

Cayman Chemical Company  
 1180 E. Ellsworth Rd.  
 Ann Arbor, MI 48108



### Section 1. Identification of the Substance/Mixture and of the

**1.1 Product Code:** 10010317  
**Product Name:** FABP Assay Buffer (10X)

**1.2 Relevant identified uses of the substance or mixture and uses advised against**  
**Relevant identified uses:** For research use only, not for human or veterinary use.

**1.3 Details of the Supplier of the Safety Data Sheet**

**Company Name:** Cayman Chemical Company  
**Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300  
**Alternate Emergency Contact:** CHEMTREC Outside USA and Canada: +1 (703)527-3887  
**Information:** Cayman Chemical Company +1 (734)971-3335  
**Web site address:** www.caymanchem.com

### Section 2. Hazards Identification

GHS Classification	Placard	Key word	GHS hazard phrase
Acute Toxicity: Oral, Category 5	none	Warning	May be harmful if swallowed
Serious Eye Damage/Eye Irritation, Category 2A	Exclamation point	Warning	Causes serious eye irritation

**GHS Hazard Phrases:**  
 H303: May be harmful if swallowed.  
 H319: Causes serious eye irritation.

**GHS Precaution Phrases:**  
 P264: Wash hands thoroughly after handling.  
 P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.

**GHS Response Phrases:**  
 P312: Call a POISON CENTER or doctor/physician if you feel unwell.  
 P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337+313: If eye irritation persists, get medical advice/attention.

**GHS Storage and Disposal Phrases:**  
 Please refer to Section 7 for Storage and Section 13 for Disposal information.

**2.3 Adverse Human Health Effects and Symptoms:**  
 Causes serious eye irritation.  
 Material may be irritating to the mucous membranes and upper respiratory tract.  
 May be harmful by inhalation, ingestion, or skin absorption.  
 May cause skin or respiratory system irritation.  
 To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

**Target Organs:** No data available.

**LD 50 / LC 50:** Please refer to Section 11.

**Medical Conditions Generally Aggravated By Exposure:** No data available.

### Section 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Sodium phosphate, Dibasic	7558-79-4	1.44 %	231-448-7	R36	WC4500000
2. Potassium phosphate, Monobasic	7778-77-0	0.24 %	231-913-4	No phrases apply.	TC6615500
3. Sodium chloride	7647-14-5	8.0 %	231-598-3	R36	VZ4725000

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
4. Potassium chloride	7447-40-7	0.2 %	231-211-8	R52	TS8050000
5. Water	7732-18-5	90.12 %	231-791-2	No phrases apply.	ZC0110000

### Section 4. First Aid Measures

**4.1 Description of First Aid Measures:**

- 4.1.1 In Case of Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
- 4.1.2 In Case of Skin Contact:** Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
- 4.1.3 In Case of Eye Contact:** Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
- 4.1.4 In Case of Ingestion:** Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
- 4.2 Important Symptoms and Effects, Both Acute and Delayed:** No data available.
- 4.3 Indication of any immediate medical attention and special treatment needed:** No data available.

### Section 5. Fire Fighting Measures

- 5.1 Suitable Extinguishing Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
- Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and Hazards:** No data available.
- Flash Pt:** No data.
- Autoignition Pt:** No data available.
- Explosive Limits:** LEL: No data. UEL: No data.
- Hazardous Combustion Products:** No data available.
- 5.3 Fire Fighting Instructions:** As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

### Section 6. Accidental Release Measures

- 6.1 Protective Precautions, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.
- Hazard Label Information:** Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.



**Percent Volatile:** No data.

### Section 10. Stability and Reactivity

**10.1 Reactivity:** No data available.

**10.2 Stability:** Unstable [ ] Stable [ X ]

**10.3 Stability Note(s):** Stable if stored in accordance with information listed on the product insert.

**10.4 Conditions To Avoid:** No data available.

**10.3 Polymerization:** Will occur [ ] Will not occur [ X ]

**10.5 Incompatibility - Materials To Avoid:** strong acids  
strong oxidizing agents

**10.6 Hazardous Decomposition Or Byproducts:** hydrogen chloride gas  
phosphorus oxides  
sodium oxides

### Section 11. Toxicological Information

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

Sodium chloride - Irritation Data: Eyes (rabbit): 100 mg (24h) moderate; Skin (rabbit): 500 mg (24h) mild;

Sodium phosphate, Dibasic - Irritation Data: Eyes (rabbit): 500 mg (24h) mild; Skin (rabbit): 500 mg (24h) mild;

**Chronic Toxicological Effects:** Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.  
Sodium chloride RTECS Number: VZ4725000  
Sodium phosphate, Dibasic RTECS Number: WC4500000

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Sodium phosphate, Dibasic	7558-79-4	n.a.	n.a.	n.a.	n.a.
2. Potassium phosphate, Monobasic	7778-77-0	n.a.	n.a.	n.a.	n.a.
3. Sodium chloride	7647-14-5	n.a.	n.a.	n.a.	n.a.
4. Potassium chloride	7447-40-7	n.a.	n.a.	n.a.	n.a.
5. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

### Section 12. Ecological Information

**12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

### Section 13. Disposal Considerations

**13.1 Waste Disposal Method:** Dispose in accordance with local, state, and federal regulations.

### Section 14. Transport Information

**14.1 LAND TRANSPORT (US DOT)**  
DOT Proper Shipping Name Not dangerous goods.

**14.1 LAND TRANSPORT (European ADR/RID)**  
ADR/RID Shipping Name Not dangerous goods.

**14.3 AIR TRANSPORT (ICAO/IATA)**  
ICAO/IATA Shipping Name Not dangerous goods.



# SAFETY DATA SHEET

## FABP Assay Buffer (10X)

**Additional Transport Information:** Transport in accordance with local, state, and federal regulations.

### Section 15. Regulatory Information

**European Community Hazard Symbol codes** Xi: Irritant

**European Community Risk and Safety Phrases**

- R36 - Irritating to eyes.
- S24/25 - Avoid contact with skin and eyes.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

**US EPA SARA Title III**

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Sodium phosphate, Dibasic	7558-79-4	No	Yes 5000 LB	No	No
2. Potassium phosphate, Monobasic	7778-77-0	No	No	No	No
3. Sodium chloride	7647-14-5	No	No	No	No
4. Potassium chloride	7447-40-7	No	No	No	No
5. Water	7732-18-5	No	No	No	No

**Other US EPA or State Lists**

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Sodium phosphate, Dibasic	7558-79-4	No	No	Inventory	No
2. Potassium phosphate, Monobasic	7778-77-0	No	No	Inventory	No
3. Sodium chloride	7647-14-5	No	No	Inventory	No
4. Potassium chloride	7447-40-7	No	No	Inventory	No
5. Water	7732-18-5	No	No	Inventory	No

**Regulatory Information Statement:** This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

### Section 16. Other Information

**Revision Date:** 05/28/2013

**Company Policy or Disclaimer**

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required



## FABP4 (human recombinant) Assay Reagent (5X)

Revision: 05/28/2013

Supercedes Revision: 01/14/2008

Cayman Chemical Company  
1180 E. Ellsworth Rd.  
Ann Arbor, MI 48108

## Section 1. Identification of the Substance/Mixture and of the

**1.1 Product Code:** 10010318  
**Product Name:** FABP4 (human recombinant) Assay Reagent (5X)

**1.2 Relevant identified uses of the substance or mixture and uses advised against**  
**Relevant identified uses:** For research use only, not for human or veterinary use.

**1.3 Details of the Supplier of the Safety Data Sheet**  
**Company Name:** Cayman Chemical Company  
**Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300  
**Alternate Emergency Contact:** CHEMTREC Outside USA and Canada: +1 (703)527-3887  
**Information:** Cayman Chemical Company +1 (734)971-3335  
**Web site address:** www.caymanchem.com

## Section 2. Hazards Identification

GHS Classification	Placard	Key word	GHS hazard phrase
Skin Corrosion/Irritation, Category 3	none	Warning	Causes mild skin irritation
Serious Eye Damage/Eye Irritation, Category 2B	none	Warning	Causes eye irritation

**GHS Hazard Phrases:** H316: Causes mild skin irritation.  
H320: Causes eye irritation.

**GHS Precaution Phrases:** P264: Wash hands thoroughly after handling.

**GHS Response Phrases:** P332+313: If skin irritation occurs, get medical advice/attention.  
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+313: If eye irritation persists, get medical advice/attention.

**GHS Storage and Disposal Phrases:** Please refer to Section 7 for Storage and Section 13 for Disposal information.

**2.3 Adverse Human Health Effects and Symptoms:** Causes eye irritation.  
Causes mild skin irritation.  
Material may be irritating to the mucous membranes and upper respiratory tract.  
May be harmful by inhalation, ingestion, or skin absorption.  
May cause respiratory system irritation.  
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

**Target Organs:** Eyes, Kidneys, Respiratory system, Skin.

**LD 50 / LC 50:** Please refer to Section 11.

**Medical Conditions Generally Aggravated By Exposure:** No data available.

## Section 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. FABP4 (human recombinant)	NA	< 1.0 %	NA	No phrases apply.	NA
2. Glycerol	56-81-5	20.0 %	200-289-5	R36	MA8050000
3. Sodium chloride	7647-14-5	0.5 %	231-598-3	R36	VZ4725000
4. Sodium phosphate monobasic, monohydrate	10049-21-5	0.02 %	NA	R36	WA1900000

## FABP4 (human recombinant) Assay Reagent (5X)

Revision: 05/28/2013

Supersedes Revision: 01/14/2008

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
5. Sodium phosphate, Dibasic	7558-79-4	0.33 %	231-448-7	R36	WC450000
6. Water	7732-18-5	>78.15 %	231-791-2	No phrases apply.	ZC0110000

### Section 4. First Aid Measures

**4.1 Description of First Aid Measures:**

- 4.1.1 **In Case of Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
- 4.1.2 **In Case of Skin Contact:** Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
- 4.1.3 **In Case of Eye Contact:** Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
- 4.1.4 **In Case of Ingestion:** Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
- 4.2 **Important Symptoms and Effects, Both Acute and Delayed:** Exposure may cause: damage to kidneys.  
Prolonged exposure may cause nausea, headache, and vomiting.
- 4.3 **Indication of any immediate medical attention and special treatment needed:** No data available.

### Section 5. Fire Fighting Measures

- 5.1 **Suitable Extinguishing Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
Use water spray to cool fire-exposed containers.
- Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 **Flammable Properties and Hazards:** Emits toxic fumes under fire conditions.
- Flash Pt:** No data.
- Autoignition Pt:** No data available.
- Explosive Limits:** LEL: No data. UEL: No data.
- Hazardous Combustion Products:** No data available.
- 5.3 **Fire Fighting Instructions:** As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

### Section 6. Accidental Release Measures

- 6.1 **Protective Precautions, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation.  
As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 **Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 **Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate.  
Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

- 7.1 **Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray.  
Avoid prolonged or repeated exposure.
- 7.2 **Precautions To Be Taken in Storing:** Keep container tightly closed.  
Store in accordance with information listed on the product insert.
- Hazard Label Information:** Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.  
Wash thoroughly after handling.

**FABP4 (human recombinant) Assay Reagent (5X)**

Revision: 05/28/2013

Supersedes Revision: 01/14/2008

**Section 8. Exposure Controls/Personal Protection**

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. FABP4 (human recombinant)	NA	No data.	No data.	No data.
2. Glycerol	56-81-5	15 (dust); 5 (resp.) mg/m3	10 mg/m3	No data.
3. Sodium chloride	7647-14-5	No data.	No data.	No data.
4. Sodium phosphate monobasic, monohydrate	10049-21-5	No data.	No data.	No data.
5. Sodium phosphate, Dibasic	7558-79-4	No data.	No data.	No data.
6. Water	7732-18-5	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. FABP4 (human recombinant)	NA	No data.	No data.	No data.
2. Glycerol	56-81-5	TWA: 10 mg/m3 ( STEL: )	TWA: 10 mg/m3	No data.
3. Sodium chloride	7647-14-5	No data.	No data.	No data.
4. Sodium phosphate monobasic, monohydrate	10049-21-5	No data.	No data.	No data.
5. Sodium phosphate, Dibasic	7558-79-4	No data.	No data.	No data.
6. Water	7732-18-5	No data.	No data.	No data.

**Protective Equipment Summary - Hazard Label Information:** Compatible chemical-resistant gloves    Eye wash station in work area    Lab coat    Safety glasses    Safety shower in work area    Vent Hood

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**8.2.2.1 Eye Protection:** Safety glasses

**8.2.2.2 Protective Gloves:** Compatible chemical-resistant gloves

**Other Protective Clothing:** Lab coat

**8.2.2.3 Respiratory Equipment (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.  
Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.  
Wash thoroughly after handling.

**8.2.3 Environmental Exposure Controls:** No data available.

**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties**

**Physical States:**                            [ ] Gas    [ X ] Liquid    [ ] Solid

**Appearance and Odor:**                No data available.

**pH:**    7.2

**Melting Point:**                            No data.

**Boiling Point:**                             No data.

**Flash Pt:**                                     No data.

**Evaporation Rate:**                        No data.

**Vapor Pressure (vs. Air or mm Hg):**    No data.

**Vapor Density (vs. Air = 1):**            No data.

**Specific Gravity (Water = 1):**            No data.

**Solubility in Water:**                      No data.

**Autoignition Pt:**                          No data.

**Explosive Properties:**                    No data available.



**FABP4 (human recombinant) Assay Reagent (5X)**

Revision: 05/28/2013

Supercedes Revision: 01/14/2008

**Oxidizing Properties:** No data available.

**9.2 Other Information**
**Percent Volatile:** No data.

### Section 10. Stability and Reactivity

**10.1 Reactivity:** No data available.

**10.2 Stability:** Unstable [ ] Stable [ X ]

**10.3 Stability Note(s):** Stable if stored in accordance with information listed on the product insert.

**10.4 Conditions To Avoid:** No data available.

**10.3 Polymerization:** Will occur [ ] Will not occur [ X ]

**10.5 Incompatibility - Materials To Avoid:** strong bases  
strong oxidizing agents

**10.6 Hazardous Decomposition Or Byproducts:** carbon dioxide  
carbon monoxide

### Section 11. Toxicological Information

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

Glycerol - Irritation Data: Eyes (rabbit): 500 mg (24h) mild; Skin (rabbit): 500 mg (24h) mild;

**Chronic Toxicological Effects:**

Glycerol - Investigated as a mutagen, reproductive effector, and tumorigen.

Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.

See actual entry in RTECS for complete information.

Glycerol RTECS Number: MA8050000

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. FABP4 (human recombinant)	NA	n.a.	n.a.	n.a.	n.a.
2. Glycerol	56-81-5	n.a.	n.a.	n.a.	n.a.
3. Sodium chloride	7647-14-5	n.a.	n.a.	n.a.	n.a.
4. Sodium phosphate monobasic, monohydrate	10049-21-5	n.a.	n.a.	n.a.	n.a.
5. Sodium phosphate, Dibasic	7558-79-4	n.a.	n.a.	n.a.	n.a.
6. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

### Section 12. Ecological Information

**12.1 Toxicity:** Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

### Section 13. Disposal Considerations

**13.1 Waste Disposal Method:** Dispose in accordance with local, state, and federal regulations.

### Section 14. Transport Information

**14.1 LAND TRANSPORT (US DOT)**
**DOT Proper Shipping Name** Not dangerous goods.

**14.1 LAND TRANSPORT (European ADR/RID)**
**ADR/RID Shipping Name** Not dangerous goods.

**14.3 AIR TRANSPORT (ICAO/IATA)**
**ICAO/IATA Shipping Name** Not dangerous goods.

**Additional Transport Information:** Transport in accordance with local, state, and federal regulations.

**FABP4 (human recombinant) Assay Reagent (5X)**

Revision: 05/28/2013

Supercedes Revision: 01/14/2008

**Section 15. Regulatory Information****European Community Hazard Symbol codes** Xi: Irritant**European Community Risk and Safety Phrases**

- R36 - Irritating to eyes.  
 S24/25 - Avoid contact with skin and eyes.  
 S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

**US EPA SARA Title III**

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. FABP4 (human recombinant)	NA	No	No	No	No
2. Glycerol	56-81-5	No	No	No	No
3. Sodium chloride	7647-14-5	No	No	No	No
4. Sodium phosphate monobasic, monohydrate	10049-21-5	No	No	No	No
5. Sodium phosphate, Dibasic	7558-79-4	No	Yes 5000 LB	No	No
6. Water	7732-18-5	No	No	No	No

**Other US EPA or State Lists**

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. FABP4 (human recombinant)	NA	No	No	No	No
2. Glycerol	56-81-5	No	No	Inventory	No
3. Sodium chloride	7647-14-5	No	No	Inventory	No
4. Sodium phosphate monobasic, monohydrate	10049-21-5	No	No	No	No
5. Sodium phosphate, Dibasic	7558-79-4	No	No	Inventory	No
6. Water	7732-18-5	No	No	Inventory	No

**Regulatory Information Statement:**

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

**Section 16. Other Information****Revision Date:** 05/28/2013**Company Policy or Disclaimer**

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required

Cayman Chemical Company  
 1180 E. Ellsworth Rd.  
 Ann Arbor, MI 48108



### Section 1. Identification of the Substance/Mixture and of the

**1.1 Product Code:** 10010376  
**Product Name:** FABP Assay Detection Reagent (5X)

**1.2 Relevant identified uses of the substance or mixture and uses advised against**  
**Relevant identified uses:** For research use only, not for human or veterinary use.

**1.3 Details of the Supplier of the Safety Data Sheet**  
**Company Name:** Cayman Chemical Company  
**Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300  
**Alternate Emergency Contact:** CHEMTREC Outside USA and Canada: +1 (703)527-3887  
**Information:** Cayman Chemical Company +1 (734)971-3335  
**Web site address:** www.caymanchem.com

### Section 2. Hazards Identification

GHS Classification	Placard	Key word	GHS hazard phrase
Flammable Liquids, Category 2	Flame	Danger	Highly flammable liquid and vapor
Skin Corrosion/Irritation, Category 2	Exclamation point	Warning	Causes skin irritation
Serious Eye Damage/Eye Irritation, Category 2A	Exclamation point	Warning	Causes serious eye irritation
Toxic To Reproduction, Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child
Target Organ Systemic Toxicity (single exposure), Category 3	Exclamation point	Warning	May cause respiratory irritation, or may cause drowsiness and dizziness
Target Organ Systemic Toxicity (repeated exposure), Category 1	Health hazard	Danger	Causes damage to {<target organs>} through prolonged or repeated exposure

**GHS Hazard Phrases:**  
 H225: Highly flammable liquid and vapor.  
 H315: Causes skin irritation.  
 H319: Causes serious eye irritation.  
 H361: Suspected of damaging fertility or the unborn child.  
 H335: May cause respiratory irritation.  
 H336: May cause drowsiness or dizziness.  
 H372: Causes damage to organs {liver} through prolonged or repeated exposure.

**GHS Precaution Phrases:**  
 P210: Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking.  
 P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.  
 P264: Wash hands thoroughly after handling.  
 P362+364: Take off contaminated clothing and wash it before reuse.  
 P201: Obtain special instructions before use.  
 P202: Do not handle until all safety precautions have been read and understood.  
 P281: Use personal protective equipment as required.  
 P261: Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P260: Do not breathe dust/fume/gas/mist/vapours/spray.

**GHS Response Phrases:**  
 P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P302+352: IF ON SKIN: Wash with plenty of soap and water.  
 P332+313: If skin irritation occurs, get medical advice/attention.  
 P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.



# SAFETY DATA SHEET

## FABP Assay Detection Reagent (5X)

P337+313: If eye irritation persists, get medical advice/attention.  
 P308+313: IF exposed or concerned: Get medical attention/advice.  
 P309+311: Call a POISON CENTER or doctor/physician if exposed or you feel unwell.  
 P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P314: Get medical attention/advice if you feel unwell.

**GHS Storage and Disposal Phrases:**

Please refer to Section 7 for Storage and Section 13 for Disposal information.

**2.3 Adverse Human Health Effects and Symptoms:**

Causes damage to organs {liver} through prolonged or repeated oral exposure.  
 Causes serious eye irritation.  
 Causes skin or respiratory system irritation.  
 Material is irritating to the mucous membranes and upper respiratory tract.  
 May be harmful by inhalation, ingestion, or skin absorption.  
 Suspected of damaging fertility or the unborn child.  
 To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

**Target Organs:**

Central nervous system, Blood, Eyes, Reproductive system, Heart, Respiratory system, Liver, Skin.

**LD 50 / LC 50:**

Please refer to Section 11.

**Medical Conditions Generally Aggravated By**

No data available.

**Exposure:**

### Section 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. FABP Assay Detection Reagent (5X)	NA	0.0 -5.0 %	NA	R36/38	NA
2. Ethyl alcohol	64-17-5	95.0 -100.0 %	200-578-6	R11-36/37/38-48-62 -63	KQ6300000

### Section 4. First Aid Measures

**4.1 Description of First Aid Measures:****4.1.1 In Case of Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

**4.1.2 In Case of Skin Contact:**

Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

**4.1.3 In Case of Eye Contact:**

Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

**4.1.4 In Case of Ingestion:**

Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

**4.2 Important Symptoms and Effects, Both Acute and Delayed:**

Irritating to eyes, skin, nose; may cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects.

**4.3 Indication of any immediate medical attention and special treatment needed:**

No data available.

### Section 5. Fire Fighting Measures

**5.1 Suitable Extinguishing Media:**Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
Use water spray to cool fire-exposed containers.**Unsuitable Extinguishing Media:**

A solid water stream may be inefficient.

**5.2 Flammable Properties and Hazards:**

Can release vapors that form explosive mixtures at temperatures at or above the flashpoint.  
 Container explosion may occur under fire conditions.  
 Emits toxic fumes under fire conditions.  
 Sensitive to static discharge.  
 Vapors can travel to a source of ignition and flash back.

**Flash Pt:** 14.00 C Method Used: Closed Cup  
**Autoignition Pt:** 363.00 C  
**Explosive Limits:** LEL: 3.3% at 25.0 C UEL: 19.0% at 25.0 C  
**Hazardous Combustion Products:** No data available.

**5.3 Fire Fighting Instructions:** As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.  
 Note: Flammable as diluted in ethanol.

### Section 6. Accidental Release Measures

**6.1 Protective Precautions, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation.  
 As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

**6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.

**6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate.  
 Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

**7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray.  
 Avoid prolonged or repeated exposure.  
 Keep away from sources of ignition.  
 Take precautionary measures against static discharge.

**7.2 Precautions To Be Taken in Storing:** Keep away from heat, sparks, and flame.  
 Keep container tightly closed.  
 Store in accordance with information listed on the product insert.

**Other Precautions:** Hygroscopic.  
 Light sensitive.

**Hazard Label Information:** Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.  
 Wash thoroughly after handling.

### Section 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. FABP Assay Detection Reagent (5X)	NA	No data.	No data.	No data.
2. Ethyl alcohol	64-17-5	1000 ppm	1000 ppm	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. FABP Assay Detection Reagent (5X)	NA	No data.	No data.	No data.
2. Ethyl alcohol	64-17-5	TWA: 1920 mg/m3 (1000 ppm) STEL: ()	TWA: 1900 mg/m3 (1000 ppm) STEL: 9500 mg/m3 (5000 ppm)	No data.

**Protective Equipment Summary - Hazard Label Information:** Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**8.2.2.1 Eye Protection:** Safety glasses

**8.2.2.2 Protective Gloves:** Compatible chemical-resistant gloves

**Other Protective Clothing:** Lab coat

**8.2.2.3 Respiratory Equipment (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.  
 Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.  
 Wash thoroughly after handling.

**8.2.3 Environmental Exposure Controls:** No data available.

### Section 9. Physical and Chemical Properties

#### 9.1 Information on Basic Physical and Chemical Properties

**Physical States:** [ ] Gas [ X ] Liquid [ ] Solid

**Appearance and Odor:** Solution

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** 14.00 C Method Used: Closed Cup

**Evaporation Rate:** No data.

**Explosive Limits:** LEL: 3.3% at 25.0 C UEL: 19.0% at 25.0 C

**Vapor Pressure (vs. Air or mm Hg):** 43 MM\_HG at 20.0 C

**Vapor Density (vs. Air = 1):** No data.

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** 363.00 C

**Explosive Properties:** No data available.

**Oxidizing Properties:** No data available.

#### 9.2 Other Information

**Percent Volatile:** No data.

### Section 10. Stability and Reactivity

**10.1 Reactivity:** No data available.

**10.2 Stability:** Unstable [ ] Stable [ X ]

**10.3 Stability Note(s):** Stable if stored in accordance with information listed on the product insert.

**10.4 Conditions To Avoid:** No data available.

**10.3 Polymerization:** Will occur [ ] Will not occur [ X ]

**10.5 Incompatibility - Materials To Avoid:** alkali metals  
 ammonia  
 peroxides  
 strong oxidizing agents

**10.6 Hazardous Decomposition Or Byproducts:** carbon dioxide  
 carbon monoxide

### Section 11. Toxicological Information

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

Ethanol - Toxicity Data: Oral TDLO (man): 1.14 ml/kg; Oral TDLO (man): 650 mg/kg; Oral LD50 (rat): 7,060 mg/kg; Oral LD50 (mouse): 3,450 mg/kg; Oral LD50 (mouse): 10.5 ml/kg; Oral LD50 (rabbit): 6,300 mg/kg; Inhalation LC50 (rat): 20,000 ppm (10h); Inhalation TCLO (human): 1,800 ppm (30m); Inhalation TCLO (human): 2,500 mg/m<sup>3</sup> (20m); Inhalation LC50 (rat): 5,900 mg/m<sup>3</sup> (6h); Inhalation LCLO (mouse): 29,300 ppm (7h);

Ethanol - Irritation Data: Eyes (rabbit): 500 mg (24h) mild; Skin (rabbit): 20 mg (24h) moderate;

**Chronic Toxicological Effects:** Ethanol - Investigated as a mutagen, reproductive effector, and tumorigen.  
Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.  
See actual entry in RTECS for complete information.  
Ethanol RTECS Number: KQ6300000

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. FABP Assay Detection Reagent (5X)	NA	n.a.	n.a.	n.a.	n.a.
2. Ethyl alcohol	64-17-5	n.a.	1	A4	n.a.

**Carcinogenicity:** NTP? No      IARC Monographs? No      OSHA Regulated? No

### Section 12. Ecological Information

**12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

### Section 13. Disposal Considerations

**13.1 Waste Disposal Method:** Dispose in accordance with local, state, and federal regulations.

### Section 14. Transport Information

**14.1 LAND TRANSPORT (US DOT)**

**DOT Proper Shipping Name:** Ethyl Alcohol Solution  
**DOT Hazard Class:** 3  
**DOT Hazard Label:** FLAMMABLE LIQUID  
**UN/NA Number:** 1170  
**Packing Group:** II

**14.1 LAND TRANSPORT (European ADR/RID)**

**ADR/RID Shipping Name:** Ethyl Alcohol Solution  
**UN Number:** 1170  
**Hazard Class:** 3 - FLAMMABLE LIQUID  
**Packing Group:** II

**14.3 AIR TRANSPORT (ICAO/IATA)**

**ICAO/IATA Shipping Name:** Ethyl Alcohol Solution  
**UN Number:** 1170  
**Hazard Class:** 3 - FLAMMABLE LIQUID  
**Packing Group:** II  
**IATA Classification:** 3

**Additional Transport Information:** No data available.

### Section 15. Regulatory Information

**European Community Hazard Symbol codes:** F: Highly Flammable; Xn: Harmful; Reproductive Hazard: 3

**European Community Risk and Safety Phrases**

- R11 - Highly flammable.
- R36/37/38 - Irritating to eyes, respiratory system and skin.
- R48 - Danger of serious damage to health by prolonged exposure.
- R62 - Risk of impaired fertility.
- R63 - Possible risk of harm to the unborn child.
- S7 - Keep container tightly closed.
- S16 - Keep away from sources of ignition.
- S24/25 - Avoid contact with skin and eyes.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.



# SAFETY DATA SHEET

## FABP Assay Detection Reagent (5X)

- S33 - Take precautionary measures against static discharges.  
 S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.  
 S53 - Avoid exposure - obtain special instructions before use.

**US EPA SARA Title III**

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. FABP Assay Detection Reagent (5X)	NA	No	No	No	No
2. Ethyl alcohol	64-17-5	No	No	No	No

**Other US EPA or State Lists**

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. FABP Assay Detection Reagent (5X)	NA	No	No	No	No
2. Ethyl alcohol	64-17-5	No	No	Inventory	No

**Regulatory Information Statement:** This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

### Section 16. Other Information

**Revision Date:** 05/28/2013

**Company Policy or Disclaimer**

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required



Cayman Chemical Company  
 1180 E. Ellsworth Rd.  
 Ann Arbor, MI 48108



### Section 1. Identification of the Substance/Mixture and of the

**1.1 Product Code:** 10010377  
**Product Name:** Arachidonic Acid Control

**1.2 Relevant identified uses of the substance or mixture and uses advised against**  
**Relevant identified uses:** For research use only, not for human or veterinary use.

**1.3 Details of the Supplier of the Safety Data Sheet**  
**Company Name:** Cayman Chemical Company  
**Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300  
**Alternate Emergency Contact:** CHEMTREC Outside USA and Canada: +1 (703)527-3887  
**Information:** Cayman Chemical Company +1 (734)971-3335  
**Web site address:** www.caymanchem.com

### Section 2. Hazards Identification

GHS Classification	Placard	Key word	GHS hazard phrase
Flammable Liquids, Category 2	Flame	Danger	Highly flammable liquid and vapor
Skin Corrosion/Irritation, Category 2	Exclamation point	Warning	Causes skin irritation
Serious Eye Damage/Eye Irritation, Category 2A	Exclamation point	Warning	Causes serious eye irritation
Toxic To Reproduction, Category 2	Health hazard	Warning	Suspected of damaging fertility or the unborn child
Target Organ Systemic Toxicity (single exposure), Category 3	Exclamation point	Warning	May cause respiratory irritation, or may cause drowsiness and dizziness
Target Organ Systemic Toxicity (repeated exposure), Category 1	Health hazard	Danger	Causes damage to {<target organs>} through prolonged or repeated exposure

**GHS Hazard Phrases:**  
 H225: Highly flammable liquid and vapor.  
 H315: Causes skin irritation.  
 H319: Causes serious eye irritation.  
 H361: Suspected of damaging fertility or the unborn child.  
 H335: May cause respiratory irritation.  
 H336: May cause drowsiness or dizziness.  
 H372: Causes damage to organs {liver} through prolonged or repeated exposure.

**GHS Precaution Phrases:**  
 P210: Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking.  
 P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.  
 P264: Wash hands thoroughly after handling.  
 P362+364: Take off contaminated clothing and wash it before reuse.  
 P201: Obtain special instructions before use.  
 P202: Do not handle until all safety precautions have been read and understood.  
 P281: Use personal protective equipment as required.  
 P261: Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P260: Do not breathe dust/fume/gas/mist/vapours/spray.

**GHS Response Phrases:**  
 P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P302+352: IF ON SKIN: Wash with plenty of soap and water.  
 P332+313: If skin irritation occurs, get medical advice/attention.  
 P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists, get medical advice/attention.  
 P308+313: IF exposed or concerned: Get medical attention/advice.  
 P309+311: Call a POISON CENTER or doctor/physician if exposed or you feel unwell.  
 P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P314: Get medical attention/advice if you feel unwell.

**GHS Storage and Disposal Phrases:**

Please refer to Section 7 for Storage and Section 13 for Disposal information.

**2.3 Adverse Human Health Effects and Symptoms:**

Causes damage to organs {liver} through prolonged or repeated oral exposure.  
 Causes serious eye irritation.  
 Causes skin or respiratory system irritation.  
 Material is irritating to the mucous membranes and upper respiratory tract.  
 May be harmful by inhalation, ingestion, or skin absorption.  
 Suspected of damaging fertility or the unborn child.  
 To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

**Target Organs:**

Central nervous system, Blood, Eyes, Reproductive system, Heart, Respiratory system, Liver, Skin.

**LD 50 / LC 50:**

Please refer to Section 11.

**Medical Conditions Generally Aggravated By**

No data available.

**Exposure:**

### Section 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Arachidonic acid	506-32-1	< 0.09 %	208-033-4	R19-20/21/22-36/37/38	CE6675000
2. Ethyl alcohol	64-17-5	>99.91 %	200-578-6	R11-36/37/38-48-62-63	KQ6300000

### Section 4. First Aid Measures

**4.1 Description of First Aid Measures:**
**4.1.1 In Case of Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

**4.1.2 In Case of Skin Contact:**

Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

**4.1.3 In Case of Eye Contact:**

Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

**4.1.4 In Case of Ingestion:**

Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

**4.2 Important Symptoms and Effects, Both Acute and Delayed:**

Irritating to eyes, skin, nose; may cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects.

**4.3 Indication of any immediate medical attention and special treatment needed:**

No data available.

### Section 5. Fire Fighting Measures

**5.1 Suitable Extinguishing Media:**

Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
 Use water spray to cool fire-exposed containers.

**Unsuitable Extinguishing Media:**

A solid water stream may be inefficient.

**5.2 Flammable Properties and Hazards:**

Can release vapors that form explosive mixtures at temperatures at or above the flashpoint.  
 Container explosion may occur under fire conditions.  
 Emits toxic fumes under fire conditions.  
 Sensitive to static discharge.

Vapors can travel to a source of ignition and flash back.

**Flash Pt:** 14.00 C Method Used: Closed Cup  
**Autoignition Pt:** 363.00 C  
**Explosive Limits:** LEL: 3.3% at 25.0 C UEL: 19.0% at 25.0 C  
**Hazardous Combustion Products:** No data available.

**5.3 Fire Fighting Instructions:** As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.  
 Note: Flammable as diluted in ethanol.

### Section 6. Accidental Release Measures

**6.1 Protective Precautions, Protective Equipment and Emergency Procedures:** Avoid breathing vapors and provide adequate ventilation.  
 As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

**6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.

**6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate.  
 Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

**7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray.  
 Avoid prolonged or repeated exposure.  
 Keep away from sources of ignition.  
 Take precautionary measures against static discharge.

**7.2 Precautions To Be Taken in Storing:** Keep away from heat, sparks, and flame.  
 Keep container tightly closed.  
 Store in accordance with information listed on the product insert.

**Other Precautions:** Hygroscopic.

**Hazard Label Information:** Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.  
 Wash thoroughly after handling.

### Section 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Arachidonic acid	506-32-1	No data.	No data.	No data.
2. Ethyl alcohol	64-17-5	1000 ppm	1000 ppm	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. Arachidonic acid	506-32-1	No data.	No data.	No data.
2. Ethyl alcohol	64-17-5	TWA: 1920 mg/m3 (1000 ppm) STEL: ()	TWA: 1900 mg/m3 (1000 ppm) STEL: 9500 mg/m3 (5000 ppm)	No data.

**Protective Equipment Summary - Hazard Label Information:** Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood

**8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**8.2.2.1 Eye Protection:** Safety glasses

**8.2.2.2 Protective Gloves:** Compatible chemical-resistant gloves

**Other Protective Clothing:** Lab coat

**8.2.2.3 Respiratory Equipment (Specify Type):** NIOSH approved respirator, as conditions warrant.

**Work/Hygienic/Maintenance Practices:** Do not take internally.  
 Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.  
 Wash thoroughly after handling.

**8.2.3 Environmental Exposure Controls:** No data available.

### Section 9. Physical and Chemical Properties

#### 9.1 Information on Basic Physical and Chemical Properties

**Physical States:** [ ] Gas [ X ] Liquid [ ] Solid

**Appearance and Odor:** Solution

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** 14.00 C Method Used: Closed Cup

**Evaporation Rate:** No data.

**Explosive Limits:** LEL: 3.3% at 25.0 C UEL: 19.0% at 25.0 C

**Vapor Pressure (vs. Air or mm Hg):** 43 MM\_HG at 20.0 C

**Vapor Density (vs. Air = 1):** No data.

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** 363.00 C

**Explosive Properties:** No data available.

**Oxidizing Properties:** No data available.

#### 9.2 Other Information

**Percent Volatile:** No data.

### Section 10. Stability and Reactivity

**10.1 Reactivity:** No data available.

**10.2 Stability:** Unstable [ ] Stable [ X ]

**10.3 Stability Note(s):** Stable if stored in accordance with information listed on the product insert.

**10.4 Conditions To Avoid:** heat, flames and sparks

**10.3 Polymerization:** Will occur [ ] Will not occur [ X ]

**10.5 Incompatibility - Materials To Avoid:** alkali metals  
 ammonia  
 peroxides  
 strong oxidizing agents

**10.6 Hazardous Decomposition Or Byproducts:** carbon dioxide  
 carbon monoxide

### Section 11. Toxicological Information

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

Ethanol - Toxicity Data: Oral TDLO (man): 1.14 ml/kg; Oral TDLO (man): 650 mg/kg; Oral LD50 (rat): 7,060 mg/kg; Oral LD50 (mouse): 3,450 mg/kg; Oral LD50 (mouse): 10.5 ml/kg; Oral LD50 (rabbit): 6,300 mg/kg; Inhalation LC50 (rat): 20,000 ppm (10h); Inhalation TCLO (human): 1,800 ppm (30m); Inhalation TCLO (human): 2,500 mg/m<sup>3</sup> (20m); Inhalation LC50 (rat): 5,900 mg/m<sup>3</sup> (6h); Inhalation LCLO (mouse): 29,300 ppm (7h);

Ethanol - Irritation Data: Eyes (rabbit): 500 mg (24h) mild; Skin (rabbit): 20 mg (24h) moderate;



# SAFETY DATA SHEET

## Arachidonic Acid Control

**Chronic Toxicological Effects:** Arachidonic Acid - Investigated as a mutagen, reproductive effector, and tumorigen.  
Ethanol - Investigated as a mutagen, reproductive effector, and tumorigen.  
Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.  
See actual entry in RTECS for complete information.  
Arachidonic Acid RTECS Number: CE6675000  
Ethanol RTECS Number: KQ6300000

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Arachidonic acid	506-32-1	n.a.	n.a.	n.a.	n.a.
2. Ethyl alcohol	64-17-5	n.a.	1	A4	n.a.

**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

### Section 12. Ecological Information

**12.1 Toxicity:** Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.

### Section 13. Disposal Considerations

**13.1 Waste Disposal Method:** Dispose in accordance with local, state, and federal regulations.

### Section 14. Transport Information

#### 14.1 LAND TRANSPORT (US DOT)

**DOT Proper Shipping Name** Ethyl Alcohol Solution  
**DOT Hazard Class:** 3  
**DOT Hazard Label:** FLAMMABLE LIQUID  
**UN/NA Number:** 1170  
**Packing Group:** II

#### 14.1 LAND TRANSPORT (European ADR/RID)

**ADR/RID Shipping Name** Ethyl Alcohol Solution  
**UN Number:** 1170  
**Hazard Class:** 3 - FLAMMABLE LIQUID  
**Packing Group:** II

#### 14.3 AIR TRANSPORT (ICAO/IATA)

**ICAO/IATA Shipping Name** Ethyl Alcohol Solution  
**UN Number:** 1170  
**Hazard Class:** 3 - FLAMMABLE LIQUID  
**Packing Group:** II  
**IATA Classification:** 3

**Additional Transport Information:** Transport in accordance with local, state, and federal regulations.

### Section 15. Regulatory Information

**European Community Hazard Symbol codes** F: Highly Flammable; Xn: Harmful; Reproductive Hazard: 3

#### European Community Risk and Safety Phrases

R11 - Highly flammable.  
R36/37/38 - Irritating to eyes, respiratory system and skin.  
R48 - Danger of serious damage to health by prolonged exposure.  
R62 - Risk of impaired fertility.  
R63 - Possible risk of harm to the unborn child.  
S7 - Keep container tightly closed.



# SAFETY DATA SHEET

## Arachidonic Acid Control

- S16 - Keep away from sources of ignition.  
 S24/25 - Avoid contact with skin and eyes.  
 S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S33 - Take precautionary measures against static discharges.  
 S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.  
 S53 - Avoid exposure - obtain special instructions before use.

**US EPA SARA Title III**

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Arachidonic acid	506-32-1	No	No	No	No
2. Ethyl alcohol	64-17-5	No	No	No	No

**Other US EPA or State Lists**

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Arachidonic acid	506-32-1	No	No	No	No
2. Ethyl alcohol	64-17-5	No	No	Inventory	No

**Regulatory Information Statement:**

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

### Section 16. Other Information

**Revision Date:** 05/28/2013

**Company Policy or Disclaimer**

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required