VIASURE *MULTIPLEX*

C. pneumoniae, M. pneumoniae & L. pneumophila Real Time PCR Detection Kit

Pathogen and product description

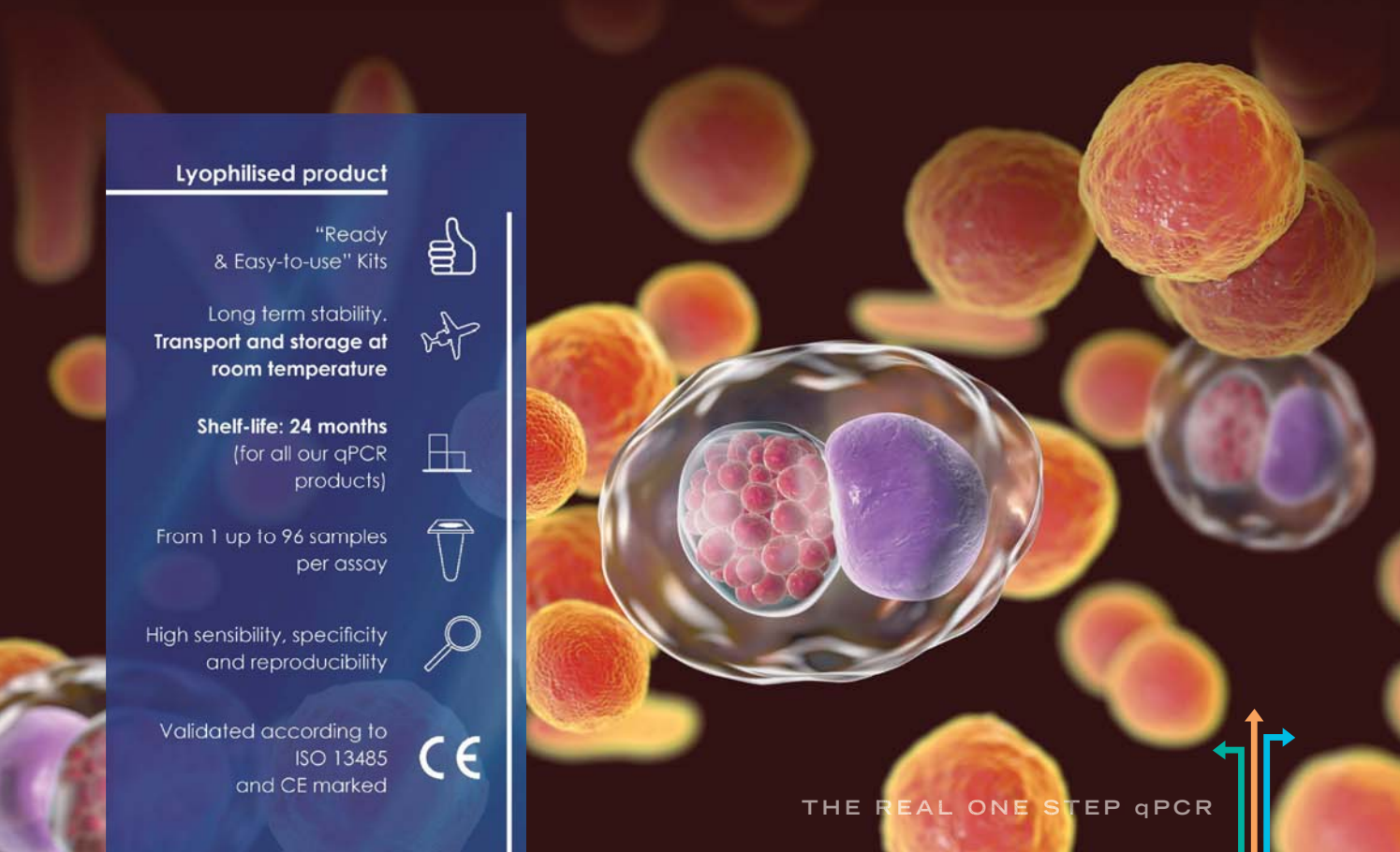
Pneumonia is a major respiratory disease with a high prevalence in the general population and variable severity. Pneumonia usually causes symptoms for 3-4 weeks, and daily activities may be impaired for a further 3 weks on average. *Chlamydophila pneumoniae, Mycoplasma pneumoniae* and *Legionella pneumophila* are some of the causes of community-acquired pneumonia.

The most common form of transmission of *Legionella* is inhalation of contaminated arosols produced in conjunction with water sprays. Infection can also occur by aspiration of contaminated water or ice, particularly in susceptible hospital patients. The disease has an incubation period of 2 to 10 days. Untreated disease usually worsens during the first week.

Chlamydophila pneumoniae cause illness by damaging the lining of the respiratory tract (throat, windpipe and lungs). Seroepidemioloical studies show that 50 to 75% of adults have antibodies against *Chlamydophila pneumoniae*. Most people are infected and reinfected throughout their life. However, not everyone who is exposed develops pneumonia. *Chlamydophila pneumoniae* has been associated with the establishment of ateromatous disease and heart attacks.

Mycoplasma pneumoniae infection is a mild illness that is common in young adults and school-aged children. Outbreaks of *Mycoplasma pneumoniae* occur mostly in crowed environments, when small droplets of water that contain the bacteria get into the air by coughing and sneezing while in close contact with others. The incubation period is usually between 1 to 4 weeks.

VIASURE *C. pneumoniae, M. pneumoniae & L. pneumophila* Real Time PCR detection Kit is designed for the diagnosis of *Chlamydophila pneumoniae, Mycoplasma pneumoniae* and *Legionella pneumophila* in clinical samples. After DNA isolation, the identification of *Chlamydophila pneumoniae*, *Mycoplasma pneumoniae* and/or *Legionella pneumophila* is performed by the amplification of a conserved region of the *argR* gene for *Chlamydophila pneumoniae, CARDS* gene for *Mycoplasma pneumoniae* and *mip* gene for *Legionella pneumophila,* using specific primers and a fluorescent-labelled probe.



Analytical sensitivity

VIASURE *C. pneumoniae, M. pneumoniae & L. pneumophila* Real Time PCR Detection Kit has a detection limit of ≥ 10 DNA copies per reaction for *Chlamydophila pneumoniae, Mycoplasma pneumoniae* and *Legionella pneumophila* (figures 1, 2 and 3).

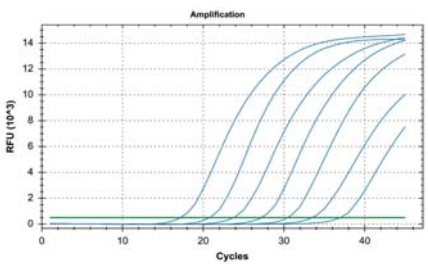


Figure 1. Dilution series of Legionella pneumophila (10^7–10^1 copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (FAM channel).

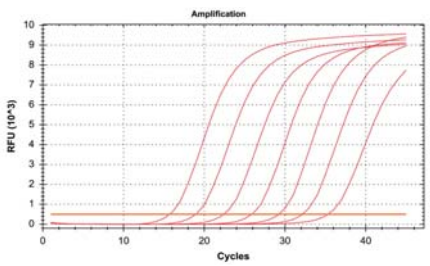


Figure 2. Dilution series of Chlamydophila pneumoniae (10^7–10^1 copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (ROX channel).

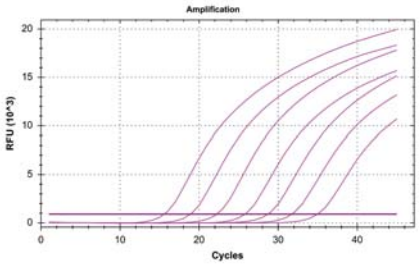


Figure 3. Dilution series of Mycoplasma pneumoniae (10^7–10^1 copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (Cy5 channel).

Components

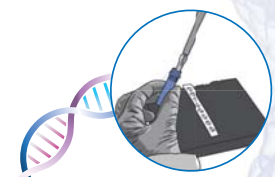
Reagent/Material	Description	Colour	Amount
***C. pneumoniae, M. pneumoniae & L. pneumophila* 8-well strips**	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	White	6/12 x 8-well strip
Rehydration Buffer	Solution to reconstitute the stabilized product	Blue	1 vial x 1,8 mL
***C. pneumoniae, M. pneumoniae & L. pneumophila* Positive Control**	Non-infectious synthetic lyophilized cDNA	Red	1 vial
Negative Control	Non template control	Violet	1 vial x 1 mL
Water RNAse/DNAse free	Water RNAse/DNAse free	White	1 vial x 1 mL
Tear-off 8-cap strips	Optical caps for sealing wells during thermal cycling	Transparent	6/12 x 8-cap strip

Kit References

Reference	Description
VS-CML106L	VIASURE *C. pneumoniae, M. pneumoniae & L. pneumophila* Real Time PCR Detection Kit 6 strips, Low
VS-CML106H	VIASURE *C. pneumoniae, M. pneumoniae & L. pneumophila* Real Time PCR Detection Kit 6 strips, High
VS-CML112L	VIASURE *C. pneumoniae, M. pneumoniae & L. pneumophila* Real Time PCR Detection Kit 12 strips, Low
VS-CML112H	VIASURE *C. pneumoniae, M. pneumoniae & L. pneumophila* Real Time PCR Detection Kit 12 strips, High
VS-CML113L	VIASURE *C. pneumoniae, M. pneumoniae & L. pneumophila* Real Time PCR Detection Kit 96-well plate, Low
VS-CML113H	VIASURE *C. pneumoniae, M. pneumoniae & L. pneumophila* Real Time PCR Detection Kit 96-well plate, High

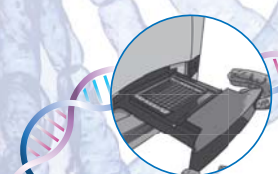
Work Flow

One-step rehydration of wells and add your extracted DNA

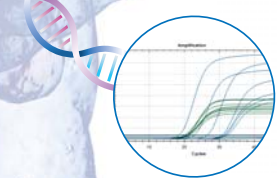


STEP 1
Add 15 µl of rehydration buffer into each well

STEP 2
Add 5 µl of DNA sample / positive control / negative control



STEP 3
Load the strips into the thermocycler and run the specified protocol



STEP 4
Interpretate results

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