



# HANABI-S1020 Staining Kit (SP2701)

## Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue : 01 September 2022      Revision: 0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name : Stock Giemsa  
Product code : SP2701-G  
Synonyms : Azure Eosin Methylene Blue Solution

Product name : Concentrated Trypsin  
Product code : SP2701-T  
Synonyms : Trypsin (1000x)

Product name : Phosphate Buffered Saline  
Product code : 554430  
Synonyms : 1x PBS

Product name : Sorensen's Buffer  
Product code : 554433  
Synonyms : N/A

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Giemsa : Concentrated staining solution for G-banding of chromosomes.  
Trypsin : Concentrated enzymatic solution for the conditioning of chromosomes  
PBS : Diluent for concentrated Giemsa and Trypsin

##### 1.2.2. Uses advised against

Giemsa : Not intended for consumer use.

#### 1.3. Details of the supplier of the safety data sheet

<u>Component</u>	<u>Manufactured by:</u>	<u>Supplied by:</u>
Giemsa	: EMD Millipore Corporation 400 Summit Dr. Burlington, MA 01803 United States +1 800-645-5476	ADS Biotec 7409 Irvington Rd. Omaha, NE 68122 United States +1 402-800-3200
Trypsin	: Life Technologies 5250 Mainway Dr. Burlington, ONT Canada L7L 6A4 +1 800-263-6236	
PBS	: ADS Biotec 7409 Irvington Rd. Omaha, NE 68122 United States +1 402-800-3200	
Sorensen's Buffer	: ADS Biotec 7409 Irvington Rd. Omaha, NE 68122 United States +1 402-800-3200	

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## 1.4. Emergency telephone number

Emergency Contact Number : USA: 1-800-255-3924 (CHEMTEL 24hr); International: +1-813-248-0585 (CHEMTEL 24hr)

## SECTION 2: Hazards identification




### 2.1. Classification of the substance or mixture

Component	Classification	Hazards
Giemsa	: GHS in accordance with 29 CFR 1910 (OSHA HCS)	: Flammable Liquids (Category 2), H225 Acute Toxicity, Oral (Category 3), H301 Acute Toxicity, Inhalation (Category 3), H331 Acute Toxicity, Dermal (Category 3), H311 Skin Sensitization (Category 1), H317 Specific target organ toxicity – single exposure (Category 1), Eyes, Central Nervous System, H370
Trypsin	: GHS	: Respiratory sensitization (Category 1)
PBS	: WHMIS 2015	: Not classified under the Hazardous Products Regulations (SOR/2015-17)
Sorensen's Buffer	: GHS in accordance with 29 CFR 1910 (OSHA HCS)	: Skin Irritation (Category 2), H315 Eye Irritation (Category 2B), H320

For the full text of the H-Statements mentioned in this Section, see Section 16

### 2.2. Label elements

#### GHS Label elements, Pictograms

Giemsa	: 
Trypsin	: 
PBS	: None
Sorensen's Buffer	: 

#### Precautionary statements

	<u>Giemsa</u>	<u>Trypsin</u>	<u>PBS</u>	<u>Sorensen's Buffer</u>
Signal Word(s)	Danger	Danger	None	Warning
Physical Hazards		Not Hazardous	None	
Environmental Hazards		Not Hazardous	None	
Hazard Statements	H225 Highly flammable liquid and vapor. H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled. H317 May cause an allergic skin reaction. H370 Causes damage to organs (Eyes, Central nervous system).	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.	None	H315 Causes skin irritation H320 Causes eye irritation
Precautionary Statements	P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment. P242 Use only non-sparking tools.	P261 Avoid breathing dust/fume/gas/mist/vapors/spray P284 In case of inadequate ventilation wear respiratory protection	None	P280 Wear protective gloves

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	<u>Giemsa</u>	<u>Trypsin</u>	<u>PBS</u>	<u>Sorensen's Buffer</u>
Precautionary Statements	<p>P243 Take precautionary measures against static discharge.</p> <p>P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.</p> <p>P264 Wash skin thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P272 Contaminated work clothing must not be allowed out of the workplace.</p> <p>P280 Wear protective gloves/ eye protection/ face protection.</p> <p>P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.</p>			
Precautionary Statements	<p>P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</p> <p>P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.</p> <p>P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.</p> <p>P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P362 Take off contaminated clothing and wash before reuse.</p> <p>P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.</p> <p>P403 + P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P403 + P235 Store in a well-ventilated place. Keep cool.</p>		None	<p>P305 + 351 + 338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.</p> <p>P332 + 313 If skin irritation occurs: Get medical advice/attention.</p> <p>P337 + 313 If eye irritation persists: Get medical advice/attention.</p> <p>P302 + 352 IF ON SKIN: Wash with plenty of water.</p> <p>P362 + 364 Take off contaminated clothing and wash it before reuse.</p> <p>P403 + 233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P501 Dispose of contents/container in accordance with local/regional/ international regulations.</p>

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	<u>Giemsa</u>	<u>Trypsin</u>	<u>PBS</u>	<u>Sorensen's Buffer</u>
Precautionary Statements	P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant.			
Response		DO NOT USE: P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician	None	
Storage		Not Applicable	None	
Disposal		P501 Dispose of contents/ container to an approved waste disposal plant	None	
Other Hazards	None	Not applicable	None	

## 2.3. Other hazards

Hazards not otherwise classified (HNOC) or not covered by GHS: None

## SECTION 3: Composition/information on ingredients

### 3.1. Giemsa

Component	Classification	Concentration
Methanol CAS-No. 67-56-1	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370 Concentration limits: >= 10 %: STOT SE 1, H370; 3 - < 10 %: STOT SE 2, H371	≥30% to ≤50%
Glycerine CAS-No. 56-81-5		≥30% to ≤50%
Diethylammonium Chloride CAS-No. 660-68-4	Acute Tox. 4; Acute Tox. 3; Skin Corr. 1A; Eye Dam. 1; Skin Sens. 1; STOT SE 3; Aquatic Acute 3; H302, H332, H311, H314, H318, H317, H335, H402	≥0.1% to ≤1%
Eosin G CAS-No. 17372-87-1	Eye Irrit. 2A; Skin Sens. 1; Aquatic Acute 3; H319, H317, H402	≥0.1% to ≤1%

### 3.2. Trypsin

Component	Classification	Concentration
Trypsin CAS-No. 9002-07-7	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370 Concentration limits: >= 10 %: STOT SE 1, H370; 3 - < 10 %: STOT SE 2, H371	1% to 5%

### 3.3. PBS

Component	CAS Number	Concentration
Water	7732-18-5	>99%
Sodium Phosphate, Dibasic	7558-79-4	<0.5%
Sodium Chloride	7647-14-5	<1%
Potassium Phosphate, Monobasic	7778-77-0	<0.1%
Potassium Chloride	7447-40-7	<0.1%

### PBS

Component	CAS Number	Concentration
Water	7732-18-5	>99%
Sodium Phosphate, Dibasic	7558-79-4	<1%
Potassium Phosphate, Monobasic	7778-77-0	<1%

Full text of H-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

	<u>Giemsa</u>	<u>Trypsin</u>	<u>PBS</u>
Signal Word(s)	Danger	Danger	None

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	<u>Giemsa</u>	<u>Trypsin</u>	<u>PBS</u>
Physical Hazards		Not Hazardous	None
Environmental Hazards		Not Hazardous	None
Hazard Statements	H225 Highly flammable liquid and vapor. H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled. H317 May cause an allergic skin reaction. H370 Causes damage to organs (Eyes, Central nervous system).	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.	None
Precautionary Statements	P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/ eye protection/ face protection.	P261 Avoid breathing dust/fume/gas/mist/vapors/spray P284 In case of inadequate ventilation wear respiratory protection	None
Precautionary Statements	P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor. P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P362 Take off contaminated clothing and wash before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant.		None
Response		DO NOT USE: P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician	None
Storage		Not Applicable	None

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	<u>Giemsa</u>	<u>Trypsin</u>	<u>PBS</u>
Disposal			P501 Dispose of contents/ container to an approved waste disposal plant
Other Hazards	None		Not applicable

	<u>Giemsa</u>	<u>Trypsin</u>	<u>PBS</u>	<u>Sorensen's Buffer</u>
General Advice	First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.			Consult a physician if symptoms are severe or persistent. Provide this data sheet to medical personnel.
Inhalation	Fresh air. Immediately call a physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.	Remove to fresh air. If not breathing, give artificial respiration. If symptoms persist call a physician	Remove to fresh air. If not breathing, give artificial respiration. If symptoms persist call a physician	Remove to fresh air. If not breathing, give artificial respiration. If symptoms persist call a physician
Skin Contact	Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Immediate medical attention is required.	Wash off immediately with plenty of water for at least 15 minutes. If symptoms arise, call a physician.	Wash off immediately with plenty of water for at least 15 minutes. If symptoms arise, call a physician.
Eye Contact	Rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
Ingestion	Fresh air. Make victim drink ethanol (e.g. 1 drinking glass of a 40% alcoholic beverage). Call a doctor immediately (mention methanol ingestion). Only in exceptional cases, if no medical care is available within one hour, induce vomiting (only in fully conscious persons) and make victim drink ethanol again (approx. 0.3 ml of a 40% alcoholic beverage/kg body weight/hour).	Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Get medical attention if symptoms occur.	Rinse mouth. Do NOT induce vomiting. Get medical attention if symptoms occur.	Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Get medical attention if symptoms occur.
Note to Physician		Treat symptomatically	Treat symptomatically	Treat symptomatically

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

Giemsa	: The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Trypsin	: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
PBS	: None
Sorensen's Buffer	: None

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Giemsa	: Suitable: Water Foam Carbon (CO <sub>2</sub> ) Dry Powder Unsuitable: No limitations given
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Trypsin	: Suitable: Water Foam Carbon (CO <sub>2</sub> ) Dry Powder Unsuitable: No limitations given
PBS	: Unsuitable: No information available
Sorensen's Buffer	: Suitable: Water Spray, alcohol-resistant foam, dry chemical, and carbon dioxide (CO <sub>2</sub> )

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

Giemsa	: Carbon oxides, Mixture with combustible ingredients, Fire may cause evolution of: Acrolein. Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.
Trypsin	: Not known
PBS	: Keep product and empty container away from heat and sources of ignition.
Sorensen's Buffer	: Not known

## 5.3. Advice for firefighters

Giemsa	: Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Trypsin	: Wear self-contained breathing apparatus and protective suit
PBS	: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Sorensen's Buffer	: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 5.4. Further information

Giemsa	: Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.
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## SECTION 6: Accidental release measures

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

Giemsa	: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Trypsin	: Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. Use personal protection equipment. See section 8 for more information.
PBS	: Use personal protective equipment as required. Ensure adequate ventilation.
Sorensen's Buffer	: Use personal protective equipment as required. Ensure adequate ventilation.

### 6.2. Environmental precautions

Giemsa	: Do not let product enter drains. Risk of explosion.
Trypsin	: Avoid discharge into drains and waterways whenever possible.
PBS	: See Section 12 for additional Ecological Information.
Sorensen's Buffer	: Avoid discharge into drains and waterways whenever possible.

### 6.3. Methods and material for containment and cleaning up

Giemsa	: Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.
Trypsin	: Soak up with inert absorbent material.
PBS	: Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.
Sorensen's Buffer	: Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

### 6.4. Reference to other sections

Giemsa	: For disposal see section 13.
Trypsin	: See section 8 for more information.
PBS	: None
Sorensen's Buffer	: None

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## SECTION 7 : Handling and storage

### 7.1. Precautions for safe handling

- Giemsa** : Advice on safe handling: Work under hood. Do not inhale substance/mixture. Avoid generation of vapors/aerosols.  
Advice on protection against fire and explosion: Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.  
Hygiene measures: Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.
- Trypsin** : Advice for safe handling: Always wear recommended Personal Protective Equipment. See section 8 for more information. Do not get in eyes, on skin, or on clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator.
- PBS** : Wear personal protective equipment/face protection. Ensure adequate ventilation.
- Sorensen's Buffer** : Wear personal protective equipment/face protection. Ensure adequate ventilation.

### 7.2. Conditions for safe storage, including any incompatibilities

- Giemsa** : Storage conditions: Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons. Recommended storage temperature see product label.  
Storage class: Storage class (TRGS 510): 3: Flammable liquids
- Trypsin** : Keep in a dry, cool and well-ventilated place. Keep in properly labeled containers. Store in accordance with local regulations.
- PBS** : Keep containers tightly closed in a dry, cool and well-ventilated place.
- Sorensen's Buffer** : Keep containers tightly closed in a dry, cool and well-ventilated place.

### 7.3. Specific end use(s)

- Giemsa** : Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
- Trypsin** : CAUTION: For use as a raw material component in further manufacturing applications.
- PBS** : None
- Sorensen's Buffer** : None

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Giemsa

Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis	
Methanol	Remarks	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)	
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)	
		Danger of cutaneous absorption			
		ST 250 ppm	325 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits	
		Potential for dermal absorption			
		TWA	200 ppm 260 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits	
		Potential for dermal absorption			
		TWA	200 ppm 260 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants	
		PEL	200 ppm 260 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)	
		Skin			
		C	1,000 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)	
		Skin			
		STEL	250 ppm 325 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)	
		Skin			



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Component	CAS-No.	Value	Control parameters	Basis
Glycerine	56-81-5	TWA	5 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	15 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		PEL	10 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		PEL	5 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		TWA	10 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	5 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

## Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological Specimen	Basis
Methanol	67-56-1	Methanol	15 mg/L	Urine	ACGIH – Biological Exposure Indices (BEI)
		Remarks	End of shift (As soon as possible after exposure ceases)		

## Trypsin

### Control Parameters

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Trypsin	None	None	None	None

Chemical Name	Brazil – OEL – TWAs (LTs)	Brazil – OEL – Ceilings	Brazil – OEL – Skin Designations
Trypsin	None	None	None

## PBS

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

## Sorensen's Buffer

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

## 8.2. Exposure controls

	Giemsa	Trypsin	PBS	Sorensen's Buffer
Appropriate engineering controls	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.			
Personal protective equipment				
Hand protection	Wear suitable gloves.	Wear suitable gloves.	Wear appropriate protective gloves and clothing to prevent skin exposure	Wear appropriate protective gloves and clothing to prevent skin exposure
Eye protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses.	Tight sealing safety goggles.	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.	Use only government-approved safety glasses with side-shields.
Skin and body protection	When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves. Flame retardant antistatic protective clothing.	Wear laboratory coat for body protection.	Wear appropriate clothing. Ensure clothing is in good condition, with no holes or tears. When selecting clothing, consider the concentrations and amount of substance to be handled.	Wear appropriate clothing. Ensure clothing is in good condition, with no holes or tears. When selecting clothing, consider the concentrations and amount of substance to be handled.

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	<u>Giemsa</u>	<u>Trypsin</u>	<u>PBS</u>	<u>Sorensen's Buffer</u>
Respiratory protection	Required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.	No protective equipment is needed under normal use conditions.	No protective equipment is needed under normal use conditions.
Environmental exposure controls	Do not let product enter drains. Risk of explosion.	Avoid discharge into drains and waterways whenever possible.	No information available.	Avoid discharge into drains and waterways whenever possible.
Other information		Handle in accordance with good industrial hygiene and safety practice.	Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before use. Wash hands before breaks and after work.	Comply with general industrial hygiene practice guidelines. Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before use. Wash hands before breaks and after work.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

	<u>Giemsa</u>	<u>Trypsin</u>	<u>PBS</u>	<u>Sorensen's Buffer</u>
Physical state	Liquid	Liquid	Liquid	Liquid
Colour	Blue	Clear	Clear	Clear
Odour	Of Methanol	No data available	Slight	Odorless
Odour threshold	No data available	No data available	No data available	No data available
pH	6.0 – 8.2 @ 20°C (68°F) – (undiluted)	No data available	7.3 - 7.5	6.8 - 7.0
Melting point	No data available	No data available	~0°C (32°F)	~0°C (32°F)
Freezing point	No data available	No data available	~0°C (32°F)	~0°C (32°F)
Boiling point	> 65°C > 149°F @ 1,013hPa	No data available	~100°C (212°F)	~100°C (212°F)
Flash point	Ca. 18°C (64°F)	No data available	No data available	No data available
Evaporation rate	No data available	No data available	No data available	No data available
Flammability (solid, gas)		No data available	No flammable	Not flammable
Upper/lower flammability or explosive limits	Upper explosion limit: 44%(V) – Methanol Lower explosion limit: 5.5%(V) – Methnaol	No data available	No data available	No data available
Vapour pressure	No data available	No data available	No data available	No data available
Relative vapour density at 20 °C	No data available	No data available	>1.0	No data available
Density	No data available		No data available	No data available
Relative density	0.99 g/cm <sup>3</sup> @ 20°C (68°F)	No data available		
Solubility		No data available	Soluble in water	No data available
Partition coefficient: n-octanol/water	No data available	No data available	No data available	No data available
Autoignition temperature	No data available	No data available	Not applicable	Not applicable
Decomposition temperature	No data available	No data available	No data available	No data available
Viscosity, kinematic	No data available	No data available	No data available	No data available
Viscosity, dynamic	No data available	No data available	No data available	No data available
Oxidising properties	None	No data available	No data available	No data available

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## 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Giemsa vapors may form explosive mixture with air. Trypsin, PBS, and Sorensen's Buffer have no known reactive hazards.

### 10.2. Chemical stability

All reagents are stable under normal conditions.

### 10.3. Possibility of hazardous reactions

- Giemsa : Risk of explosion with: Oxidizing agents, perchloric acid, perchlorates, salts of oxyhalogenic acids, chromium(VI) oxide, halogen oxides, nitrogen oxides, nonmetallic oxides, chromosulfuric acid, chlorates, hydrides, zinc diethyl, Halogens, Magnesium, hydrogen peroxide, Nitric acid, peroxi compounds, Nitriles.  
Exothermic reaction with: acid halides, Acid anhydrides, Reducing agents, Acids, Oxides of phosphorus, chromium(VI) oxide, phosphorus halides, Acetic anhydride, with, phosphorous oxichloride  
Generates dangerous gases or fumes in contact with: Alkaline earth metals, Alkali metals  
Risk of ignition or formation of inflammable gases or vapours with: potassium permanganate, calcium hypochlorite, Oxides of phosphorus  
Fluorine with Lead oxides  
Generates dangerous gases or fumes in contact with: Alkaline earth metals, Alkali metals
- Trypsin : Hazardous reaction has not been reported.
- PBS : Strong oxidizing agents
- Sorensen's Buffer : Strong oxidizing agents

### 10.4. Conditions to avoid

- Giemsa : Risk of explosion with: Oxidizing agents, perchloric acid, perchlorates, salts of oxyhalogenic acids, chromium(VI) oxide, halogen oxides, nitrogen oxides, nonmetallic oxides, chromosulfuric acid, chlorates, hydrides, zinc diethyl, Halogens, Magnesium, hydrogen peroxide, Nitric acid, peroxi compounds, Nitriles.  
Exothermic reaction with: acid halides, Acid anhydrides, Reducing agents, Acids, Oxides of phosphorus, chromium(VI) oxide, phosphorus halides, Acetic anhydride, with, phosphorous oxichloride  
Generates dangerous gases or fumes in contact with: Alkaline earth metals, Alkali metals  
Risk of ignition or formation of inflammable gases or vapours with: potassium permanganate, calcium hypochlorite, Oxides of phosphorus  
Fluorine with Lead oxides  
Generates dangerous gases or fumes in contact with: Alkaline earth metals, Alkali metals
- Trypsin : Hazardous reaction has not been reported.
- PBS : Incompatible products.
- Sorensen's Buffer : Incompatible products

### 10.5. Incompatible Materials

- Giemsa : Various plastics, Aluminium, zinc alloys, Magnesium
- Trypsin : No dangerous reaction known under conditions of normal use.
- PBS : Strong oxidizing agents
- Sorensen's Buffer : Strong oxidizing agents

### 10.6. Hazardous decomposition products

- Giemsa : In the event of fire, see Section 5
- Trypsin : No known hazardous decomposition products.
- PBS : None under normal use conditions
- Sorensen's Buffer : None under normal use conditions

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute Toxicity

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according to Regulation (EC) No. 453/2010

Giemsa : Acute toxicity estimate Oral - 201.44 mg/kg (Calculation method)  
Acute toxicity estimate Inhalation - 4 h - 6.24 mg/l – vapor (Calculation method)  
Acute toxicity estimate Dermal - 600.08 mg/kg (Calculation method)

Trypsin : Data are conclusive but insufficient for classification.

PBS : No information available

Sorensen's Buffer : No information available

## Skin Toxicity

Giemsa : No data available

Trypsin : Data are conclusive but insufficient for classification.

PBS : No information available

Sorensen's Buffer : No information available

## Serious Eye Damage/Irritation

Giemsa : No data available

Trypsin : Data are conclusive but insufficient for classification.

PBS : No information available

Sorensen's Buffer : No information available

## Respiratory or Skin Sensitization

Giemsa : Mixture may cause an allergic skin reaction.

Trypsin : May cause sensitization by inhalation

PBS : No information available

Sorensen's Buffer : No information available

## Carcinogenicity

Giemsa : IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Trypsin : Data are conclusive but insufficient for classification.

PBS : No data available

Sorensen's Buffer : No data available

## Reproductive Toxicity

Giemsa : No data available

Trypsin : Data are conclusive but insufficient for classification.

PBS : No information available

Sorensen's Buffer : No information available

## Specific Organ Toxicity (Single Exposure)

Giemsa : Mixture causes damage to organs. - Eyes, Central nervous system

Trypsin : Data are conclusive but insufficient for classification.

PBS : None known

Sorensen's Buffer : None known

## Specific Organ Toxicity (Repeated Exposure)

Giemsa : No data available

Trypsin : Data are conclusive but insufficient for classification.

PBS : None known

Sorensen's Buffer : None known

## Aspiration Hazard

Giemsa : No data available

Trypsin : Data are conclusive but insufficient for classification.

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according to Regulation (EC) No. 453/2010

PBS : No information available

Sorensen's : No information available

Buffer

## Potential Adverse Human Health Effects and Symptoms

Giemsa : Systemic effects: acidosis, drop in blood pressure, agitation, spasms, inebriation, Dizziness, Drowsiness, Headache, Impairment of vision, Blindness, narcosis, Coma. Symptoms may be delayed. Damage to: Liver, Kidney, Cardiac. Irreversible damage of the optical nerve. Other dangerous properties cannot be excluded. Handle in accordance with good industrial hygiene and safety practice.

Trypsin : Oral LD<sub>50</sub>: >5g/kg in Rat. Dermal LD<sub>50</sub> and Inhalation LD<sub>50</sub>: No data available

PBS : Oral LD<sub>50</sub> Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg. Dermal LD<sub>50</sub> Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg. Vapor LC<sub>50</sub> Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

The toxicological properties have not been fully investigated.

Sorensen's : No information available

Buffer

## SECTION 12: Ecological information

### 12.1. Toxicity

Giemsa : No information available

Trypsin : No information available

PBS : No information available

Sorensen's : No information available

Buffer

### 12.2. Persistence and degradability

Giemsa : No data available

Trypsin : No data available

PBS : Miscible with water Persistence is unlikely based on information available.

Sorensen's : No information available

Buffer

### 12.3. Bioaccumulative potential

Giemsa : No data available

Trypsin : No data available

PBS : No data available

Sorensen's : No data available

Buffer

### 12.4. Mobility in soil

Giemsa : No data available

Trypsin : No data available

PBS : Will likely be mobile in the environment due to its water solubility

Sorensen's : Will likely be mobile in the environment due to its water solubility

Buffer

### 12.5. Results of PBT and vPvB assessment

Giemsa : PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Trypsin : PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

PBS : PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Sorensen's : PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Buffer

### 12.6. Other adverse effects

Giemsa : Endocrine disrupting properties: No data available

Discharge into the environment must be avoided.

Trypsin : No data available

PBS : No data available

Sorensen's : No data available

Buffer

# Safety Data Sheet for HANABI-S1020 Staining Kit (SP2701)

according to Regulation (EC) No. 453/2010

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. Empty containers or liners may retain some product residues. No mixing with other waste. Handle uncleaned containers like the product itself. Disposal of Giemsa and Trypsin, its solutions, or of any by-products, shall comply with the requirements of all applicable local, regional, or national/federal regulations.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

Trypsin, PBS, and Sorensen's Buffer are not dangerous goods in sense of transport regulations.

Giemsa: **DOT (US)** UN number: 1230

Class: 3 Packing group: II

Proper shipping name: Methanol

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

**IMDG UN number:** 1230

Class: 3 (6.1) Packing group: II

EMS-No: F-E, S-D

Proper shipping name: METHANOL

**IATA UN number:** 1230

Class: 3 (6.1) Packing group: II

Proper shipping name: Methanol

## SECTION 15: Regulatory information

### Giemsa

SARA 302 Components: This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components: The following components are subject to reporting levels established by SARA Title III, Section 313:

Methanol CAS-No. 67-56-1 Revision Date 2007-07-01

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.

### Trypsin

Component	US TSCA
Trypsin	Listed

US Federal Regulations

SARA 313 Components: This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61): This product does not contain HAPs

US State Regulations

California Proposition 65: This product does not contain any Proposition 65 chemicals.

WHMIS Hazard Class: D2A - Very toxic materials

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR. National Regulations - Brazil

Chemical Name	CAS-No.	Brazil – National Agency for Sanitary Surveillance (ANVISA)	Brazil – National List of Carcinogen Agents to Human (LINACH)
Trypsin	9002-07-7	Not Listed	Not Listed

### PBS

International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification – Active-Inactive	EINECS	ELINCS	NLP
Water	7732-18-5	Listed	Not Listed	Listed	Active	231-791-2	Not Listed	Not Listed
Sodium Chloride	7647-14-5	Listed	Not Listed	Listed	Active	231-598-3	Not Listed	Not Listed
Potassium Phosphate, Monobasic	7778-77-0	Listed	Not Listed	Listed	Active	231-913-4	Not Listed	Not Listed
Potassium Chloride	7447-40-7	Listed	Not Listed	Listed	Active	231-211-8	Not Listed	Not Listed
Sodium Phosphate, Dibasic	7558-79-4	Listed	Not Listed	Listed	Active	231-448-7	Not Listed	Not Listed

# Safety Data Sheet for HANABI-S1020 Staining Kit (SP2701)

according to Regulation (EC) No. 453/2010

<u>Component</u>	<u>CAS-No</u>	<u>IECSC</u>	<u>KECL</u>	<u>ENCS</u>	<u>ISHL</u>	<u>TCSI</u>	<u>NZIoC</u>	<u>PICCS</u>
Water	7732-18-5	Listed	KE-35400	Listed	Not Listed	Listed	Listed	Listed
Sodium Chloride	7647-14-5	Listed	KE-31387	Listed	Listed	Listed	Listed	Listed
Potassium Phosphate, Monobasic	7778-77-0	Listed	KE-28622	Listed	Listed	Listed	Listed	Listed
Potassium Chloride	7447-40-7	Listed	KE-29086	Listed	Listed	Listed	Listed	Listed
Sodium Phosphate, Dibasic	7558-79-4	Listed	KE-12344	Listed	Listed	Listed	Listed	Listed

Canada: SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

Other International Regulations: Authorization/Restrictions according to EU REACH Safety, health and environmental regulations/legislation specific for the substance or mixture.

<u>Component</u>	<u>CAS-No</u>	<u>OECD HPV</u>	<u>Persistent Organic Pollutant</u>	<u>Ozone Depletion Potential</u>	<u>Restriction of Hazardous Substances (RoHS)</u>
Water	7732-18-5	Listed	Not Applicable	Not Applicable	Not Applicable
Sodium Chloride	7647-14-5	Listed	Not Applicable	Not Applicable	Not Applicable
Potassium Phosphate, Monobasic	7778-77-0	Listed	Not Applicable	Not Applicable	Not Applicable
Potassium Chloride	7447-40-7	Listed	Not Applicable	Not Applicable	Not Applicable
Sodium Phosphate, Dibasic	7558-79-4	Listed	Not Applicable	Not Applicable	Not Applicable

<u>Component</u>	<u>CAS-No</u>	<u>Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification</u>	<u>Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements</u>	<u>Rotterdam Convention (PIC)</u>	<u>Basel Convention (Hazardous Waste)</u>
Water	7732-18-5	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Sodium Chloride	7647-14-5	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium Phosphate, Monobasic	7778-77-0	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium Chloride	7447-40-7	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Sodium Phosphate, Dibasic	7558-79-4	Not Applicable	Not Applicable	Not Applicable	Not Applicable

## Sorensen's Buffer

SARA 302: This product and components are not subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This product does not contain any components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

SARA 311/312: No SARA Hazard

## SECTION 16: Other information

Data sources	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Abbreviations and acronyms	: ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route). CAS (Chemical Abstracts Service) number. IARC (International Agency for Research on Cancer). IATA (International Air Transport Association). IMDG (International Maritime Dangerous Goods Code). RID (Règlement concernant le transport international ferroviaire de marchandises).
Other information	: None

NCEC SDS EU (REACH ANNEX II)

*The information and recommendations contained herein are based upon data believed to be up-to-date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information and recommendations contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by (incorrect) use, handling, purchase, resale, or exposure to our product. Customers and users of our product must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391 and 98/24.*