

## magnetiQ

### Universal Pathogen DNA/RNA Extraction kit

**A universal protocol for all pathogens from any matrix.** The Galenvs magnetiQ Universal Pathogen DNA/RNA Extraction Kit is designed to simplify the extraction of pathogenic DNA and RNA from a variety of sample types – *in only 4 steps, without need for heating, centrifugation, vortex, enzymatic/mechanical digestion*. Using buffers and magnetic beads that were optimized to capture DNA and RNA, users can obtain a purified product in under 25 minutes.

Magnetic bead-based extraction and purification of pathogenic DNA and RNA from:

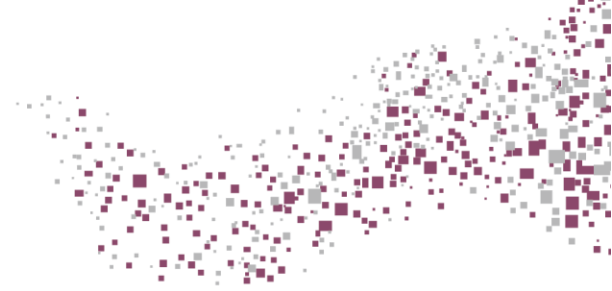
- Swab solutions (viral transport medium – VTM, and inactivation transport medium – ITM)
- Serum/plasma
- Blood
- Stool
- Saliva samples
- Cell-free body fluids
- Complex matrices such as sputum or stool
- Exudate
- Cerebrospinal Fluid (CSF)

#### Applications

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The Universal Pathogen DNA/RNA Extraction Kit provides a safe, simple and reproducible method for obtaining purified nucleic acid products. These can be used for downstream applications such as:

- Detection of viral and bacterial infection
- Pathogen population profiling
- Quantification via PCR, RT-qPCR and digital PCR
- Next Generation Sequencing (NGS)
- Genomic DNA library preparation
- Copy number variation (CNV)



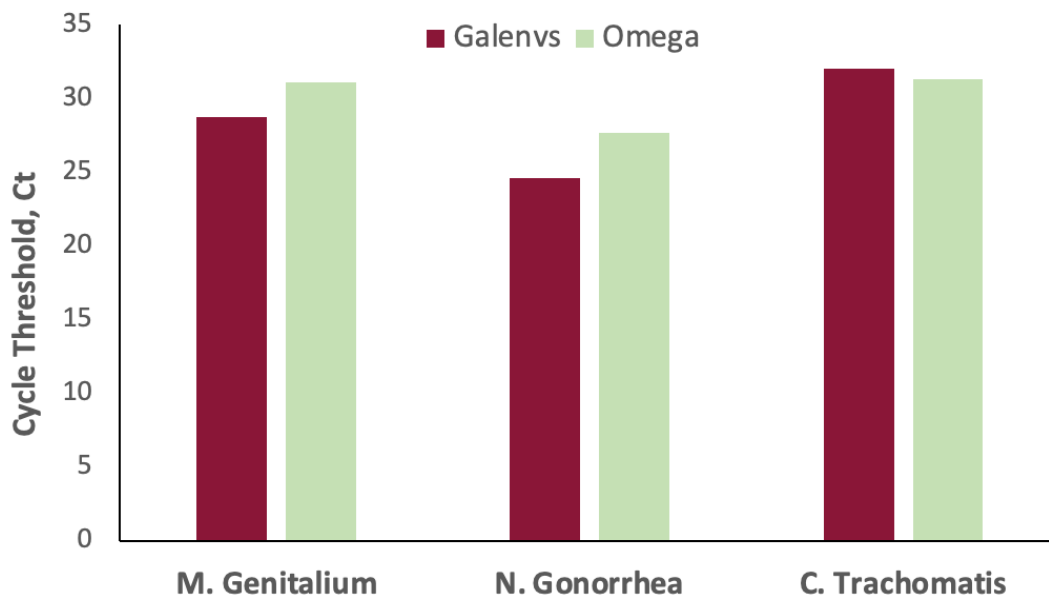
## Performance

Galenvs magnetiQ Universal Pathogen DNA/RNA Kit is benchmarked against Industry-leading kits:

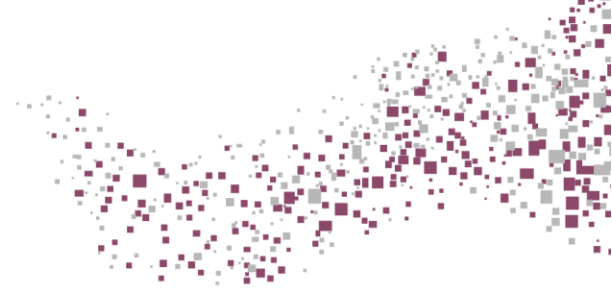
- QIAamp UCP Pathogen Mini Kits by Qiagen (Qiagen)
- EZNA® Universal Pathogen Kit by Omega Bio-Tek (Omega)

### Sexually Transmitted Diseases (STDs) – Exudate, Swab, Urine

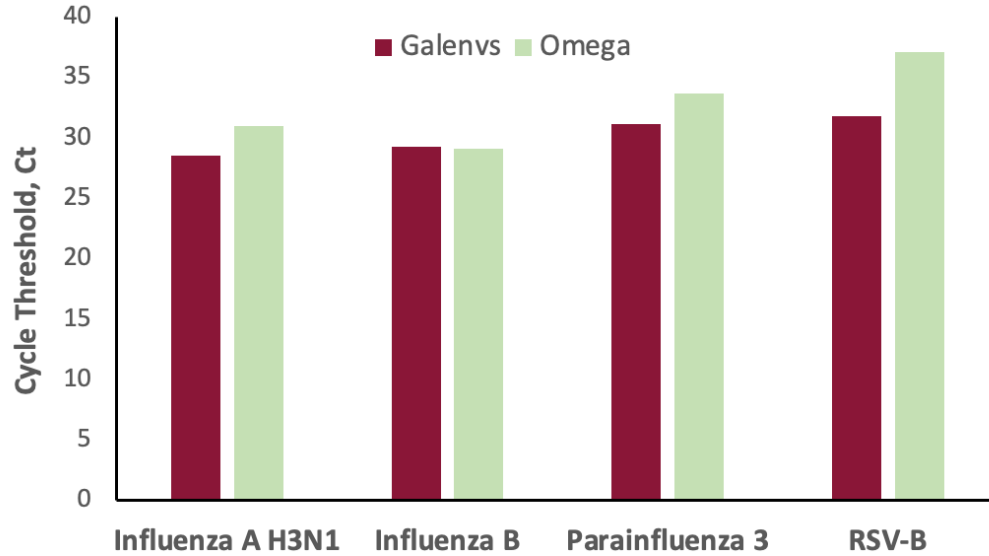
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**Fig 1** - qPCR results for Mycoplasma genitalium, Neisseria gonorrhoeae, Chlamydia trachomatis extracted from Exudate samples using Galenvs magnetiQ Universal Pathogen Kit and Omega EZNA® Universal Pathogen Kit

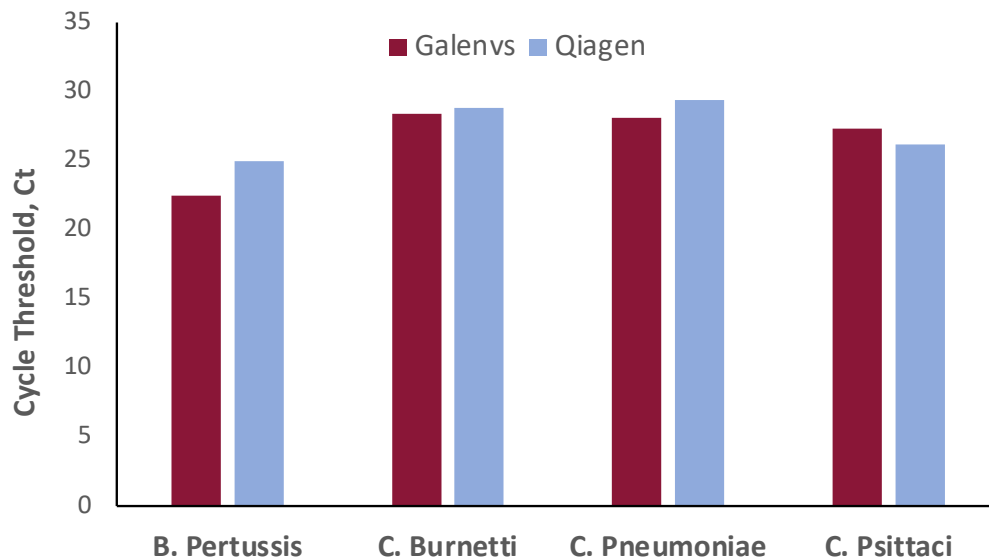


**Respiratory (Viral) – Swab**

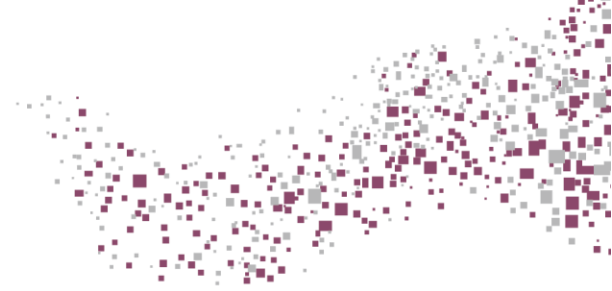


**Fig 2 – RT-qPCR results for Influenza A H3N1, Influenza B, Parainfluenza 3, Respiratory syncytial virus B (RSV-B) extracted from swab samples using Galenvs magnetiQ Universal Pathogen Kit and Omega EZNA® Universal Pathogen Kit**

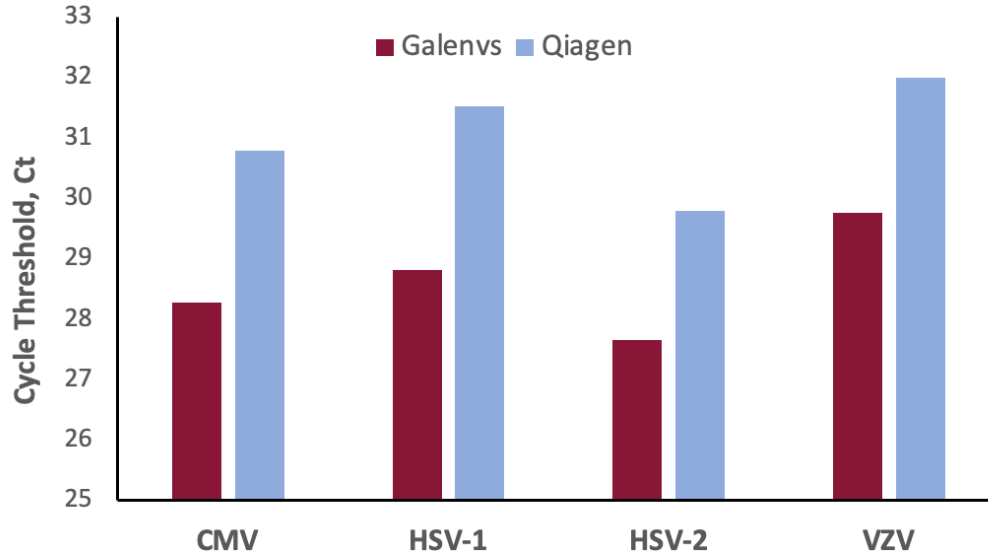
**Respiratory (Bacterial) – Swab**



**Fig 3 - qPCR results for Bordetella pertussis , Coxiella burnetiid, Chlamyophila pneumoniae and Chlamydia psittaci extracted from swab samples using Galenvs magnetiQ Universal Pathogen Kit and Qiagen QIAamp UCP Pathogen Mini Kit**

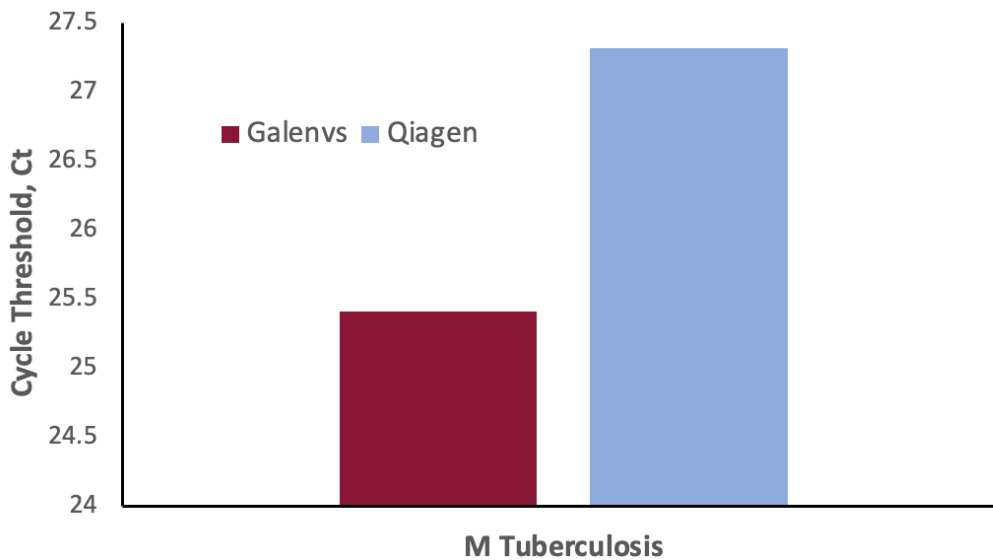


**Torch – Plasma, CSF, Exudate**

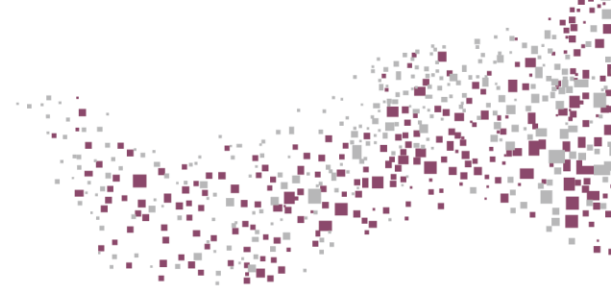


**Fig 4** - qPCR results for Cytomegalovirus, Herpes simplex virus (type 1 and 2), Varicella-zoster virus extracted from cerebrospinal fluid (CSF) samples using Galenvs magnetiQ Universal Pathogen Kit and Qiagen QIAamp UCP Pathogen Mini Kit

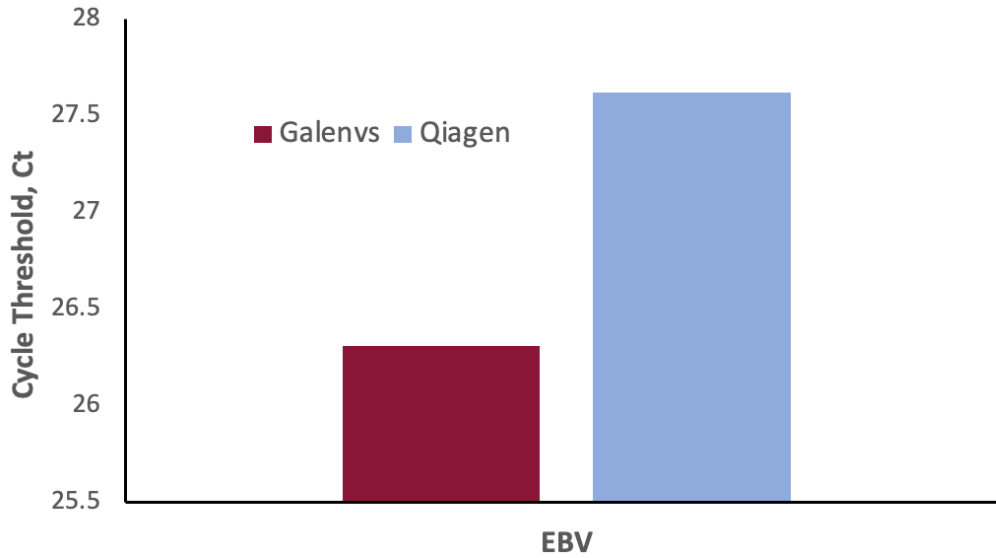
**Mycobacterial – Sputum**



**Fig 5** - qPCR result for Mycobacterium tuberculosis extracted from sputum samples using Galenvs magnetiQ Universal Pathogen Kit and Qiagen QIAamp UCP Pathogen Mini Kit

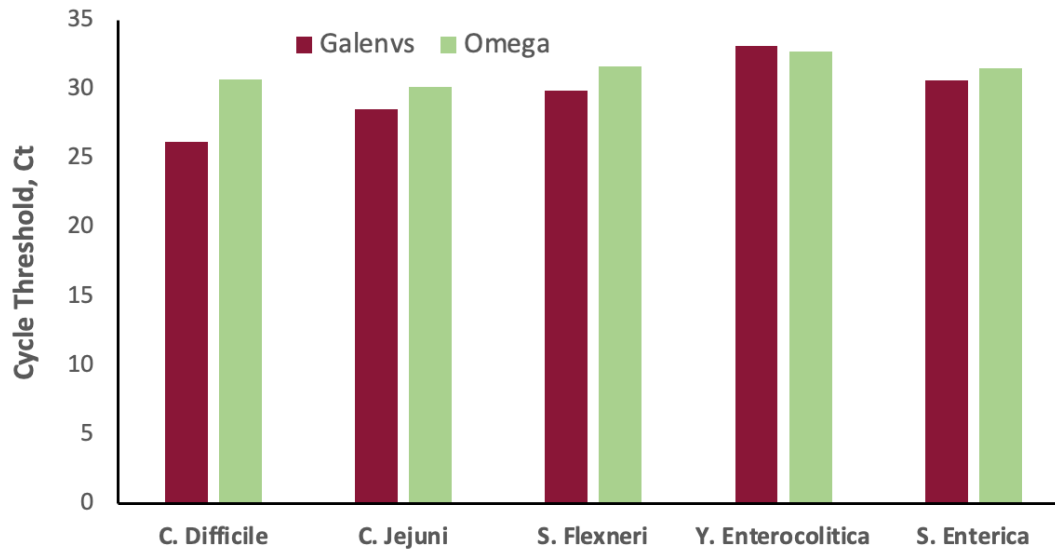


**Infectious Mononucleosis – Plasma, Blood**

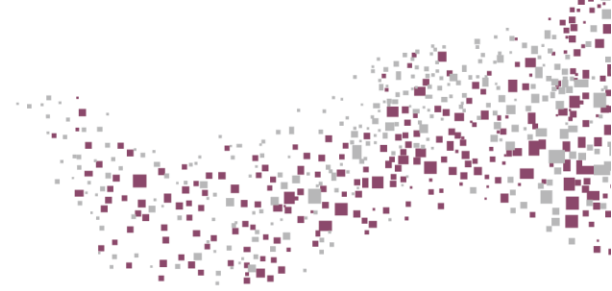


**Fig 6** - qPCR result for Epstein-Barr virus (human herpesvirus 4) extracted from plasma samples using Galenvs magnetiQ Universal Pathogen Kit and Qiagen QIAamp UCP Pathogen Mini Kit

**Gastrointestinal Infection – Stool**



**Fig 7** - qPCR results for Clostridioides difficile, Campylobacter jejuni, Shigella flexneri, Yersinia enterocolitica, and Salmonella enterica extracted from Swab samples using Galenvs magnetiQ Universal Pathogen Kit and Omega EZNA® Universal Pathogen Kit



## Results

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The Galenvs magnetiQ Universal Pathogen DNA/RNA Kit provides a **single and simple protocol** for the extraction of DNA/RNA from a wide variety of pathogens in different matrices without the need for enzymatic/mechanical digestion, centrifugation steps, or separate collection tubes. The kit performance shows consistently higher extraction yields (*ie. lower qPCR cycle threshold values, Ct*) when compared to competitors across many pathogen and matrices. Sample processing is completed in less than 25 minutes.

### Specifications

Sample Type	Swab, Saliva, Serum/Plasma, Blood, Sputum, Stool and Various transport media such as Universal Viral Transport medium (VTM), Inactivation Transport Medium (ITM), Exudate, CSF
Quantity	50 or 100 assays / Prefilled plates (16 preps)
Elution Volume	50-100µl Manual / 90µl Prefilled plates
Processing Mode	Automated – Manual
Binding Technology	Magnetic beads
Binding Capacity	Scalable
Components	(i) Pathogen Lysis/Binding Buffer (ii) Binding Magnetic Nanoparticles (iii) Wash Buffer #1 (iv) Wash Buffer #2 (v) Elution Buffer
Storage	Room temperature

### Product Codes

50 preps	UP0050
200 Preps	UP0200
Prefilled plates 16-well	UP0016
Sampler (5 preps)	UP0005

