

SECTION 1: IDENTIFICATION**1.1 Product identifier**

Product Name NISH Probe Hybridization Buffer

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

Identified uses For research use only. Not for diagnostic use.

1.3 Details of the supplier of the data sheet

Company Empire Genomics Corp.
3370 Walden Ave, Suite 114
Depew, NY 14043
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SECTION 2. HAZARDS IDENTIFICATION

This safety data sheet complies with the requirements of Regulation EC 1907/2006.

2.1 Classification of the substance or mixture**Classification according to Regulation EC 1272/2008**

Physical and Chemical	Not classified
Human health	Repr. 1B – H360D
Environment	Not classified

Classification according to EU Directives 67/548/EEC or 1999/45/EC

T	Toxic
R40	Limited evidence of a carcinogenic effect.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R61	May cause harm to the unborn child.

GHS ClassificationHealth Hazards

Specific target organ system toxicity (repeated exposure)	Category 2
Carcinogenicity	Category 2
Reproductive Toxicity	Category 1B

Physical Hazards

Not hazardous

2.2 Label elements including precautionary statements

Contains formamide.



Signal Word

Danger

Hazard Statements

H360D

May damage fertility or the unborn child

H351

Suspected of causing cancer if swallowed

H373

May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

P202

Do not handle until all safety precautions have been read and understood

P308+313

If exposed or concerned: Get medical advice/attention

P260

Do not breathe in dust/fume/gas/mist/vapors/spray

P201

Obtain special instructions before use

P281

Use personal protective equipment as required

P314

Get medical advice/attention if you feel unwell

P405

Store locked up

2.3 Other hazards

None.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Characterization

Mixtures.

3.2 Dangerous Components

Chemical Name	CAS-No	EINECS-No	Weight %
Formamide	75-12-7	200-842-0	10-30%
Citric acid	77-92-9	201-069-1	<1%

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

General information

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

Inhalation	Allow victim to breath fresh air. Allow the victim to rest. Get medical attention if symptoms occur.
Ingestion	Rinse mouth. Do not induce vomiting without medical advice. Drink plenty of water. Consult a physician.
Skin Contact	Rinse immediately with plenty of water. Get medical attention if symptoms occur.
Eye Contact	Flush immediately with plenty of water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses if present.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in Section 2.2 and/or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed.

Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES**5.1 Extinguishing Media**

Alcohol-resistant foam, water spray, carbon dioxide (CO₂), or dry chemical.

5.2 Special hazards

No data available.

5.3 Advice for fire fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

No data available.

SECTION 6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors and/or aerosols. Do not use steel or aluminum tools or equipment. Avoid substance contact. Avoid dust formation. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environmental Precautions

Should not be released into the environment. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and clean up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see Sections 7 and 10). Take up with liquid-absorbent and neutralizing material. Dispose of properly. Avoid dust formation. Clean up affected area.

6.4 Reference to other sections

Wear personal protective equipment as described in Section 8 of the safety data sheet.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Provide good ventilation in the process area. Always wear recommended personal protective equipment. Avoid contact with skin, eyes, and clothing.

7.2 Conditions for safe storage, including and incompatibles

Keep container tightly closed in a dry and well-ventilated place. Keep away from combustible material as well strong acids and strong bases. Keep away from food and drink. Protect pressurized gas bottles against overturning.

7.3 Specific end use(s)

For research use only.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Workplace Exposure Limits (WEL)

Chemical Name	Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)	
Formamide	20 ppm	37 mg/m ³	30 ppm	56 mg/m ³

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.2 Exposure controls

Personal Protective Equipment

Wear protective gloves/protective clothing and eye/face protection. Only wear fitting, comfortable, and clean protective clothing.

Respiratory Protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Hand Protection

Tested protective gloves are to be worn: DIN-/EN-Norms: EN ISO 374.

Eye Protection

Tightly sealed safety glasses.

Skin and Body Protection

Wear suitable protective clothing.

Environmental exposure controls

Refer to Section 6. No further action is necessary.

Environmental Exposure Controls

Should not be released in the environment. Prevent product from entering drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Liquid.

9.2 Other information

Not available.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

No specific reactivity associated with this product.

10.2 Stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None under normal use conditions.

10.4 Conditions to avoid

Direct sunlight. Extremely high temperatures.

10.5 Incompatible materials

No dangerous reactions under conditions of normal use.

10.6 Hazardous decomposition products

None under conditions of normal use.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicological information

Acute Toxicity

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LD50 (inhalation, rat/mouse)
Formamide	3200 mg/kg	13500 mg/kg	3900 ppm/6H
Citric Acid	5400 mg/kg	Not Listed	Not Listed

Principle Routes of exposure

Inhalation

Ingestion

Skin contact

Eye contact

Carcinogenetic effects

Mutagenic effects

Reproductive toxicity

Sensitization

Target organ effects

Other adverse effect

May cause irritation of respiratory tract.

May be harmful if swallowed.

May cause skin irritation in susceptible persons.

May cause eye irritation in susceptible persons.

This product contains one or more substances which are classified as carcinogenic.

No data available.

May cause adverse reproductive effects.

No data available.

Cardiovascular system, hematopoietic system.

No data available.

SECTION 12. ECOLOGICAL INFORMATION
12.1 Ecotoxicity

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data
Formamide	EC50: > 500 mg/L (72 h) (<i>D. subspicatus</i>)	EC50: > 500 mg/L (48 h) (<i>D. magna</i>)	-
Citric acid	-	1534 mg/L	LC50: 440 mg/L

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulation potential

No data available on bioaccumulation.

12.4 Mobility in soil

No information available.

12.5 Other adverse effects

No information available.

SECTION 13. DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product shall comply with all the requirements of all applicable local, regional, national/federal regulations.

SECTION 14. TRANSPORT INFORMATION
IATA/ADR/DOT-US/IMDG

Not dangerous goods. Not regulated by transport regulations.

14.1 UN number	Not applicable
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not applicable
14.4 Packaging group	Not applicable
14.5 Environmental hazards	Not applicable

SECTION 15. REGULATORY INFORMATION
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
US Federal Regulations
SARA 313

This product is not regulated by SARA.

Clean Air Act

This product does not contain any hazardous air pollutants, as defined by the US Clean Air Act.

Clean Water Act

This product does not contain any hazardous substances listed under the US Clean Water Act.

US State Regulations

Chemical Name	Massachusetts-RTK	New Jersey-RTK	Pennsylvania-RTK	Rhode Island-RTK
Formamide	Listed	Listed	Listed	Listed

California Proposition 65

This product does not contain any Proposition 65 chemicals.

International Regulations

Substances of very high concern

Chemical Name	Weight %	EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances for Eventual Inclusion in Annex XIV
Formamide	4-20	Toxic for reproduction (Article 57c)

Restricted substances under EC 1907/2006, Annex XVII

Chemical Name	Weight %	EU - REACH (1907/2006) - Annex XVII – Restrictions on Certain Dangerous Substances
Formamide	4-20	Restricted to professional users.

Substances Listed under Annex I of Regulation (EC) No 689/2008

None.

Restricted Substances under Annex V of Regulation (EC) No 689/2008

None.

Substances under Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on Persistent Organic Pollutants and Amending Directive 79/117/EEC

None.

German Water Hazard Classes

Chemical Name	Weight %	Germany – Water Classification (VwVwS) – Annex 1	Germany – Water Classification (VwVwS) – Annex 2 – Water Hazard Classes	Germany – Water Classification (VwVwS) – Annex 3
Formamide	4-20	-	Hazard class 1 – low hazard to waters	Hazard class 1 – low hazard to waters

Other Countries

Chemical Name	EINECS (European Union)	ELINCS (European List of Notified Chemical Substances)	ENCS (Japan)	PICCS (Philippines)
Formamide	Listed	-	Listed	Listed

Chemical Name	AICS (Australia)	South Korea (KECL)	Canada (DSL)	NDSL
Formamide	Listed	Listed	Listed	-

15.2 Chemical safety assessment

No data available.

SECTION 16. OTHER INFORMATION**Disclaimer**

The information contained herein is believed to be correct at time of issue but may not be all-inclusive and should be used as a guide only. Further, it is recommended that the product be handled and used by appropriately trained personnel only. Empire Genomics Corp. shall not be held liable for any damage resulting from handling or from contact with the product.