Oxford Biomedical Research
SUPERIOR SCIENCE. RELIABLE RESULTS.

Safety Data Sheet

Product Number:	FR19
Product Name:	Spectrophotometric assay for glutathione reductase
Revision:	220608

1.1 Product Identification

Product Name:	FR19 Diluent Buffer
Product Number:	FR19
Brand:	Oxford Biomedical Research

1.2 Supplier

Company:	Oxford Biomedical Research, Inc. PO Box 522 Oxford, MI 48371 USA
Contact:	248-852-8815 info@oxfordbiomed.com

1.3 Relevant Uses

Identified uses:	Research Assay

1.4 Emergency Contact Number

Contact:	248-852-8815

2.1 Classification of the substance or mixture

Acute toxicity inhalation (category 4), specific target organ toxicity repeated exposure inhalation (category 2), short term acute aquatic hazard (category 3), long term chronic aquatic hazard (category 3)

2.2 GHS Label or Precautionary Statements

Harmful if inhaled. May cause damage to organs (respiratory tract) through prolonged or repeated exposure if inhaled. Harmful to aquatic life with long lasting effects.

2.3 Hazards not otherwise classified

None

3.1 Substances: Diluent Buffer (100mL)

Edetate Disodium Dihydrate	Acute Tox. 4; STOT RE 2; Aquatic Acute 3; Aquatic Chronic 3; H332, H373, H402, H412

4.1 Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration and if necessary oxygen. Call in a physician

In case of skin contact

Wash off with soap and plenty of water. Remove all contaminated clothing.

In case of eye contact

Flush eyes with plenty of water. Remove contact lenses

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water (2 glasses at most). Consult a physician if feeling unwell

4.2 Most important symptoms and effects: acute or delayed

The most important symptoms/effects are listed in section 2 and 11

4.3 Recommendations for immediate medical care or special treatment

Treat symptomatically

5.1	**Extinguishing media**	Use water foam carbon dioxide dry powder
5.2	**Special hazards**	Nature of decomposition products not known. Hazardous vapors possible in the event of a fire.

SECTION 6: Accidental Release Measures

6.1	**Personal precautions and personal protective equipment**	Standard laboratory personal protective equipment should be utilized.
6.2	**Environmental precautions**	Do not let the product enter drains
6.3	**Methods for containment and clean up**	Wipe with absorbent material and dispose of in suitable container.

SECTION 7: Handling and Storage

7.1	**Precautions for safe handling**	Follow standard Good Laboratory Practices while using this

		product.
7.2	**Conditions for safe storage, including any incompatibilities**	Keep container tightly closed. Recommended storage temperature is 4°C.

SECTION 8: Exposure Controls/Personal Protection

8.1	**OSHA Permissible Exposure Limits**	Contains no substances with occupational exposure limits.
8.2	**Exposure controls**	Follow standard Good Laboratory Practices while using this product.
8.3	**Personal Protective Equipment**	
	Eye/face protection	Use eye protection approved by NIOSH or EN166.
	Skin protection	Handle with gloves. Use proper glove removal technique to avoid skin contact. Gloves should be disposed of after use according to standard Good Laboratory Practices. Wash hands after use.
	Body protection	Wear a lab coat in accordance to standard Good Laboratory Practices.
	Respiratory protection	Respiratory protection is not required.
	Control of environmental exposure	Do not let the product enter drains

SECTION 9: Physical and Chemical Properties

Appearance	Liquid
Odor	None
Flammability	No data available
Vapor Pressure	No data available
Odor Threshold	No data available
Vapor Density	No data available
pH	No data available
Relative Density	No data available
Melting Point	No data available

Freezing Point	No data available
Solubility	No data available
Boiling Point	No data available
Flash Point	No data available
Evaporation Rate:	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available

SECTION 10: Stability and Reactivity

10.1	**Reactivity**	No data available
10.2	**Chemical Stability**	Stable under recommended storage conditions
10.3	**Possibility of hazardous reactions**	Violent reactions possible with strong oxidizing agents

SECTION 11: Toxicological Information

11.1	**Toxicity**	
	Acute toxicity	No data available
	Skin irritation	No data available
	Serious eye damage or irritation	No data available
	Respiratory or skin sensitization	No data available
	Germ cell mutagenicity	No data available
	Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.
	Reproductive toxicity	No data available
	Specific target organ toxicity	May cause damage to organs through prolonged or repeated exposure (respiratory tract)

	Aspiration hazard	No data available

SECTION 12: Ecological Information

12.1	**Toxicity**	Toxicity to fish, bacteria, algae, daphnia, and other aquatic invertebrates
12.2	**Persistence and degradability**	No data available
12.3	**Bioaccumulation potential**	No data available
12.4	**Mobility in Soil**	No data available
12.5	**Other adverse effects**	Discharge into the environment must be avoided

SECTION 13: Disposal Considerations

13.1	**Waste treatment methods**	Dispose of product with a licensed disposal company.

SECTION 14: Transport Information

14.1	**US DOT**	Not dangerous goods
14.2	**IMDG**	Not dangerous goods
14.3	**IATA**	Not dangerous goods

SECTION 15: Regulatory Information

No known regulatory requirements.

SECTION 16: Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.

Revision date: 6-9-22

1.1 Product Identification

Product Name:	FR19 Potassium Phosphate Buffer
Product Number:	FR19
Brand:	Oxford Biomedical Research

1.2 Supplier

Company:	Oxford Biomedical Research, Inc. PO Box 522 Oxford, MI 48371 USA
Contact:	248-852-8815 info@oxfordbiomed.com

1.3 Relevant Uses

Identified uses: Research Assay

1.4 Emergency Contact Number

Contact: 248-852-8815

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2 GHS Label or Precautionary Statements

Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified

None

3.1 Substances: Potassium Phosphate Buffer (20mL)

No components need to be disclosed according to applicable regulations

4.1 Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water. Remove any contaminated clothing

In case of eye contact

Flush eyes with plenty of water. Remove contact lenses

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water (two glasses at most). Consult a physician if feeling unwell

4.2 **Most important symptoms and effects: acute or delayed**
The most important symptoms/effects are listed in section 2 and 11

4.3 **Recommendations for immediate medical care or special treatment**
Treat symptomatically

5.1	**Extinguishing media**	Use water spray, dry chemical, or carbon dioxide
5.2	**Special hazards**	Oxides of phosphorus, potassium oxides, not combustible, ambient fire may liberate hazardous vapors.

SECTION 6: Accidental Release Measures

6.1	**Personal precautions and personal protective equipment**	Standard laboratory personal protective equipment should be utilized.
6.2	**Environmental precautions**	Do not let the product enter drains
6.3	**Methods for containment and clean up**	Cover drains. Wipe with absorbent material and dispose of in suitable container.

SECTION 7: Handling and Storage

7.1	**Precautions for safe handling**	Follow standard Good Laboratory Practices while using this product.
7.2	**Conditions for safe storage, including any incompatibilities**	Keep container tightly closed. Recommended storage temperature is 4°C.

SECTION 8: Exposure Controls/Personal Protection

8.1	**OSHA Permissible Exposure Limits**	Contains no substances with occupational exposure limits.

8.2	**Exposure controls**	Follow standard Good Laboratory Practices while using this product. Change contaminated clothing
8.3	**Personal Protective Equipment** **Eye/face protection**	Use eye protection approved by NIOSH or EN166.
	Skin protection	Handle with gloves. Use proper glove removal technique to avoid skin contact. Gloves should be disposed of after use according to standard Good Laboratory Practices. Wash hands after use.
	Body protection	Wear a lab coat in accordance to standard Good Laboratory Practices.
	Respiratory protection	Respiratory protection is not required.
	Control of environmental exposure	Do not let the product enter drains

SECTION 9: Physical and Chemical Properties

Appearance	Clear, Colorless Liquid
Odor	Odorless/slight
Flammability	No data available
Vapor Pressure	No data available
Odor Threshold	No data available
Vapor Density	No data available
pH	7.5
Relative Density	No data available
Melting Point	No data available
Freezing Point	No data available
Solubility	Soluble in water
Boiling Point	No data available
Flash Point	No data available
Evaporation Rate:	No data available
Auto-ignition Temperature	No data available

	Decomposition Temperature	No data available
	Viscosity	No data available

SECTION 10: Stability and Reactivity

10.1	**Reactivity**	No data available
10.2	**Chemical Stability**	Stable under recommended storage conditions
10.3	**Possibility of hazardous reactions**	Violent reactions possible with strong oxidizing agents, acids, bases

SECTION 11: Toxicological Information

11.1	**Toxicity**	
	Acute toxicity	Acute Toxicity Estimate oral- 2500mg/kg Acute Toxicity Estimate dermal 2500mg/kg
	Skin irritation	No known skin irritation
	Serious eye damage or irritation	No known eye irritation
	Respiratory or skin sensitization	No data available
	Germ cell mutagenicity	No mutagenic affects
	Carcinogenicity	Not found to be a potential carcinogen
	Reproductive toxicity	No data available
	Specific target organ toxicity	No data available
	Aspiration hazard	No data available

SECTION 12: Ecological Information

12.1	**Toxicity**	Toxicity to fish, algae, bacteria, daphnia, and other aquatic invertebrates
12.2	**Persistence and degradability**	The methods for determining the biological degradability are not applicable to inorganic substances
12.3	**Bioaccumulation potential**	No data available
12.4	**Mobility in Soil**	No data available
12.5	**Other adverse effects**	Discharge into the environment must be avoided.

SECTION 13: Disposal Considerations

13.1	**Waste treatment methods**	Dispose of product with a licensed disposal company.

SECTION 14: Transport Information

14.1	**US DOT**	Not dangerous goods
14.2	**IMDG**	Not dangerous goods
14.3	**IATA**	Not dangerous goods

SECTION 15: Regulatory Information

No known regulatory requirements.

SECTION 16: Other Information

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide.

Revision date: 6-13-22

1.1 Product Identification

Product Name:	FR19 GSSG Reagent
Product Number:	FR19
Brand:	Oxford Biomedical Research

1.2 Supplier

Company:	Oxford Biomedical Research, Inc.
	PO Box 522
	Oxford, MI 48371
	USA
Contact:	248-852-8815
	info@oxfordbiomed.com

1.3 Relevant Uses

Identified uses: Research Assay

1.4 Emergency Contact Number

Contact: 248-852-8815

2.1 Classification of the substance or mixture

Acute toxicity inhalation (category 4), specific target organ toxicity repeated exposure (category 2), short term acute aquatic hazard (category 3), long term chronic aquatic hazard (category 3)

2.2 GHS Label or Precautionary Statements

Harmful if inhaled. May cause damage to organs (respiratory tract) through prolonged or repeated exposure if inhaled. Harmful to aquatic life with long lasting effects

2.3 Hazards not otherwise classified

None

3.1 Substances: GSSG Reagent (20mL x2)

Edetate Disodium dihydrate	Acute Tox. 4; STOT RE 2; Aquatic Acute 3; Aquatic Chronic 3; H332, H373, H402, H412

4.1 Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration or oxygen if necessary. Call in a physician

In case of skin contact

Wash off with soap and plenty of water. Remove all contaminated clothing

In case of eye contact

Flush eyes with plenty of water. Remove contact lenses.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water (2 glasses at most). Consult a physician if feeling unwell

4.2 **Most important symptoms and effects: acute or delayed**
The most important symptoms/effects are listed in section 2 and 11

4.3 **Recommendations for immediate medical care or special treatment**
Treat symptomatically

5.1	**Extinguishing media**	Use water spray, dry chemical, or carbon dioxide
5.2	**Special hazards**	Hydrogen chloride gas, oxides of phosphorus, potassium oxides, ambient fire may liberate hazardous vapors

SECTION 6: Accidental Release Measures

6.1	**Personal precautions and personal protective equipment**	Standard laboratory personal protective equipment should be utilized.
6.2	**Environmental precautions**	Do not let the product enter drains
6.3	**Methods for containment and clean up**	Wipe with absorbent material and dispose of in suitable container.

SECTION 7: Handling and Storage

7.1	**Precautions for safe handling**	Follow standard Good Laboratory Practices while using this product.
7.2	**Conditions for safe storage, including any incompatibilities**	Keep container tightly closed. Recommended storage temperature is 4°C.

SECTION 8: Exposure Controls/Personal Protection

8.1	**OSHA Permissible Exposure Limits**	Contains no substances with occupational exposure limits.
8.2	**Exposure controls**	Follow standard Good Laboratory Practices while using this product.
8.3	**Personal Protective Equipment**	
	Eye/face protection	Use eye protection approved by NIOSH or EN166.
	Skin protection	Handle with gloves. Use proper glove removal technique to avoid skin contact. Gloves should be disposed of after use according to standard Good Laboratory Practices. Wash hands after use.
	Body protection	Wear a lab coat in accordance to standard Good Laboratory Practices.
	Respiratory protection	Respiratory protection is not required.
	Control of environmental exposure	Do not let the product enter drains

SECTION 9: Physical and Chemical Properties

Appearance	Clear colorless liquid
Odor	Odorless
Flammability	Not data available
Vapor Pressure	No data available
Odor Threshold	No data available
Vapor Density	No data available
pH	7.5
Relative Density	No data available
Melting Point	No data available
Freezing Point	No data available
Solubility	Soluble in water
Boiling Point	No data available

Flash Point	No data available
Evaporation Rate:	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available

SECTION 10: Stability and Reactivity

10.1	**Reactivity**	No data available
10.2	**Chemical Stability**	Stable under recommended storage conditions
10.3	**Possibility of hazardous reactions**	Violent reactions possible with strong oxidizing agents, bases, acids

SECTION 11: Toxicological Information

11.1 Toxicity

Acute toxicity	No data available
Skin irritation	No data available
Serious eye damage or irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No mutagenic affects
Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.
Reproductive toxicity	No data available
Specific target organ toxicity	May cause damage to organs through prolonged or repeated exposure- respiratory tract

	Aspiration hazard	No data available

SECTION 12: Ecological Information

12.1	**Toxicity**	Toxicity to fish, algae, bacteria, daphnia and other aquatic invertebrates
12.2	**Persistence and degradability**	No data available
12.3	**Bioaccumulation potential**	No data available
12.4	**Mobility in Soil**	No data available
12.5	**Other adverse effects**	Discharge into the environment must be avoided

SECTION 13: Disposal Considerations

13.1	**Waste treatment methods**	Dispose of product with a licensed disposal company.

SECTION 14: Transport Information

14.1	**US DOT**	Not dangerous goods
14.2	**IMDG**	Not dangerous goods
14.3	**IATA**	Not dangerous goods

SECTION 15: Regulatory Information

No known regulatory requirements.

SECTION 16: Other Information

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide.

Revision date: 6-27-22

1.1 Product Identification

Product Name:	NADPH
Product Number:	FR19
Brand:	Oxford Biomedical Research

1.2 Supplier

Company:	Oxford Biomedical Research, Inc.
	PO Box 522
	Oxford, MI 48371
	USA
Contact:	248-852-8815
	info@oxfordbiomed.com

1.3 Relevant Uses

Identified uses: Research Assay

1.4 Emergency Contact Number

Contact: 248-852-8815

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2 GHS Label or Precautionary Statements

Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified

None

3.1 Substances: NADPH (6 vials)

No components need to be disclosed according to applicable regulations

4.1 Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. If symptoms persist, call a physician

In case of skin contact

Wash off with soap and plenty of water. Remove all contaminated clothing

In case of eye contact

Flush eyes with plenty of water. Remove contact lenses.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water (2 glasses at most). Consult a doctor if feeling unwell

4.2 **Most important symptoms and effects: acute or delayed**
The most important symptoms/effects are listed in section 2 and 11

4.3 **Recommendations for immediate medical care or special treatment**
Treat symptomatically

5.1	**Extinguishing media**	Use water spray, dry chemical, or water foam carbon dioxide
5.2	**Special hazards**	Carbon oxides, nitrogen oxides, combustible, development of hazardous vapors possible in the event of a fire

SECTION 6: Accidental Release Measures

6.1	**Personal precautions and personal protective equipment**	Standard laboratory personal protective equipment should be utilized. Avoid inhalation of dust
6.2	**Environmental precautions**	Do not let product enter drains.
6.3	**Methods for containment and clean up**	Wipe with absorbent material and dispose of in suitable container. Cover drains

SECTION 7: Handling and Storage

7.1	**Precautions for safe handling**	Follow standard Good Laboratory Practices while using this product.
7.2	**Conditions for safe storage, including any incompatibilities**	Keep container tightly closed. Recommended storage temperature is 4°C.

SECTION 8: Exposure Controls/Personal Protection

8.1	**OSHA Permissible Exposure Limits**	Contains no substances with occupational exposure limits.
8.2	**Exposure controls**	Follow standard Good Laboratory Practices while using this product.
8.3	**Personal Protective Equipment**	
	Eye/face protection	Use eye protection approved by NIOSH or EN166.
	Skin protection	Handle with gloves. Use proper glove removal technique to avoid skin contact. Gloves should be disposed of after use according to standard Good Laboratory Practices. Wash hands after use. Change contaminated clothing
	Body protection	Wear a lab coat in accordance to standard Good Laboratory Practices.
	Respiratory protection	Respiratory protection is not required.
	Control of environmental exposure	Do not let the product enter drains

SECTION 9: Physical and Chemical Properties

Appearance	White/light yellow powder
Odor	No data available
Flammability	No data available
Vapor Pressure	No data available
Odor Threshold	No data available
Vapor Density	No data available
pH	No data available
Relative Density	No data available
Melting Point	No data available
Freezing Point	No data available
Solubility	No data available

Boiling Point	No data available
Flash Point	No data available
Evaporation Rate:	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available

SECTION 10: Stability and Reactivity

10.1	**Reactivity**	No data available
10.2	**Chemical Stability**	Stable under recommended storage conditions
10.3	**Possibility of hazardous reactions**	Violent reactions possible with strong oxidizing agents, strong acids, strong alkalis

SECTION 11: Toxicological Information

11.1	**Toxicity**	
	Acute toxicity	No data available
	Skin irritation	No data available
	Serious eye damage or irritation	No data available
	Respiratory or skin sensitization	No data available
	Germ cell mutagenicity	No data available
	Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.
	Reproductive toxicity	No data available
	Specific target organ toxicity	No data available

	Aspiration hazard	No data available

SECTION 12: Ecological Information

12.1	**Toxicity**	Toxicity to bacteria, daphnia, and other aquatic invertebrates
12.2	**Persistence and degradability**	No data available
12.3	**Bioaccumulation potential**	No data available
12.4	**Mobility in Soil**	No data available
12.5	**Other adverse effects**	Discharge into the environment must be avoided

SECTION 13: Disposal Considerations

13.1	**Waste treatment methods**	Dispose of product with a licensed disposal company.

SECTION 14: Transport Information

14.1	**US DOT**	Not dangerous goods
14.2	**IMDG**	Not dangerous goods
14.3	**IATA**	Not dangerous goods

SECTION 15: Regulatory Information

No known regulatory requirements.

SECTION 16: Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.

Revision date: 6-27-22