

Material Safety Data Sheet

IT 1-2-3™ SCOOP Sample Purification Kit



1. PRODUCT INFORMATION

Trade Name: SCOOP Buffer 1A

Kit Number: ASAY-ASY-0502

Manufacturer Information

BioFire Defense, LLC
79 West 4500 South, Suite 14
Salt Lake City, Utah 84107, USA
ph (801) 262-3592, www.BioFireDefense.com

Number for Information: 1-801-262-3695

2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME:	CAS#
Sodium Phosphate	7601-54-9

3. HAZARDOUS IDENTIFICATION

HAZARD:

N/A

NFPA Rating Health: 0 Flammability: 0 Reactivity: 0

4. FIRST AID MEASURES

Eye contact:	Flush eyes with water.
Skin contact:	Immediately wash skin with soap and copious amounts of water.
Inhalation:	Remove to fresh air, If not breathing give artificial respiration.
Ingestion:	Wash out mouth with water if person is conscious. Immediately seek medical attention.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Use extinguishing media appropriate to surrounding fire conditions.

Unsuitable Extinguishing Media: None

Special Protective Equipment: Self-contained breathing apparatus and protective clothing.

Explosion Hazard: Not Established

Other Information: Development of toxic fumes in the event of fire.

6. ACCIDENTAL RELEASE

Clean-up Procedure: Wear rubber boots and heavy rubber gloves. Dam larger spills with inert material to prevent spread.

Waste Disposal Method: Flush down the drain with plenty of water.

7. HANDLING AND STORAGE

Handling: Avoid eye and skin contact. Do not ingest.

Storage: Keep container closed. Store at room temperature and out of direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment:

Respiratory protection	Wear appropriate respirator when ventilation is inadequate
Hand protection	Compatible chemical resistant gloves
Eye protection	Chemical safety goggles or face shield
Body protection	Lab coat



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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state/Form	Colorless Liquid
Solubility in water	Soluble
Vapor Density	4.9

10. STABILITY AND REACTIVITY

Stability:	Stable
Substance to be avoided:	Strong acids
Hazardous combustion or decomposition products:	N/A

11. TOXICOLOGICAL INFORMATION

This product should be handled with the normal caution accorded to chemicals. Additional harmful properties cannot be ruled out.

12. ECOLOGICAL INFORMATION

Not Established.

13. DISPOSAL CONSIDERATIONS

Observe all Federal, State and local laws regulating chemical waste. Processing, use or contamination of this product may change waste management options.

14. TRANSPORT INFORMATION

DOT/IATA: Non-hazardous for transport

15. REGULATORY INFORMATION

None.

16. OTHER INFORMATION

Not for food, drug, household, agricultural or cosmetic use. The above information is correct to the best of our knowledge. The user should make independent decisions regarding completeness of the information based on all sources available. BioFire Defense, LLC shall not be held liable for any damage resulting from handling or from contact with the above product.



1. PRODUCT INFORMATION

Trade Name: SCOOP Buffer 1B

Kit Number: ASAY-ASY-0502

Manufacturer Information

BioFire Defense, LLC
79 West 4500 South, Suite 14
Salt Lake City, Utah 84107, USA
ph (801) 262-3592, www.BioFireDefense.com

Number for Information: 1-801-262-3695

2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME:	CAS #:
Lauryl Sulfate	151-21-3
Teepol Detergent	N/A
Tris Base	77-86-1
Sodium Chloride	7647-14-5
EDTA	60-00-4
Polyvinylpyrrolidone	9003-39-8

3. HAZARDOUS IDENTIFICATION

HAZARD:

N/A
NFPA Rating Health: 0 Flammability: 0 Reactivity: 0



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4. FIRST AID MEASURES

Eye contact:	Flush eyes with water. Seek medical attention.
Skin contact:	Immediately wash skin with soap and copious amounts of water. Seek medical attention.
Inhalation:	Remove to fresh air, if not breathing give artificial respiration.
Ingestion:	Seek medical attention.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media:	Water spray, carbon dioxide, dry chemical powder or appropriate foam.
Unsuitable Extinguishing Media:	None
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus and protective clothing.
Unusual Fire and Explosion Hazards:	Emits toxic fumes under fire conditions.

6. ACCIDENTAL RELEASE

Clean-up Procedure:	Wash spill site with water.
Waste Disposal Method:	Wash down the drain.

7. HANDLING AND STORAGE

Handling:	Avoid eye and skin contact.
Storage:	Keep container closed. Store in a cool, dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment:	
Respiratory protection	Wear appropriate respirator when ventilation is inadequate
Hand protection	Compatible chemical resistant gloves
Eye protection	Chemical safety goggles or face shield
Body protection	Lab coat

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid, no odor
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10. STABILITY AND REACTIVITY

Stability:	Stable
Incompatibility:	Strong oxidizing agents

11. TOXICOLOGICAL INFORMATION

Route of exposure:	
Skin Contact	May be harmful if absorbed through the skin.
Eye Contact	Not listed
Inhalation	May be harmful if inhaled.
Ingestion	May be harmful if swallowed.
Additional Information:	This product should be handled with the normal caution accorded to chemicals. Additional harmful properties cannot be ruled out.

12. ECOLOGICAL INFORMATION

Not Available

13. DISPOSAL CONSIDERATIONS

Observe all Federal, State and local laws regulating chemical waste. Processing, use or contamination of this product may change waste management options.

14. TRANSPORT INFORMATION

DOT/IATA: Non-hazardous for transport



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15. REGULATORY INFORMATION

N/A

16. OTHER INFORMATION

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1. PRODUCT INFORMATION

Trade Name: PPS (Protein Precipitation Solution)

Kit Number: ASAY-ASY-0502

Manufacturer Information

BioFire Defense, LLC
79 West 4500 South, Suite 14
Salt Lake City, Utah 84107, USA
ph (801) 262-3592, www.BioFireDefense.com

Number for Information: 1-801-262-3695

2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME:	CAS #:
Potassium Acetate	127-08-2
Acetic acid, glacial	64-19-7

3. HAZARDOUS IDENTIFICATION

HAZARD:

Harmful if swallowed, inhaled or absorbed through the skin. May cause eye or skin irritation.

NFPA Rating Health: 1 Flammability: 0 Reactivity: 0

4. FIRST AID MEASURES

Eye contact:	Immediately flush eyes with plenty of running water. Seek medical attention immediately.
Skin contact:	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing. Get medical attention.
Inhalation:	Remove to fresh air. Get medical attention immediately. If breathing is difficult, give oxygen.
Ingestion:	Drink plenty of water. Get medical attention immediately.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water spray, carbon dioxide, dry chemical powder, alcohol or polymer foam.

Unsuitable Extinguishing Media: None.

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

Explosion Hazard: Emits toxic fumes under fire conditions.

6. ACCIDENTAL RELEASE

Special Protective Equipment: Large spills: Respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Clean-up Procedure: Soak spill with sand.

Waste Disposal Method: This material should be ignited in the presence of sodium carbonate and slaked lime (calcium hydroxide). The substance should be mixed with vermiculite and then with the dry caustics, wrapped in paper and burned in a chemical incinerator equipped with an afterburner and scrubber.

7. HANDLING AND STORAGE

Handling: Avoid eye and skin contact. Avoid breathing vapor. Avoid ingesting.



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Storage:

Store in a cool, dry place. Keep container closed.



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment:

Respiratory protection	Wear appropriate respirator when ventilation is inadequate.
Hand protection	Compatible chemical resistant gloves
Eye protection	Chemical safety goggles or face shield
Body protection	Lab coat

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state/Form	Colorless Liquid
Odor	Acetic odor
Boiling point	118°C
Vapor pressure	Not available
Solubility in water	Soluble

10. STABILITY AND REACTIVITY

Stability:	Stable
Substance to be avoided:	Strong oxidizing agents

11. TOXICOLOGICAL INFORMATION

Toxicological Data	Acute oral toxicity (LD50): 3250 mg/kg [Rat]
Target organ(s) or System(s):	Respiratory tract, skin, eye.
Symptoms of overexposure:	Coughing wheezing, shortness of breath, headache, nausea and vomiting.
Skin Contact	Wash with copious amounts of water. Remove contaminated clothing.
Eye Contact	Flush eyes with water for at least 15 minutes.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Ingestion	No data.
Additional Information:	This product should be handled with the normal caution accorded to chemicals. Additional harmful properties cannot be ruled out.

12. ECOLOGICAL INFORMATION

Not established. The products of degradation are less toxic than the product itself.

13. DISPOSAL CONSIDERATIONS

Observe all Federal, State and local laws regulating chemical waste. Processing, use or contamination of this product may change waste management options.

14. TRANSPORT INFORMATION

DOT/IATA: Non-hazardous for transport

15. REGULATORY INFORMATION

None.

16. OTHER INFORMATION

Not for food, drug, household, agricultural or cosmetic use. The above information is correct to the best of our knowledge. The user should make independent decisions regarding completeness of the information based on all sources available. BioFire Defense, LLC shall not be held liable for any damage resulting from handling or from contact with the above product.





1. PRODUCT INFORMATION

Trade Name: Binding Suspension

Kit Number: ASAY-ASY-0502

Manufacturer Information

Defense, LLC
79 West 4500 South, Suite 14
Salt Lake City, Utah 84107, USA
ph (801) 262-3592, www.BioFireDefense.com

Number for Information: 1-801-262-3695BioFire

2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME:	CAS #:
Guanidine thiocyanate	593-84-0

3. HAZARDOUS IDENTIFICATION

HAZARD:

Harmful if swallowed, inhaled or absorbed through the skin. May cause eye or skin irritation.

NFPA Rating Health: 2 Flammability: 0 Reactivity: 0

4. FIRST AID MEASURES

Eye contact: Immediately flush eyes with copious amounts of water for at least 15 minutes. Seek medical attention immediately.

Skin contact: In case of contact, immediately flush skin with soap and plenty of water for at least 15 minutes. Seek medical attention.

Inhalation: No data.

Ingestion: If conscious, induce vomiting. Seek medical attention immediately.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water spray, carbon dioxide, or foam.

Unsuitable Extinguishing Media: None.

Special Protective Equipment: Use a respirator as toxic gases may be evolved.

6. ACCIDENTAL RELEASE

Special Protective Equipment: Chemical safety goggles, rubber boots, and heavy rubber gloves.

Clean-up Procedure: Material is a salt. Dilute with water and flush to sewer if allowed by local ordinance.

7. HANDLING AND STORAGE

Handling: Avoid eye and skin contact.

Storage: Keep container closed. Store at room temperature in a dry location.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment:

Respiratory protection If ventilation is inadequate, wear a NIOSH approved respirator.

Hand protection Compatible chemical resistant gloves

Eye protection Chemical safety goggles or face shield

Body protection Lab coat



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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state/Form	Liquid
Color	Brown
Odor	Odorless
Solubility in water	Soluble
Molecular Weight	118.6

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to be avoided:	N/A
Substances to be avoided:	Strong oxidants (the compound is organic and may ignite), strong acids (may evolve thiocyanic acid).
Hazardous decomposition products:	CO ₂ , CO, SO ₂ , NO ₂ .

11. TOXICOLOGICAL INFORMATION

Toxicological Data	
Guanidine thiocyanate	Harmful if swallowed or inhaled and in contact with skin. Skin, eye and respiratory irritant.
Route/Symptoms of exposure:	Prolonged or repeated exposure may cause dermatitis. Repeated ingestion of small amounts may cause weakness, confusion, CSN effects, nausea and skin eruptions.
Skin Contact	Causes irritation to skin. Symptoms include redness, itching and pain.
Eye Contact	Causes irritation, redness and pain.
Inhalation	Causes irritation to the respiratory tract. Symptoms include coughing, shortness of breath.
Ingestion	May cause psychosis, vomiting, disorientation, weakness, low blood pressure, and convulsions.

12. ECOLOGICAL INFORMATION

Not available. The products of degradation are less toxic than the product itself.

13. DISPOSAL CONSIDERATIONS

Observe all Federal, State and local laws regulating chemical waste. Processing, use or contamination of this product may change waste management options.

14. TRANSPORT INFORMATION

DOT/IATA: Non-hazardous for transport

15. REGULATORY INFORMATION

None.

16. OTHER INFORMATION

Not for food, drug, household, agricultural or cosmetic use. The above information is correct to the best of our knowledge. The user should make independent decisions regarding completeness of the information based on all sources available. BioFire Defense, LLC shall not be held liable for any damage resulting from handling or from contact with the above product.



1. PRODUCT INFORMATION

Trade Name: Buffer 2

Kit Number: ASAY-ASY-0502

Manufacturer Information

BioFire Defense, LLC
79 West 4500 South, Suite 14
Salt Lake City, Utah 84107, USA

Number for Information: 1-801-262-3695



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2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME:	PERCENT:	CAS #:
Ethanol	>60 %	64-17-5
Methanol	0 - 4%	67-56-1

3. HAZARDOUS IDENTIFICATION

HAZARD:

Flammable liquid and vapor. Harmful if swallowed, inhaled or absorbed through skin. Vapor harmful. Affects central nervous system. May cause blindness. Causes irritation to skin, eyes, and respiratory tract. May affect liver, blood, and reproductive system.

NFPA Rating Health: 1 Flammability: 3 Reactivity: 0

4. FIRST AID MEASURES

Eye contact:	Immediately flush eyes with copious amounts of water. Seek medical attention.
Skin contact:	Immediately wash skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing. Seek medical attention for overexposure.
Inhalation:	Remove to fresh air. Seek appropriate medical attention.
Ingestion:	Seek medical attention immediately. Induce vomiting as directed by medical personnel.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water spray, carbon dioxide, dry chemical powder, or foam.

Unsuitable Extinguishing Media: None.

Special Protective Equipment: Self-contained breathing apparatus and protective clothing.

Explosion Hazard: Vapors may travel a considerable distance to ignition source and flash back. Container explosion may occur under fire conditions.

Flashpoint Not determined (57°F (14°C) for 95% ethanol)

Explosion limits 3.3% Lower 19% Upper

Autoignition Temp. 750°F (389°C)

Other Information: Flammable liquid; development of toxic fumes in the event of fire.

6. ACCIDENTAL RELEASE

Precautionary Measures: Large spills: Evacuate area and Shut off all ignition sources.

Special Protective Equipment: Large spills: Respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Clean-up Procedure: Small spills can be flushed with large amounts of water. For large spill cleanup, use vapor-suppressing foam to reduce vapors, and absorb spill with liquid absorbent-material. Use non-sparking tools to remove saturated absorbent, or other absorbent material, and forward it to disposal area. Ventilate and wash affected area.

7. HANDLING AND STORAGE

Handling: Avoid eye and skin contact. Avoid breathing vapor. Avoid flammable material. Keep away from heat, sparks and flame.

Storage: Store at room temperature. Keep container closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment:

Respiratory protection	If the exposure limit is exceeded, wear a supplied air, full-facepiece respirator, airtight hood, or full-facepiece self-contained breathing apparatus.
Hand protection	Compatible chemical resistant gloves
Eye protection	Chemical safety goggles or face shield
Body protection	Lab coat

Airborne Exposure Limits:

OSHA Permissible Exposure Limit (PEL): 1000 ppm (TWA) for ethyl alcohol 200 ppm (TWA) for methyl alcohol

ACGIH Threshold Limit Value (TLV): 1000 ppm (TWA), A4 - not classifiable as a human carcinogen for ethyl alcohol 200 ppm (TWA), 250 ppm (STEL) skin, for methyl alcohol

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state/Form Liquid



Color	Colorless
Odor	Characteristic
Freezing Point	Approx. -55°C
Boiling point	80°C at 760mm Hg
Vapor density	1.6 (air = 1) @ 20°C
Vapor pressure	44.6 mm Hg @ 20°C
Specific gravity	0.882 - 0.896
Solubility in water	Soluble
Density	71.59 (air=1)

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to be avoided:	Strong heating, open flames and sparks.
Substance to be avoided:	Alkali metals, ammonia, oxidizing agents, peroxides, acids, acid anhydrides, halogens.
Hazardous combustion or decomposition products:	CO and CO ₂

11. TOXICOLOGICAL INFORMATION

Toxicological Data	
Ethanol (ethyl alcohol)	oral rat LD50: 7060 mg/kg; inhalation rat LC50: 20,000 ppm/10H; Irritation data, eye, rabbit: 500 mg/24H moderate; Investigated as a mutagen.
Methanol (methyl alcohol)	oral rat LD50: 5628 mg/kg; inhalation rat LC50: 64000 ppm/4H; skin rabbit LD50: 15800 mg/kg; Irritation data, skin, rabbit: 20 mg/24H, Moderate; Investigated as a mutagen.
Target organ(s) or System(s):	Nerves, Liver, Kidneys, Eyes, and Cardiovascular, GI, Reproductive and Central Nervous systems.
Routes of exposure:	
Skin Contact	May be harmful if absorbed through the skin. May cause irritation; Skin inflammation characterized by itching, scaling, reddening, or blistering. Permeator.
Eye Contact	May cause severe eye irritation. Inflammation of the eye is characterized by redness, watering, itching, and pain.
Inhalation	Hazardous if inhaled. Symptoms include coughing and shortness of breath.
Ingestion	May be fatal or cause blindness if swallowed. May cause neurological disturbances or irritation to the gastrointestinal tract and mucous membranes. Symptoms include nausea, vomiting, and diarrhea.
Symptoms of exposure:	Can cause blindness, CNS depression, drowsiness, narcotic effect, birth defects and heart damage.

12. ECOLOGICAL INFORMATION

Not Established

13. DISPOSAL CONSIDERATIONS

Observe all Federal, State and local laws regulating chemical waste. Processing, use or contamination of this product may change waste management options.

14. TRANSPORT INFORMATION

DOT/IATA Flammable liquid N.O.S. (ethanol, methanol) Hazard class: 3
 Shipper must be hazardous goods certified in compliance with 49CFR and IATA Resolution 618.
 When product is shipped as part of a kit, contact supplier for proper transportation method.

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA 8(b) inventory; SARA 311/312 (MSDS distribution): acute=yes, chronic=yes; SARA 313 (toxic chemical notification); SARA 302/304/311/312 hazardous chemicals; SARA 313 toxic chemical notification and release reporting:

16. OTHER INFORMATION

Not for food, drug, household, agricultural or cosmetic use. The above information is correct to the best of our knowledge. The user should make independent decisions regarding completeness of the information based on all sources available. BioFire Defense, LLC shall not be held liable for any damage resulting from handling or from contact with the above product.



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1. PRODUCT INFORMATION

Trade Name: Buffer 3

Kit Number: ASAY-ASY-0502

Manufacturer Information

BioFire Defense, LLC
79 West 4500 South, Suite 14
Salt Lake City, Utah 84107, USA
ph (801) 262-3592, www.BioFireDefense.com

Number for Information: 1-801-262-3695

MSDS not required for these products under Occupational Safety and Health Administration standard 'Hazard Communication' 29 CFR 1910.1200.



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