents in the components of these products are not on the CEPA Priority Substances Lists.

CANADIAN WHMIS CLASSIFICATION AND SYMBOLS: Not applicable.

ADDITIONAL EUROPEAN UNION REGULATIONS:

LABELING AND CLASSIFICATION: The following classifications are based on European Union Council Directive 67/548/EEC and subsequent Directives.

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

LABELING AND CLASSIFICATION FOR CONSTITUENTS: Official classifications for these substances have not been published in Commission Directives 93/72EEC, 94/69/EC, 96/56/EC, or 98/98/EC.

ADDITIONAL AUSTRALIAN REGULATIONS:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: The constituents in the components of these products which are listed in Section 3 (Composition and Information on Ingredients) are on the AICS. Hydrates of listed compounds and biological materials are exempt from listing. Any chemical not included in AICS is regarded as a new industrial chemical unless it is outside the scope of the Industrial Chemicals (Notification and Assessment) Act 1989 OR is otherwise exempt from notification. New industrial chemicals must be notified and assessed before being manufactured or imported into Australia.

HAZARDOUS SUBSTANCES INFORMATION SYSTEM (HSIS): No constituent in the components of these products is listed in the HSIS.

LABELING AND CLASSIFICATION: The following classifications are based on the Australian National Occupational Health and Safety Commission [NOHSC(1008:2004)].

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

POISONS SCHEDULE NUMBER: None.

ADDITIONAL LABELING: Not applicable.

ADDITIONAL JAPANESE REGULATIONS:

JAPANESE ENCS: The constituents in the components of these products are on the ENCS Inventory as indicated in composition tables in Section 3 (Composition and Information on Ingredients).

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: No constituent in the components of these products is listed as a Deleterious Substance under the Poisonous and Deleterious Substances Control Law.

### 16. Other Data:

The above information is believed to be correct but does not purport to be all-inclusive and should be used only as a guide. Bioingentech shall not be held liable for consequences resulting from handling of or contact with the above product.

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## Material Safety Data Sheet

Date of Issue: January 2015

Kit Name: MSDS Lawsonia intracellularis PCR Detection Kit

### 1. Identification of the substance:

Component name: Brig™ Molecular Weight marker

### 2. Details of the supplier of the safety data sheet:

- Manufacturer/Supplier: Bioingentech Ltd.
- Address: Bernardo O'higgins 1186, of 1307, Concepción, Chile.
- Phone: (56)-41-2790435
- Mobile: (56)-09-90802078

### 3. Hazardous Identification:

Harmful by inhalation, contact with skin and if swallowed.

### 4. First aid:

In case of eye contact: Immediately flush eyes with large amounts of water for at least 20 minutes adequate flushing is achieved by separating eyelids with clean fingers.

In case of skin contact: Immediately wash skin with soap and copious amounts of water.

If inhaled: Remove to an area with fresh air. Give artificial respiration if not breathing and call medical emergency services. Oxygen may be required if respiration is difficult.

If swallowed: Call a Physician immediately.

### 5. Fire-Fighting Measures:

Extinguishing media: Carbon dioxide, dry chemical powder or appropriate foam.

Special Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

### 6. Accidental Release Measures:

Precautionary Measures: Wear self-contained breathing apparatus, protective eyewear/goggles, rubber boots and thick rubber gloves.

Clean-Up Procedure: Absorb on vermiculite or sand. Place in closed containers for disposal.

Finally ventilate area and wash spills when pick-up is complete.

### 7. Handling and Storage:

Storage: Store tightly closed at 22-25°C.

### 8. Exposure Controls:

Rubber gloves, protective eyewear, NIOSH/MSHA-approved respirator, safety shower and eye wash bottle.

Mechanical exhaust required. Keep tightly closed. Wash hands thoroughly after handling. Do not get into eyes, on skin or on clothing. Do not breathe vapor. Severe eye irritant.

### 9. Physical and Chemical Properties:

Physical State:	liquid
Color:	colorless
Odor:	odorless
pH:	(25°C) 8.0
Viscosity:	(25°C) N/A

Melting Point:	N/A
Boiling Point:	N/A
Ignition Temp:	N/A
Flashpoint:	N/A
Explosion Level:	Lower: N/A

Explosion Level:	Upper: N/A
Vapor Pressure:	(25°C) N/A
Specific Gravity:	(25°C) N/A
Water Solubility:	(25°C) Soluble

### 10. Stability and Reactivity:

Substances to avoid: N/A

Hazardous combustion or decomposition products: nature of decomposition products not known.

### 11. Toxicological Data:

Toxicity Data N/A Acute Effects of:	
Inhalation:	May be harmful by inhalation.
Eye Contact:	Causes severe irritation.
Skin Contact:	Causes skin irritation Harmful by skin absorption
Ingestion:	Harmful if swallowed.
Prolonged exposure:	N/A
Chronic Effects:	N/A
RTECS Numbers:	N/A

Additional Information Handle with normal caution according to chemicals. Other harmful properties cannot be ruled out.

### 12. Ecological Data:

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: These products have not been tested for mobility in soil.

PERSISTENCE AND BIODEGRADABILITY: These products have not been tested for persistence or biodegradability. It is expected that the constituents of these products will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known.

BIO-ACCUMULATION POTENTIAL: These products have not been tested for bio-accumulation potential. No information is available for constituents.

ECOTOXICITY: These products have not been tested for aquatic or animal toxicity. All releases to terrestrial, atmospheric and aquatic environments should be avoided.

OTHER ADVERSE EFFECTS: These products do not contain any constituents with known ozone depletion potential.

### 13. Disposal:

Small amounts can be flushed down a sink with a large quantity of water. Make sure to observe all federal, state and local laws and requirements.

### 14. Transportation Information:

U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS: These products are NOT classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

These products are NOT classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION/ICAO (IATA/ICAO): These products are NOT classified as dangerous goods, per rules of IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO): These products are NOT classified as dangerous goods, per the rules of IMO.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): These products are NOT classified by the United Nations Economic Commission for Europe to be dangerous goods.

AUSTRALIAN FEDERAL OFFICE OF ROAD SAFETY CODE FOR THE TRANSPORTATION OF DANGEROUS GOODS BY ROAD OR RAIL: These products are NOT classified as dangerous goods, per regulations of the Office of Road Safety.

### 15. Regulatory Data:

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The constituents in the components of these products are not subject to Sections 302, 304, and 313 reporting requirements under the Superfund Amendment and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the constituents in the components of these products. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: These products are regulated by the Food and Drug Administration; they are exempt from the requirements of TSCA.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No constituent in the components of these products is on the California Proposition 65 lists.

ANSI LABELING (Z129.1; Provided to Summarize Occupational Hazard Information): CAUTION! MAY CAUSE SKIN AND EYE IRRITATION. MAY CAUSE DISCOMFORT IF SWALLOWED OR INHALED. Do not taste or swallow. Avoid skin or eye contact. Avoid prolonged or repeated skin contact. Avoid breathing mists or sprays. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Wear gloves and goggles.

FIRST-AID: In case of contact, immediately flush skin or eyes with plenty of water. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention if necessary. IN CASE OF FIRE: Use water fog, dry chemical, CO<sub>2</sub>, or "alcohol" foam. IN CASE OF SPILL: Absorb spill with polypads and place in suitable container. Consult Material Safety Data Sheet for additional information.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: The constituents in the components of these products are listed on the DSL Inventory or are exempt.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITY SUBSTANCES LISTS: The constituents in the components of these products are not on the CEPA Priority Substances Lists.

CANADIAN WHMIS CLASSIFICATION AND SYMBOLS: Not applicable.

ADDITIONAL EUROPEAN UNION REGULATIONS:

LABELING AND CLASSIFICATION: The following classifications are based on European Union Council Directive 67/548/EEC and subsequent Directives.

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

LABELING AND CLASSIFICATION FOR CONSTITUENTS: Official classifications for these substances have not been published in Commission Directives 93/72EEC, 94/69/EC, 96/56/EC, or 98/98/EC.

ADDITIONAL AUSTRALIAN REGULATIONS:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: The constituents in the components of these products which are listed in Section 3 (Composition and Information on Ingredients) are on the AICS. Hydrates of listed compounds and biological materials are exempt from listing. Any chemical not included in AICS is regarded as a new industrial chemical unless it is outside the scope of the Industrial Chemicals (Notification and Assessment) Act 1989 OR is otherwise exempt from notification. New industrial chemicals must be notified and assessed before being manufactured or imported into Australia.

HAZARDOUS SUBSTANCES INFORMATION SYSTEM (HSIS): No constituent in the components of these products is listed in the HSIS.

LABELING AND CLASSIFICATION: The following classifications are based on the Australian National Occupational Health and Safety Commission [NOHSC(1008:2004)].

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

POISONS SCHEDULE NUMBER: None.

ADDITIONAL LABELING: Not applicable.

ADDITIONAL JAPANESE REGULATIONS:

JAPANESE ENCS: The constituents in the components of these products are on the ENCS Inventory as indicated in composition tables in Section 3 (Composition and Information on Ingredients).

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: No constituent in the components of these products is listed as a Deleterious Substance under the Poisonous and Deleterious Substances Control Law.

### 16. Other Data:

The above information is believed to be correct but does not purport to be all-inclusive and should be used only as a guide. Bioingentech shall not be held liable for consequences resulting from handling of or contact with the above product.

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## Material Safety Data Sheet

Date of Issue: January 2015

Kit Name: MSDS Lawsonia intracellularis PCR Detection Kit

### 1. Identification of the substance:

Component name: DNA Purification kit

### 2. Details of the supplier of the safety data sheet:

- Manufacturer/Supplier: Bioingentech Ltd.
- Address: Bernardo O'higgins 1186, of 1307, Concepción, Chile.
- Phone: (56)-41-2790435
- Mobile: (56)-09-90802078

### 3. Hazardous Identification:

Harmful by inhalation, contact with skin and if swallowed.

### 4. First aid:

In case of eye contact: Immediately flush eyes with large amounts of water for at least 20 minutes adequate flushing is achieved by separating eyelids with clean fingers.

In case of skin contact: Immediately wash skin with soap and copious amounts of water.

If inhaled: Remove to an area with fresh air. Give artificial respiration if not breathing and call medical emergency services. Oxygen may be required if respiration is difficult.

If swallowed: Call a Physician immediately.

### 5. Fire-Fighting Measures:

Extinguishing media: Carbon dioxide, dry chemical powder or appropriate foam.

Special Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

### 6. Accidental Release Measures:

Precautionary Measures: Wear self-contained breathing apparatus, protective eyewear/goggles, rubber boots and thick rubber gloves.

Clean-Up Procedure: Absorb on vermiculite or sand. Place in closed containers for disposal.

Finally ventilate area and wash spills when pick-up is complete.

### 7. Handling and Storage:

Storage: Store tightly closed at 22-25°C.

### 8. Exposure Controls:

Rubber gloves, protective eyewear, NIOSH/MSHA-approved respirator, safety shower and eye wash bottle.

Mechanical exhaust required. Keep tightly closed. Wash hands thoroughly after handling. Do not get into eyes, on skin or on clothing. Do not breathe vapor. Severe eye irritant.

### 9. Physical and Chemical Properties:

Physical State:	liquid
Color:	colorless
Odor:	odorless
pH:	(25°C) 8.0
Viscosity:	(25°C) N/A

Melting Point:	N/A
Boiling Point:	N/A
Ignition Temp:	N/A
Flashpoint:	N/A
Explosion Level:	Lower: N/A

Explosion Level:	Upper: N/A
Vapor Pressure:	(25°C) N/A
Specific Gravity:	(25°C) N/A
Water Solubility:	(25°C) Soluble

### 10. Stability and Reactivity:

Substances to avoid: N/A

Hazardous combustion or decomposition products: nature of decomposition products not known.

### 11. Toxicological Data:

Toxicity Data N/A Acute Effects of:	
Inhalation:	May be harmful by inhalation.
Eye Contact:	Causes severe irritation.
Skin Contact:	Causes skin irritation Harmful by skin absorption
Ingestion:	Harmful if swallowed.
Prolonged exposure:	N/A
Chronic Effects:	N/A
RTECS Numbers:	N/A

Additional Information Handle with normal caution according to chemicals. Other harmful properties cannot be ruled out.

### 12. Ecological Data:

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: These products have not been tested for mobility in soil.

PERSISTENCE AND BIODEGRADABILITY: These products have not been tested for persistence or biodegradability. It is expected that the constituents of these products will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known.

BIO-ACCUMULATION POTENTIAL: These products have not been tested for bio-accumulation potential. No information is available for constituents.

ECOTOXICITY: These products have not been tested for aquatic or animal toxicity. All releases to terrestrial, atmospheric and aquatic environments should be avoided.

OTHER ADVERSE EFFECTS: These products do not contain any constituents with known ozone depletion potential.

### 13. Disposal:

Small amounts can be flushed down a sink with a large quantity of water. Make sure to observe all federal, state and local laws and requirements.

### 14. Transportation Information:

U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS: These products are NOT classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

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U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: These products are regulated by the Food and Drug Administration; they are exempt from the requirements of TSCA.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

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FIRST-AID: In case of contact, immediately flush skin or eyes with plenty of water. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention if necessary. IN CASE OF FIRE: Use water fog, dry chemical, CO<sub>2</sub>, or "alcohol" foam. IN CASE OF SPILL: Absorb spill with polypads and place in suitable container. Consult Material Safety Data Sheet for additional information.

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CANADIAN DSL/NDL INVENTORY STATUS: The constituents in the components of these products are listed on the DSL Inventory or are exempt.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITY SUBSTANCES LISTS: The constituents in the components of these products are not on the CEPA Priority Substances Lists.

CANADIAN WHMIS CLASSIFICATION AND SYMBOLS: Not applicable.

ADDITIONAL EUROPEAN UNION REGULATIONS:

LABELING AND CLASSIFICATION: The following classifications are based on European Union Council Directive 67/548/EEC and subsequent Directives.

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

LABELING AND CLASSIFICATION FOR CONSTITUENTS: Official classifications for these substances have not been published in Commission Directives 93/72/EEC, 94/69/EC, 96/56/EC, or 98/98/EC.

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LABELING AND CLASSIFICATION: The following classifications are based on the Australian National Occupational Health and Safety Commission [NOHSC(1008:2004)].

Classification: Not applicable. Risk Phrases: Not applicable. Safety Phrases: Not applicable. Hazard Symbol: Not applicable.

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ADDITIONAL LABELING: Not applicable.

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JAPANESE ENCS: The constituents in the components of these products are on the ENCS Inventory as indicated in composition tables in Section 3 (Composition and Information on Ingredients).

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### 16. Other Data:

The above information is believed to be correct but does not purport to be all-inclusive and should be used only as a guide. Bioingentech shall not be held liable for consequences resulting from handling of or contact with the above product.

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