

SAFETY DATA SHEET

RNA Spike In Kit - Single Color

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

1.1 Product identifier

Product name : RNA Spike In Kit - Single Color
Part no. (chemical kit) : 5188-5282
Part no. : One Color Spike-Mix 5972-3563
 Dilution Buffer 5972-3562

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

Identified uses : Analytical reagent.
 For research use only.
 One Color Spike-Mix 0.01 ml
 Dilution Buffer 1.2 ml
Uses advised against : Not for use in diagnostic procedures.

1.3 Details of the supplier of the safety data sheet

Agilent Technologies LDA UK Ltd.
 5500 Lakeside Cheadle Royal Business Park,
 Cheadle, Cheshire, SK8 3GR
 United Kingdom
 Tel: +44 (0) 345 712 5292
e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +44 20 3807 3798

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : One Color Spike-Mix Mixture
 Dilution Buffer Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

One Color Spike-Mix The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Dilution Buffer The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ingredients of unknown toxicity : One Color Spike-Mix Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : One Color Spike-Mix No signal word.
 Dilution Buffer No signal word.
Hazard statements : One Color Spike-Mix No known significant effects or critical hazards.
 Dilution Buffer No known significant effects or critical hazards.

Precautionary statements

RNA Spike In Kit - Single Color

SECTION 2: Hazards identification

Prevention	: One Color Spike-Mix Dilution Buffer	Not applicable. Not applicable.
Response	: One Color Spike-Mix Dilution Buffer	Not applicable. Not applicable.
Storage	: One Color Spike-Mix Dilution Buffer	Not applicable. Not applicable.
Disposal	: One Color Spike-Mix Dilution Buffer	Not applicable. Not applicable.
Supplemental label elements	: One Color Spike-Mix Dilution Buffer	Not applicable. Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: One Color Spike-Mix Dilution Buffer	Not applicable. Not applicable.
<u>Special packaging requirements</u>		
Containers to be fitted with child-resistant fastenings	: One Color Spike-Mix Dilution Buffer	Not applicable. Not applicable.
Tactile warning of danger	: One Color Spike-Mix Dilution Buffer	Not applicable. Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: One Color Spike-Mix Dilution Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB. This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Other hazards which do not result in classification	: One Color Spike-Mix Dilution Buffer	None known. None known.

SECTION 3: Composition/information on ingredients

3.1 Substances	: One Color Spike-Mix Dilution Buffer	Mixture Mixture
-----------------------	--	--------------------

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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: One Color Spike-Mix Dilution Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: One Color Spike-Mix Dilution Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

RNA Spike In Kit - Single Color

SECTION 4: First aid measures

Skin contact	: One Color Spike-Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Dilution Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: One Color Spike-Mix	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Dilution Buffer	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. 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.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact	: One Color Spike-Mix	No specific data.
	Dilution Buffer	No specific data.
Inhalation	: One Color Spike-Mix	No specific data.
	Dilution Buffer	No specific data.
Skin contact	: One Color Spike-Mix	No specific data.
	Dilution Buffer	No specific data.
Ingestion	: One Color Spike-Mix	No specific data.
	Dilution Buffer	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: One Color Spike-Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Dilution Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: One Color Spike-Mix	No specific treatment.
	Dilution Buffer	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: One Color Spike-Mix	Use an extinguishing agent suitable for the surrounding fire.
	Dilution Buffer	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: One Color Spike-Mix	None known.
	Dilution Buffer	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: 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.
Hazardous combustion products	: One Color Spike-Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides
	Dilution Buffer	No specific data.

SECTION 5: Firefighting measures

5.3 Advice for firefighters

Special protective actions for fire-fighters	: One Color Spike-Mix Dilution Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: One Color Spike-Mix Dilution Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: 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. 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.
For emergency responders	: One Color Spike-Mix Dilution Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: One Color Spike-Mix	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).
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).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	: One Color Spike-Mix	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.
	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.

6.4 Reference to other sections

: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	: One Color Spike-Mix Dilution Buffer	Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: One Color Spike-Mix Dilution Buffer	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. See also Section 8 for additional information on hygiene measures. 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. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage	: One Color Spike-Mix 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
----------------	--	--

7.3 Specific end use(s)

Recommendations	: One Color Spike-Mix Dilution Buffer	Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: One Color Spike-Mix Dilution Buffer	Not available. Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

RNA Spike In Kit - Single Color

SECTION 8: Exposure controls/personal protection

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

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.

Eye/face protection : 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : 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.

Body protection : 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.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

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.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: One Color Spike-Mix Dilution Buffer	Liquid. Liquid.
Colour	: One Color Spike-Mix Dilution Buffer	Not available. Not available.
Odour	: One Color Spike-Mix Dilution Buffer	Not available. Not available.
Odour threshold	: One Color Spike-Mix Dilution Buffer	Not available. Not available.
Melting point/freezing point	: One Color Spike-Mix Dilution Buffer	Not available. 0°C
Initial boiling point and boiling range	: One Color Spike-Mix Dilution Buffer	Not available. 100°C
Flammability	: One Color Spike-Mix Dilution Buffer	Not applicable. Not applicable.

RNA Spike In Kit - Single Color

SECTION 9: Physical and chemical properties

- Upper/lower flammability or explosive limits** : One Color Spike-Mix Not available.
Dilution Buffer Not available.
- Flash point** : One Color Spike-Mix Not available.
Dilution Buffer Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : One Color Spike-Mix Not available.
Dilution Buffer Not available.
- pH** : One Color Spike-Mix 6.4
Dilution Buffer 7
- Viscosity** : One Color Spike-Mix Not available.
Dilution Buffer Not available.

Solubility(ies)	Media	Result
	One Color Spike-Mix water	Soluble
	Dilution Buffer water	Soluble

- Partition coefficient: n-octanol/water** : One Color Spike-Mix Not applicable.
Dilution Buffer Not applicable.

Vapour pressure	Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	One Color Spike-Mix						
	water	17.5	2.3	-	92.258	12.3	-
	Dilution Buffer						
	water	17.5	2.3	-	92.258	12.3	-

- Evaporation rate** : One Color Spike-Mix Not available.
Dilution Buffer Not available.
- Relative density** : One Color Spike-Mix Not available.
Dilution Buffer Not available.
- Vapour density** : One Color Spike-Mix Not available.
Dilution Buffer Not available.
- Explosive properties** : One Color Spike-Mix Not available.
Dilution Buffer Not available.
- Oxidising properties** : One Color Spike-Mix Not available.
Dilution Buffer Not available.

Particle characteristics

- Median particle size** : One Color Spike-Mix Not applicable.
Dilution Buffer Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : One Color Spike-Mix No specific test data related to reactivity available for this product or its ingredients.
Dilution Buffer No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : One Color Spike-Mix The product is stable.
Dilution Buffer The product is stable.

RNA Spike In Kit - Single Color

SECTION 10: Stability and reactivity

10.3 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.
10.4 Conditions to avoid	: One Color Spike-Mix Dilution Buffer	No specific data. No specific data.
10.5 Incompatible materials	: One Color Spike-Mix Dilution Buffer	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
10.6 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.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity estimates

N/A

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : 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 contact : One Color Spike-Mix
Dilution Buffer

No known significant effects or critical hazards.
No known significant effects or critical hazards.

Eye contact : One Color Spike-Mix
Dilution Buffer

No known significant effects or critical hazards.
No known significant effects or critical hazards.

SECTION 11: Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

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 contact	: One Color Spike-Mix Dilution Buffer	No specific data. No specific data.
Eye contact	: One Color Spike-Mix Dilution Buffer	No specific data. No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : Not available.

General : 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.

Reproductive toxicity : One Color Spike-Mix
Dilution Buffer
No known significant effects or critical hazards.
No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

Additional information

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

RNA Spike In Kit - Single Color

SECTION 15: Regulatory information

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

No listed substance

Label : One Color Spike-Mix Dilution Buffer Not applicable. Not applicable.

Seveso Directive

This product is not controlled under the Seveso Directive.

EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

United States : All components are active or exempted.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

RNA Spike In Kit - Single Color

SECTION 16: Other information

Procedure used to derive the classification

Classification	Justification
Not classified.	

Full text of abbreviated H statements

Not applicable.

Full text of classifications

Not applicable.

Date of issue/ Date of revision : 20/09/2024

Date of previous issue : 30/08/2021

Version : 4

Notice to reader

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.