

## Material Safety Data Sheet for Xpress.4U™ LightPace Cor.4U® Reagents

Date: 28 September 2018

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### Section 1: Product and Company identification

Product Name: Xpress.4U™ LightPace Cor.4U® Kit

Product catalog number: Nc-S-X-LP

Company: Ncardia  
47 Rue Adrienne Bolland  
6041 Gosselies  
Belgium

Phone: +49 (0)221 998818-0

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### Section 2: Composition/information on ingredients

Kit reagents are not considered to be hazardous. They are mixtures of components that do not exceed the limits specified in the EU directive 1999/45/EC.

**Neutralization buffer** (20 µL): Water (CAS #7732-18-5), changed peptides (CAS #9009-65-8)

**Liposomes** (25 µL): Water (CAS #7732-18-5), DOPE lipid (CAS #4004-05-1), DOTAP lipid (CAS #132172-61-3)

**LightPace mRNA** (30 µL): contains no substances which at their given concentration, are considered to be hazardous to health

**Dilution Buffer** (10 mL): contains no substances which at their given concentration, are considered to be hazardous to health

Components not listed here are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1999/45/EC.

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### Section 3: Hazards Identification

**Hazard classification:** No hazardous substance or mixture in accordance with Regulation (EC) No 1727/2008

**Information concerning particular hazards for humans and environments:** The product does not have to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

**Potential Acute Health Effects:** No data available.

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## Section 4: First Aid Measures

- Eyes:** In case of contact, rinse opened eye for several minutes under running water.
- Skin:** Generally the product does not irritate the skin.
- Ingestion:** If swallowed, wash out mouth with water if person is conscious. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Remove contaminated clothing. Get medical attention if symptoms persist.
- Inhalation:** If inhaled, supply fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention in case of complaints.
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## Section 5: Fire-Fighting Measures

- Flammability:** Not applicable.
- Method Used:** NA
- Extinguishing Media:** Use any suitable media for extinguishing material supporting the fire.
- Special Fire-Fighting Procedures:** Standard measures apply
- Unusual Fire & Explosion Hazards:** Not a fire or explosion hazard
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## Section 6: Accidental Release Measures

Mop up or absorb with an inert dry material and place in an appropriate waste disposal container. Use appropriate personal protective equipment. Finish cleaning by spreading decontaminant on the contaminated surface and dispose of according to local and regional authority requirements. Ventilate the area.

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## Section 7: Handling and Storage

- Handling:** Avoid contact with eyes, skin, and clothing. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.
- Storage:** For storage of up to 6 months store at -80°C.
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## Section 8: Exposure Controls and Personal Protection

- Engineering Controls:** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Personal Protection:**

The usual precautionary measures are to be adhered to when handling chemicals. Respiratory protection is not required. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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## Section 9: Physical and Chemical Properties

### Neutralization Buffer

**Physical state and appearance:** Liquid.

**Color:** Colorless.

**Odour:** Odourless.

**Change in condition:**

Melting point/Melting range: not available

Boiling point/Boiling range: not available

Flash point: not available

Self-igniting: not available

Danger of explosion: not available

Density at 20°C: not available

Solubility: Suspension in water, fully miscible in organic solvents.

pH-value at 20°C: not available

### Liposomes

**Physical state and appearance:** Liquid.

**Color:** Slightly blue or red depending on added labelling dye.

**Odour:** Odourless.

**Change in condition:**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

**Flash point:** Not applicable.

**Self-igniting:** Product is not self-igniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Density at 20°C:** approximately 1g/cm<sup>3</sup>

**Solubility:** Suspension in water, fully miscible in organic solvents.

**pH-value at 20°C:** 7,4

### LightPace mRNA

<b>Physical state and appearance:</b>	Liquid.
<b>Color:</b>	Colorless.
<b>Odour:</b>	Mild.
<b>Change in condition:</b>	
<b>Melting point/Melting range:</b>	No information available.
<b>Boiling point/Boiling range:</b>	No information available.
<b>Flash point:</b>	No information available.
<b>Self-igniting:</b>	Product is not self-igniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Density at 20°C:</b>	No information available.
<b>Solubility:</b>	Suspension in water, fully miscible in organic solvents.
<b>pH-value at 20°C:</b>	7,4

### Dilution Buffer

<b>Physical state and appearance:</b>	Liquid.
<b>Color:</b>	Colorless.
<b>Odour:</b>	No data available
<b>Change in condition:</b>	
<b>Melting point/Melting range:</b>	No information available.
<b>Boiling point/Boiling range:</b>	No information available.
<b>Flash point:</b>	No information available.
<b>Self-igniting:</b>	Product is not self-igniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Density at 20°C:</b>	No information available.
<b>Solubility:</b>	No information available.
<b>pH-value at 20°C:</b>	7,4

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## **Section 10: Stability and Reactivity**

### Neutralization Buffer

<b>Stability:</b>	No data available.
<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used according to specifications.
<b>Dangerous reactions:</b>	No dangerous reactions known.

**Dangerous decomposition products:** No dangerous decomposition products known.

**Polymerization:** Will not occur.

### Liposomes

**Stability:** The product is stable.

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Dangerous reactions:** No dangerous reactions known.

**Dangerous decomposition products:** No dangerous decomposition products known.

**Polymerization:** Will not occur.

### LightPace mRNA

**Reactivity:** No information available.

**Chemical stability:** The product is stable under normal conditions.

**Possible hazardous reactions:** Can react briskly with oxidizers.

**Conditions to be avoided:** Incompatible materials. Ignition sources. Heat

**Dangerous reactions:** No dangerous reactions known.

**Dangerous decomposition products:** Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide.

### Dilution Buffer

**Reactivity:** No information available.

**Chemical stability:** The product is stable under normal conditions.

**Possible hazardous reactions:** Hazardous reaction has not been reported.

**Conditions to be avoided:** No information available.

**Dangerous reactions:** No dangerous reactions known.

**Dangerous decomposition products:** No information available.

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## Section 11: Toxicological Information

### Neutralization Buffer:

**Acute toxicity:** No data available.

**Primary irritant effect:**

**On the skin:** No data available.

**On the eye:** No data available.

**Chronic Effects on Humans:** No data available.

**Sensitization:** No data available.

**Additional toxicological information:** The product is not subject to classification according to the calculation procedure of the “General Classification guideline for preparations of the EU” in the latest valid version. When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

#### Liposomes:

**Acute toxicity:** No acute toxicity known.

**Primary irritant effect:**

**On the skin:** No irritant effect.

**On the eye:** No irritant effect.

**Chronic Effects on Humans:** No data available.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:** The product is not subject to classification according to the calculation procedure of the “General Classification guideline for preparations of the EU” in the latest valid version. When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

#### LightPace mRNA:

**Inhalation:** Avoid breathing vapors or mists. May cause irritation of respiratory tract.

**Eye contact:** Redness. May cause slight irritation.

**Skin contact:** Prolonged contact may cause redness and irritation.  
Repeated exposure may cause skin dryness or cracking.

**Ingestion:** May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

**Information on toxicological effects:**

**Symptoms:** No information available.

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

**Skin corrosion/Irritation:** Mild

**Serious Eye Damage/Eye****Irritation:** Mild**Skin or Respiratory****Sensitization:** No information available**Germ Cell Mutagenicity:** No information available**Carcinogenicity:** No information available**Reproductive Toxicity:** No information available**Developmental Toxicity:** No information available**Teratogenicity:** No information available**Target Organs:** Kidneys, eyes, skin, respiratory system**Chronic Toxicity:** No information available**Subchronic Toxicity:** No information available**Neurological Effects:** No information available**Aspiration Hazard:** No information available**Other Adverse Effects:** No information available**Dilution Buffer:****Acute toxicity:** There is no data available indicating acute toxicity.**Primary irritant effect:****On the skin:** Conclusive but not sufficient for classification.**On the eye:** Conclusive but not sufficient for classification.**Chronic Effects on Humans:** Conclusive but not sufficient for classification.**Sensitization:** Conclusive but not sufficient for classification.

**Additional toxicological information:** The product is not subject to classification according to the calculation procedure of the “General Classification guideline for preparations of the EU” in the latest valid version. When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

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**Section 12: Ecological Information**No data available

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**Section 13: Disposal Considerations****Waste Disposal Method:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## Section 14: Transport information

**IATA:** Not restricted.

**DOT (Department of Transportation):** Not a hazardous material for DOT shipping (United States).

**ADR / RID:** No dangerous goods

**IMDG:** No dangerous goods

**IATA:** No dangerous goods

**UN Number:** None

**Hazard Class:** None

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## Section 15: Regulatory Information

**Safety, health and environmental regulations/legislation specific for the substance or mixture** No data available

**Chemical safety assessment** For this product a chemical safety assessment was not carried out

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## Section 16: Other Information

No specific notes.

The above information is believed to be correct to the best of our knowledge and information but does not purport to be all inclusive and shall be used only as a guide. This product is intended to be used by expert persons having (bio)chemical knowledge and skill, at their own discretion and risk and the distributor shall not be held liable for any damage resulting from handling or from contact with the above material.