



MSE GROUP

Simulation & Diagnostics in Healthcare

LifeCase24 COVID-19

Rapid and Accurate Molecular Testing
of SARS-CoV-2

Presented by the MSE Group
Partners of EMG



LifeCase 24 Covid-19 - Overview

- A portable and comprehensive solution for rapid COVID-19 testing



LifeCase 24

- Quick to deploy
- Easy to use
- Complete functionality
- Mobile

Case 1: RNA Extraction Unit
Case 2: DNA Amplification Unit

Reagents required for use with the LifeCase24:

EMG RNA Extraction Kit

Extraction of RNA from biological samples

EMG Detection Kit for SARS-CoV-2

SmartAmp® isothermal DNA amplification

- Fast: RNA Extraction < 20 minutes, DNA amplification < 40 minutes
- Accurate
- Reliable
- Can be used with or without the LifeCase24

LifeCase 24 Covid-19 - Overview

- Portable solution designed specifically for use with the following clinical settings in mind



- Moderate and High Complexity Laboratories
- EMS and Emergency Departments (Triage)
- Military Field Hospitals
- Departments of Public Health
- Quarantine
- Transportation Hubs

- **Faster access to testing in pre-hospital settings**
- **Fast and flexible volume testing in laboratories**

LifeCase 24 Covid-19

- Watch the mobile mini laboratory in action



[Watch LifeCase on youtube - Click Here...](#)

LifeCase 24 - Contents



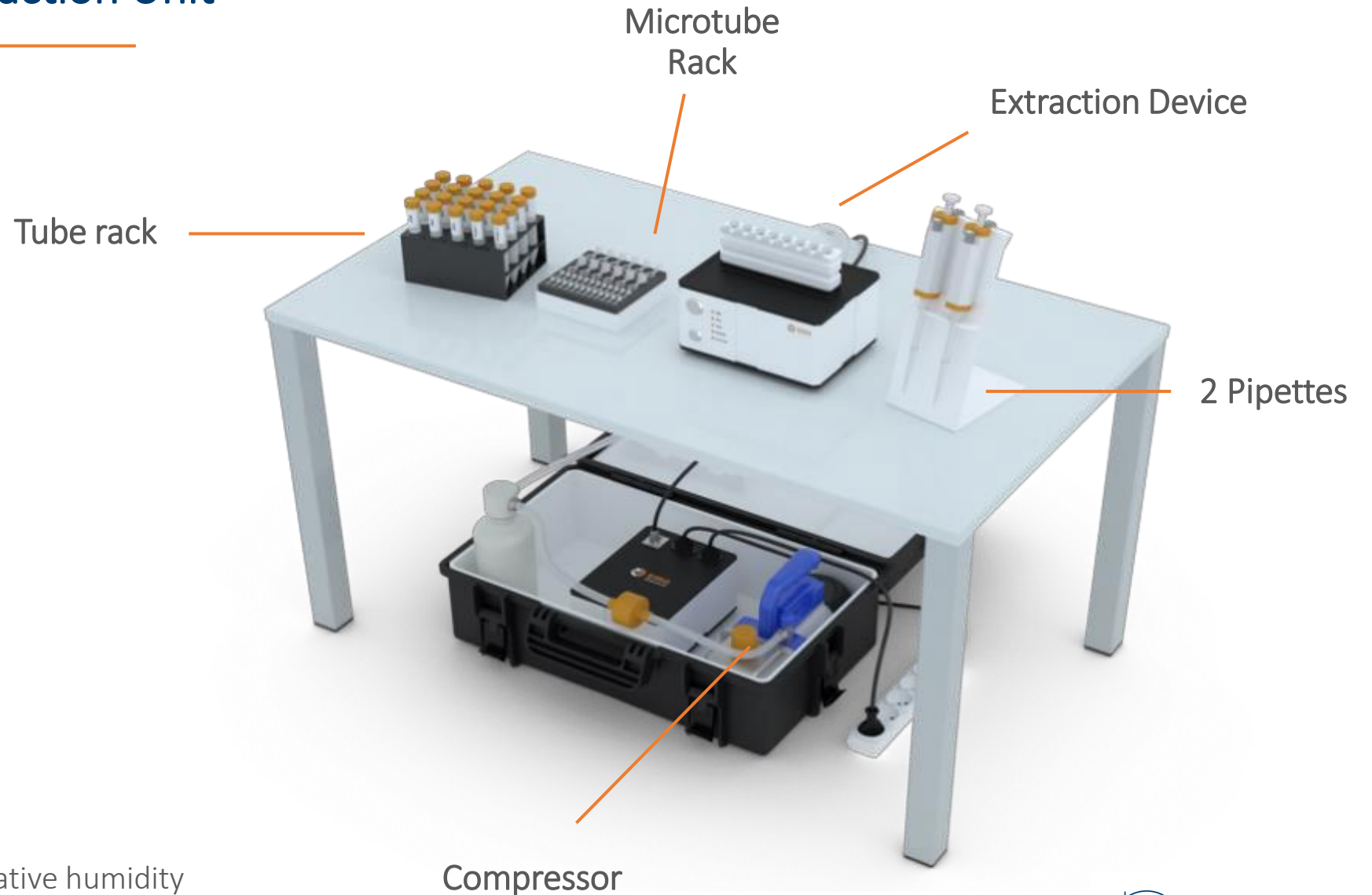
Contents include:

- Case 1 : RNA Extraction Device
- Case 2: Isothermal Amplifier for 24 samples with Laptop
- 2x pipettes (1000 μ l and 10 μ l)
- Microtube racks

Storage:

LifeCase24 has no expiry date when stored between +2°C and +35° C (non-condensing)

LifeCase 24 – The Extraction Unit



Case 1

Operating conditions:

Temperature +15 °C to +35 °C Relative humidity
30% to 85% (avoid condensation)

LifeCase 24 – The Amplification Unit

Laptop w/touchscreen
(folded backwards)

Amplifier

Power adapter

Microtube rack

Case 2

Operating conditions:

Temperature +15 °C to +35 °C Relative humidity
30% to 85% (avoid condensation)



EMG RNA Extraction Kit

Reagents designed for rapid purification of RNA from patient nasopharyngeal / oropharyngeal smears and sputum samples.

- Silica filter columns for solid-phase extraction of RNA
- Solution 1 : SSB - Swab Suspension Buffer for the lysis of cells and virus particles
- Solution 2 : WS1 - Washing Solution 1
- Solution 3: WS2 - Washing Solution 2
- Solution 4: EB - Elution Buffer

Expiry Date:

12 months from production date. Do not use the expired Extraction Kit.

Storage:

Store between +2° and +30° C for 12 months

Avoid direct sunlight

EMG Detection Kit for SARS-CoV-2 Overview

Reagents designed for the detection of SARS-CoV-2 RNA using reverse transcription and SmartAmp[®] isothermal DNA amplification.

- **Tube 1: Reagent P** - SmartAmp[®] Primers for initiation of amplification and Eprobes[®] for real-time monitoring of amplification
- **Tube 2: Reagent E** - Enzymes for reverse transcription and DNA amplification
- **Tube 3: Positive Control** – Synthetic RNA fragments of SARS-CoV-2
- **Tube 4: Negative Control** - Nuclease-free distilled water

Expiry Date:

12 months from production date. Do not use an expired Kit.

Storage:

Store unopened kits at -80 °C. Once thawed, reagents should be kept at 4°C and must be used within a week. Avoid direct light.

EMG Detection Kit for SARS-CoV-2 Performance

SmartAmp[®] isothermal DNA amplification technology

- **Fast** Less than **40 minutes**
- **High Sensitivity** **Limit of detection:** 100 copies / ml
- **High Specificity** Highly specific target sequence
Asymmetric primers to minimize unspecific background products
Demonstrated 100% diagnostic specificity

Eprobe[®] technology

- Highly Specific sequence-based real time monitoring of amplification

EMG's SmartAmp SARS-CoV-2 RNA test aligns with the *Laboratory Testing WHO Interim Guidance* published 19th March 2020

LifeCase 24 Covid-19 Clinical Test Results

France - Institut Pasteur, Paris have just published data from trials evaluating the analytical sensitivity of the EMG SmartAmp SARS-CoV-2 test and the LifeCase portable laboratory, and stated, “The National Reference Centre for Respiratory Infections Viruses considers that the SmartAmp Covid-19 Kit (including LifeCase) has an acceptable detection sensitivity of SARS-CoV-2”. [View Test Results...](#)

Russia – The State Research Center of Virology and Biotechnology VECTOR (WHO reference laboratory) and test validation showed that 800 samples tested 100% sensitivity and specificity results were achieved as well as cross-reactivity test was successfully done.

Austria – The Austrian Agency for Health and Food Safety (AGES) confirmed that the EMG SmartAmp SARS-CoV-2 RNA test is the most time saving and accurate Covid-19 detection solution currently available.

Japan – The National Institute of Infectious Diseases, part of the Japanese Government, Ministry of Health, Labour and Welfare has announced the approval of the EMG SmartAmp SARS-CoV-2 test. The use of these kits will be covered under the Japanese insurance system with related costs covered by Social Insurance. [Read report...](#)

Trials of the EMG Detection Kit for SARS-CoV-2 are currently taking place at the **University of Southampton, UK, at Charité (Germany), and in France, Italy and Switzerland.**

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