



Referral of specimens for confirmation of Legionnaires' disease

Primary diagnosis of Legionnaires' disease needs confirmation to exclude false positives and typing data should be obtained to assist identification of the possible environmental source.

The Respiratory and Vaccine Preventable Bacteria Reference Unit (RVPBRU) provides a confirmatory and typing service for *Legionella*.

For patients with a positive *Legionella* urine antigen, please send the urine plus a lower respiratory tract (LRT) specimen. Laboratories performing *Legionella pneumophila* or *Legionella spp.* PCR should also forward PCR positive respiratory specimens (regardless of urine result). Confirmation of diagnosis and typing are offered free of charge.

Primary diagnostic testing is not routinely offered. In exceptional cases or suspected outbreaks, please contact RVPBRU to discuss before sending samples.

Submit samples to RVPBRU together with Request Form [R1](#).

For further information refer to [BRD user manual](#).

SPECIMENS*	Sampling time	PHE receiving lab	Tests performed
CLINICAL SAMPLES			
Urine (at least 1 mL tested Legionella antigen positive or equivocal by local hospital)	Within 2 days of admission optimal (up to 10 days recommended)	RVPBRU	Detection of Legionella urinary antigen using Bartels EIA and BINAX EIA
LRT specimen (eg sputum or BAL)	Within 2 days of admission optimal (up to 10 days recommended)	RVPBRU	In-house real time PCR, culture and typing
Optimal combination: where possible, simultaneously refer paired urine and LRT specimen			
Post-mortem LRT sample (eg lung tissue)	ASAP after death	RVPBRU	In-house real time PCR, culture and typing
Presumptive <i>Legionella spp.</i> isolates Dense suspension in sterile distilled H ₂ O (contained in 2mL tube with "O-ring") or pure culture (subbed on BCYE slope) NOTE: Agar plates are NOT suitable "primary containers" for shipping bacterial pathogens	ASAP after isolation	RVPBRU	Confirmation of identification and typing
Legionella Serology is NOT routinely performed by RVPBRU			
ENVIRONMENTAL SAMPLES			
(LD cluster/outbreak investigation <u>ONLY</u> following agreement with HPT and regional FWE Labs)			
Water (1L) Swab (+ transport medium)	ASAP post-infection. Prior to remedial action	FWE regional Labs	Culture (isolates referred to RVPBRU for typing)
Water concentrate Swab (+ transport medium)	ASAP post-infection. Preferably prior to remedial action	FWE Porton via FWE regional Labs	Real-time PCR (Positive samples referred to RVPBRU for direct typing)

* Shipment of Infectious Substances (Cat. A, UN2814 or UN2900) and Biological Specimens (Cat. B, UN3373) must comply with relevant [guidelines](#).

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