

## SAFETY DATA SHEET

Version 2.1

Revision Date: 9/27/2016

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name : FIT-GFR™ Kit (Iohexol)

Product Number : FIT-0515

Brand : BioPAL

CAS-No. : FIT-0515

#### 1.2 Kit Components

Iohexol Concentrate - Cat #: FIT-0503

Rabbit anti-Iohexol - Cat #: FIT-0501

HRP Substrate Reagent - Cat #: FIT-0002

HRP Stop Reagent - Cat #: FIT-0003

Iohexol coated plate - Cat #: FIT-0516

Plate Sealer - Cat #: FIT-0004

Iohexol Kit Manual - Cat #: FIT-0518

#### 1.3 Usage

This product is furnished for LABORATORY RESEARCH USE ONLY. Not for diagnostic or therapeutic use.

#### 1.4 Details of the supplier of the safety data sheet

Company : BioPhysics Assay Laboratory, Inc.  
80 Webster Street  
WORCESTER MA 01603  
USA

Telephone : 508-770-1190

Fax : 508-770-1191

### 2. HAZARDS IDENTIFICATION

#### 2.1 OSHA/HCS status

HRP Stop Reagent (Cat #: FIT-0003) is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

#### 2.2 Classification of the substances or mixture

Acute Tox. 4 (Oral) H302

Skin Corr. 1B H314

Eye Irrit. 2A H319

Skin Sens. 1 H317

STOT SE 3 H335

### 2.3 GHS Label elements, including precautionary statements

Hazard pictograms (GHS-US) :



GHS05



GHS07

Signal word (GHS-US) :

**Danger**

Hazard statement (GHS-US) :

H302 – Harmful if swallowed  
H314 – Causes severe skin burns and eye damage  
H317 – May cause an allergic skin reaction  
H319 – Causes eye irritation  
H335 – May cause respiratory irritation

Precautionary statements (GHS-US) :

P206 – Do not breathe dust/fume/gas/mist/vapours/spray  
P261 – Avoid breathing fume, mist, vapours, spray  
P246 – Wash hands, forearms and face thoroughly after handling  
P270 – Do not eat, drink or smoke when using this product  
P271 – Use only outdoors or in a well-ventilated area  
P272 – Contaminated work clothing must not be allowed out of the workplace  
P280 – Wear eye protection, face protection, protective clothing, protective gloves  
P301+P312 – If swallowed: Call a doctor, a POISON CENTER if you feel unwell  
P301+P300+P331 – If swallowed: rinse mouth. Do NOT induce vomiting  
P302+P352 – If on skin: Wash with plenty of water  
P303+P351+P353 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 – Immediately call poison center/doctor  
P312 – Call a doctor, a POISON CENTER if you feel unwell  
P321 – Specific treatment (see Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work on this label  
P330 – Rinse mouth  
P333+P313 – If skin irritation or rash occurs: Get medical advice/attention  
P362+P364 – Take off contaminated clothing and wash it before reuse  
P363 – Wash contaminated clothing before reuse  
P403+P233 – Store in a well-ventilated place. Keep container tightly closed  
P405 – Store locked up  
P501 – Dispose of contents/container to licensed waste handling facility

### 2.4 Hazards not otherwise classified (HNOC) or not covered by GHS

No additional information available

### 2.5 Unknown acute toxicity (GHS-US)

No data available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances/Mixture

Mixture - Iohexol Concentrate - Cat #: FIT-0503  
Mixture - Rabbit anti-Iohexol - Cat #: FIT-0501  
Mixture - HRP Substrate Reagent - Cat #: FIT-0002  
Mixture - HRP Stop Reagent - Cat #: FIT-0003  
Mixture - Iohexol coated plate - Cat #: FIT-0516  
Substance - Plate Sealer - Cat #: FIT-0004

#### 3.2 CAS Numbers/other identifiers

Product Identifier	Ingredient Name	%
FIT-0003	Maleic acid	1-3

Any percentage shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

##### General information

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

##### If inhaled

Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing is affected. If breathing is difficult, supply oxygen.

##### In case of skin contact (or clothing)

Remove affected clothing and wash all exposed skin with water for at least 15 minutes. Get medical attention immediately.

##### If case of eye contact

Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Get medical attention immediately. Continue rinsing.

##### If swallowed

Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell.

#### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms/injuries	:	May cause an allergic skin reaction. Harmful if swallowed. Causes serious eye damage. May cause respiratory irritation. Harmful in contact with skin.
Symptoms/injuries after inhalation	:	May cause respiratory irritation.
Symptoms/injuries after skin contact	:	Harmful in contact with skin. May cause an allergic skin reaction.
Symptoms/injuries after eye contact	:	Causes serious eye damage.
Symptoms/injuries after ingestion	:	Harmful if swallowed.
Chronic symptoms	:	Skin sensitization.

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use an extinguishing agent suitable for the surrounding fire, such as water spray, carbon dioxide, dry chemical power or appropriate foam. Prevent contact with skin and eyes.

#### Unsuitable extinguishing media

None known

### 5.2 Special hazards arising from the substance or mixture

Fire hazard : The product is not flammable.  
Explosion hazard : Product is not explosive.  
Reactivity : No dangerous reactions known under normal conditions of use.

### 5.3 Advice for firefighters

Precautionary measures fire : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### 5.4. Further information

In a fire or if heated, a pressure increase will occur and the component containers may burst.

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## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate area. Keep upwind. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

#### 6.1.a For non-emergency personnel

Protective equipment : Wear Protective equipment as described in Section 8.  
Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.b For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.

### 6.2 Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

### 6.3 Methods and materials for containment and cleaning up

For containment : Scoop solid spill into closing containers or bags. Avoid dust formation.  
Methods for cleaning up : Sweep up dry powder and dispose properly. Sweep or shovel spills into appropriate container for disposal. This material and its container must be disposed of in a safe way, and as per local legislation.

### 6.4 Reference to other sections

See Section 8 and 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Use appropriate personal protection equipment (PPE). Provide appropriate exhaust ventilation at places of dust forming. Keep away from sources of

ignition - No smoking. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Keep away from incompatible materials (see Section 10) and food and drink.

## 7.2 Conditions for safe storage, including any incompatibilities

May be stored for up to 4 months at 2° C from the date of shipment. Opened Microplate Wells or reagents may be store for up to 1 month at 2° C. Return unused wells to the pouch containing desiccant pack, reseal along entire edge. Standards can be repaired in advance and stored at room temperature for up to 1 month.

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## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

### 8.1 Control parameters

No data available.

### 8.2 Exposure controls

#### Appropriate engineering controls

General industrial hygiene practice.

#### Personal protective equipment

Gloves. Wear labcoat with full coverage clothing. Wear chemical goggles and face shield in combination.



#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.  
Lab coat. Wear suitable protective clothing. Wear long sleeves.

#### Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where excessive vapour, mist, or dust may result, use NIOSH approved respiratory protection equipment.

#### Control of environment exposure

No special environmental precautions required.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Information below is specific for the kit component: HRP Stop Reagent - Cat #: FIT-0003. For other components within the kit, please refer to their specific MSDS form.

a) Appearance	Form: aqueous solution Colour: clear
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	$\leq 2$
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Vapour density	No data available
m) Relative density	No data available
n) Solubility	Soluble in water
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	Product is not explosive
t) Oxidizing properties	No data available

### 9.2 Other safety information

No data available

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## 10. STABILITY AND REACTIVELY

### 10.1 Reactivity

No dangerous reactions known under normal conditions of use.

### 10.2 Chemical stability

Stable under recommended storage conditions (see Section 7).

**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to avoid**

Elevated temperatures. Freezing. Moisture.

**10.5 Incompatible materials**

Acids and bases. Oxidizing agents. Reducing agents.

**10.6 Hazardous decomposition products**

Under normal conditions of storage and use, hazardous reactions will not occur.

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**11. TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

Information below is specific for the kit component: HRP Stop Reagent - Cat #: FIT-0003. For other components within the kit, please refer to their specific MSDS form.

**Acute toxicity**

Oral : Harmful if swallowed.

**Maleic acid (110-16-7)**

LD50 oral rat	708 mg/kg (Source: IUCLID)
LD50 dermal rabbit	1560 mg/kg (Source: NLM_CIP)
LC50 inhalation rat (mg/l)	> 720 mg/m <sup>3</sup> 1 h; (Source: NLM_CIP)

**Skin corrosion/irritation**

Causes serious skin burns and eye damage.

pH: ≤ 2

**Serious eye damage/eye irritation**

Causes serious eye irritation.

pH: ≤ 2

**Respiratory or skin sensitization**

May cause an allergic skin reaction.

**Germ cell mutagenicity**

Not classified

**Carcinogenicity**

Not classified

**Reproductive toxicity**

Not classified

**Specific target organ toxicity – single exposure**

May cause respiratory irritation

**Specific target organ toxicity – repeated exposure**

Not classified

**Aspiration hazard**

Not classified

**Symptoms/injuries after inhalation**

May cause respiratory irritation

**Symptoms/injuries after skin contact**

Harmful in contact with skin. May cause an allergic skin reaction.

**Symptoms/injuries after eye contact**

Causes serious eye damage.

**Symptoms/injuries after ingestion**

Harmful if swallowed.

**Chronic symptoms**

Skin sensitization.

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**12. ECOLOGICAL INFORMATION**

**12.1 Ecotoxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Other adverse effects**

May be harmful to the environment, particularly aquatic organisms.

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**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

**Waste disposal recommendations**

Disposal should be in accordance with applicable national, state, and local laws and regulations. Local regulations may be more stringent than national or state requirements. Verify local and state regulations before discharging into public sewers or landfills. Do not dump into any body of water. Contact a licensed professional waste disposal service for appropriate methods of disposal.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

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**15. REGULATORY INFORMATION**

**United States (TSCA)**

All ingredients are on the inventory or exempt from listing.

**Canada (DSL/NDL)**

All ingredients are on the inventory or exempt from listing.



**SARA 302 Components**

HRP Stop Reagent - Cat #: FIT-0003 : CAS 110-16-7.

**SARA 313 Components**

HRP Stop Reagent - Cat #: FIT-0003 : Concentration <5%.

**SARA 311/312 Hazards**

HRP Stop Reagent - Cat #: FIT-0003 : Delayed (chronic) health hazard.

HRP Stop Reagent - Cat #: FIT-0003 : Immediate (acute) health hazard.

**California Prop. 65 Components**

HRP Stop Reagent - Cat #: FIT-0003 : This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm.

**Maleic acid (110-16-7)**

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

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**16. OTHER INFORMATION****HMIS Rating**

Health hazard: 0

Chronic Health Hazard:

Flammability: 0

Physical Hazard: 0

**NFPA Rating**

Health hazard: 0

Fire Hazard: 0

Reactivity Hazard: 0

**Further information**

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**Preparation Information**

BioPhysics Assay Laboratory (BioPAL), Inc.

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