

Material Safety Data Sheet

RNA Spike In Kit - Single Color - Part Number 5188-5282

1. Product and company identification

Product name	: RNA Spike In Kit - Single Color - Part Number 5188-5282	
Material uses	: Analytical reagent. A kit consisting of a spike mix buffer solution and a dilution buffer.	
	One-Color Spike-Mix	0.01 ml
	Dilution Buffer	1.2 ml
Supplier/Manufacturer	: Agilent Technologies, Inc. Logistics Center - Americas 500 Ships Landing Way New Castle, Delaware 19720	
Part No. (Chemical Kit)	: 5188-5282	
Part No.	One-Color Spike-Mix	5972-3563
	Dilution Buffer	5972-3562
Validation date	: 11/4/2010	
In case of emergency	: 1-302-633-8777 1-877-4 Agilent (Information Telephone Number)	

2. Hazards identification

Physical state	: One-Color Spike-Mix Dilution Buffer	Liquid. Liquid.
Odor	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
Emergency overview		
Signal word	: One-Color Spike-Mix Dilution Buffer	No signal word. No signal word.
Hazard statements	: One-Color Spike-Mix Dilution Buffer	NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED. NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.
Precautions	: One-Color Spike-Mix Dilution Buffer	No known significant effects or critical hazards. Avoid prolonged contact with eyes, skin and clothing. No known significant effects or critical hazards. Avoid prolonged contact with eyes, skin and clothing.
Routes of entry	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
Potential acute health effects		
Inhalation	: One-Color Spike-Mix Dilution Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: One-Color Spike-Mix Dilution Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin	: One-Color Spike-Mix Dilution Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Eyes	: One-Color Spike-Mix Dilution Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.

2. Hazards identification

Potential chronic health effects

Chronic effects	: One-Color Spike-Mix Dilution Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: One-Color Spike-Mix Dilution Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: One-Color Spike-Mix Dilution Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: One-Color Spike-Mix Dilution Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: One-Color Spike-Mix Dilution Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: One-Color Spike-Mix Dilution Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Target organs	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.

Over-exposure signs/symptoms

Inhalation	: One-Color Spike-Mix Dilution Buffer	No specific data. No specific data.
Ingestion	: One-Color Spike-Mix Dilution Buffer	No specific data. No specific data.
Skin	: One-Color Spike-Mix Dilution Buffer	No specific data. No specific data.
Eyes	: One-Color Spike-Mix Dilution Buffer	No specific data. No specific data.
Medical conditions aggravated by over-exposure	: One-Color Spike-Mix Dilution Buffer	None known. None known.

See toxicological information (section 11)

3. Composition/information on ingredients

Name	CAS number	%
No hazardous ingredient		

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

4. First aid measures

Eye contact	: One-Color Spike-Mix Dilution Buffer	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur. Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.
Skin contact	: One-Color Spike-Mix Dilution Buffer	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur. In case of contact, immediately flush skin with

4. First aid measures

Inhalation	: One-Color Spike-Mix	plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.
	Dilution Buffer	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur.
Ingestion	: One-Color Spike-Mix	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.
	Dilution Buffer	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.
Protection of first-aiders	: One-Color Spike-Mix	No action shall be taken involving any personal risk or without suitable training.
	Dilution Buffer	No action shall be taken involving any personal risk or without suitable training.
Notes to physician	: One-Color Spike-Mix	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Dilution Buffer	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product	: One-Color Spike-Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	Dilution Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
Extinguishing media		
Suitable	: One-Color Spike-Mix	Use an extinguishing agent suitable for the surrounding fire.
	Dilution Buffer	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	: One-Color Spike-Mix	None known.
	Dilution Buffer	None known.
Special exposure hazards	: One-Color Spike-Mix	No action shall be taken involving any personal risk or without suitable training.
	Dilution Buffer	No action shall be taken involving any personal risk or without suitable training.

5. Fire-fighting measures

Hazardous thermal decomposition products	: One-Color Spike-Mix Dilution Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides No specific data.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.	

6. Accidental release measures

Personal precautions	: One-Color Spike-Mix Dilution Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see Section 8). No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see Section 8).
Environmental precautions	: One-Color Spike-Mix Dilution Buffer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods for cleaning up	: One-Color Spike-Mix Dilution Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling	: One-Color Spike-Mix Dilution Buffer	Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and
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7. Handling and storage

Storage : One-Color Spike-Mix

smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Dilution Buffer

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Occupational exposure limits

No exposure limit value known.

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

8. Exposure controls/personal protection

- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Other protection** : Not available.

9. Physical and chemical properties

Physical state	: One-Color Spike-Mix Dilution Buffer	Liquid. Liquid.
Flash point	: One-Color Spike-Mix Dilution Buffer	Not available. [Product does not sustain combustion.]
Auto-ignition temperature	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
Flammable limits	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
Color	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
Odor	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
pH	: One-Color Spike-Mix Dilution Buffer	6.4 7
Boiling/condensation point	: One-Color Spike-Mix Dilution Buffer	Not available. 100°C (212°F)
Melting/freezing point	: One-Color Spike-Mix Dilution Buffer	Not available. 0°C (32°F)
Specific gravity	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
Vapor pressure	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
Vapor density	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
Odor threshold	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
Evaporation rate	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
Viscosity	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
Solubility	: One-Color Spike-Mix Dilution Buffer	Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.

10. Stability and reactivity

Chemical stability	: One-Color Spike-Mix Dilution Buffer	The product is stable. The product is stable.
Conditions to avoid	: One-Color Spike-Mix Dilution Buffer	No specific data. No specific data.
Materials to avoid	: One-Color Spike-Mix Dilution Buffer	No specific data. No specific data.

10. Stability and reactivity

Hazardous decomposition products	: One-Color Spike-Mix Dilution Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of hazardous reactions	: One-Color Spike-Mix Dilution Buffer	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

Acute toxicity

Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Chronic toxicity / Carcinogenicity / Mutagenicity / Teratogenicity / Reproductive toxicity

Not available.

Other adverse symptoms	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
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12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Partition coefficient: n-octanol/water	: One-Color Spike-Mix Dilution Buffer	Not available. Not available.
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Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information

TDG / IMDG / IATA : Not regulated.

15. Regulatory information

WHMIS (Canada) : One-Color Spike-Mix Dilution Buffer Not controlled under WHMIS (Canada).
Not controlled under WHMIS (Canada).

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. Other information

Label requirements : One-Color Spike-Mix Dilution Buffer
NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.
NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Date of issue : 11/4/2010

Date of previous issue : No previous validation.

Version : 1

☑ Indicates information that has changed from previously issued version.

Notice to reader

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