

Material Safety Data Sheet

According to EC directive 2001/58/EC

Reviewed on 30 / 03 / 2020

1. Information about chemicals and companies

Product Information

Name : **LIIIIF™ COVID-19 Multi Real-time RT-PCR Kit**

Intended use : Sputum, bronchoalveolar lavage fluid (BAL) in patients with suspected respiratory infections, or nasopharyngeal swab (NS) and oropharyngeal swab (OS) collected simultaneously in the upper respiratory tract In vitro diagnostic medical device that helps to diagnose new coronavirus infection (COVID-19) by qualitatively detecting genes (RdRP gene, E gene and N gene) of new coronavirus (2019-nCoV) from the sample

Usage restrictions : Do not use for purposes other than diagnostic reagents.

Manufacturer : **INtRON Biotechnology, Inc.**

Tel : 031-739-5678

Fax : 031-739-5072

Responsible 031-739-5066

Emergency 031-739-5071

2. Name and content of ingredients

- Contents

- 2X RT-PCR mix : 1100 uL x 1 tube
- COVID Multi detection dolution : 550 uL x 1tube
- Positive Control : 150uL x 1tube

- 2X RT-PCR mix

- Appearance: Colorless liquid
- Labeling: 2X RT-PCR mix
- Ingredients: 100% RealMOD Probe W2 2X qRT-PCR mix

- COVID Multi detection dolution

- Appearance: Light pink liquid
- Labeling: COVID Multi detection solution
- Ingredients: <0.005% RdRP primers, <0.005% RdRP probe, <0.005% E primer, <0.005% E Probe, <0.005% N Primer, <0.005% N Probe, <0.005% RNase P primers, <0.005% RNase P Probe, Water, sterile, Nuclease free (99% <)
- Various primers/probes (Genotech): Cas. No. : Not applicable- ingredient
 - dA(bz) amidite : Cas. No. : 98796-53-3
 - dC(bz) amidite : Cas. No. : 110522-84-4
 - dG(bz) amidite : Cas. No. : 93183-15-4
 - dT(bz) amidite : Cas. No. : 98796-51-5

- Positive control

- Appearance: Colorless liquid
- Labelling : N/A
- Ingredients : < 0.001% Non-infectious plasmid DNA(microbial) containing E, RdRP, N partial primer/probe binding sequences

- < Recombinant clone >

- RdRP Positive DNA (Bionix) : Cas. No. : N/A
- E Positive DNA (Bionix) : Cas. No. : N/A
- N Positive DNA (Bionix) : Cas. No. : N/A
- RNaseP Standard DNA (**INtRON Biotechnology, Inc.**) : Cas. No. : N/A

- DNase / RNase free Water

- Appearance: Colorless liquid
- Labelling : N/A

3. Risk hazard

Human or environmental hazard recommendations

This product is classified as no risk according to European Regulations 67/548/EC and 1999/45/EC.

Possible health effects

Eyes: May cause eye irritation.

Skin: Contact may be irritating to the skin.

Inhalation: No toxicity expected from inhalation

4. First aid measures

inhale

If side effects occur, move to uncontaminated area. If not breathing, give artificial respiration. Get medical attention immediately.

Skin contact

Take off contaminated clothing and shoes and immediately wash with soap and water for at least 15 minutes. Seek medical attention if necessary. Dry and wash contaminated clothing and shoes before reuse.

Eye contact

Wash your eyes for at least 15 minutes with plenty of water. Seek medical attention immediately.

Intake

If swallowed in large quantities, seek medical attention.

5. Fire-fighting measures

peptic

Particulate powder extinguishing agent, carbon dioxide, water, general foam.

Large fire

Use common fire extinguishing agents or sprinkle with fine water spray.

Fire fighting

Move containers from fire area if you can do it without risk. Do not scatter spilled material with high-pressure water streams. Build an embankment for further processing. Use an extinguishing agent adapted to the surrounding fire. Avoid inhalation of material itself or combustion products. Keep in the wind and avoid the lowlands.

6. What to do in case of a leak

Occupational spillage: Stop leak if worker can do so without risk.

Small spills: Absorb with sand or other non-combustible material. Collect spilled material in suitable container. Block access by others, isolate dangerous areas, and deny entry.

7. Handling and storage

Storage: Store and handle in accordance with current laws and regulations. Store in a closed container. Store in a cool, dry place. Store in a well-ventilated area. Separate from prohibited substances.

8. Exposure prevention and personal protection

Wear appropriately approved gas mask, chemical-durable gloves, goggles and other protective clothing.

Use safety shower and eye protection solution

Use chemical hood only.

Avoid contact with eyes, skin and clothing.

Breathing protection: Not required.

Gout: general ventilation

Protective gloves: Protective gloves used in general laboratories.

Eye protection: Wear regular eye protection goggles.

9. Physical and chemical properties

2X RT-PCR Mix

Physical state: liquid / suspension, frozen under storage temperature

Solubility in water: recording.

COVID Multi detection solution

Physical state: liquid / suspension, frozen under storage temperature

Solubility in water: recording.

Positive control

Physical state: liquid, frozen under storage temperature

Solubility in water: recording.

DNase/RNase free water

Physical state: liquid, frozen under storage temperature

10. Stability and reactivity

Stability: Stable.

Reactivity: Stable in frozen state.

Conditions to avoid: Strong oxidizing agents

Decomposition products: carbon monoxide, carbon dioxide

Polymerization reaction: No polymerization.

11. Toxicological information

No information.

12. Environmental impact

Additional environmental information: No information.

13. Notes on disposal

Products: Disposal laws according to each region should be followed. Dispose of it through a chemical disposal company.

14. Transport information

Maintain and store the product storage temperature stated on the product label and manual.

15. Legal Regulations

This product is classified as no risk according to European Regulations 67/548/EC and 1999/45/EC.

16. Other notes

If the product is used by the consumer for any purpose other than the intended purpose, the user is not responsible for the result. Consumers are responsible for evaluating that all regulations regarding human protection and the environment are observed when using and storing products.

Source of data

Water, sterile, Nuclease free(BioSolution), Real-Time RT-PCR mixture (iNtRON Biotechnology, Inc.), Primer & Probes (Genotech)의 MSDS