

Health Protection Agency  
Expertise in External Quality Assessment

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# Water EQA The Legionella Isolation Scheme

# The Health Protection Agency's EQA Scheme for the isolation of *Legionella* spp. from environmental waters provides simulated samples that allow participating laboratories to challenge their procedures for the detection, enumeration and identification of *Legionella* spp. Four distributions of three samples are dispatched per year to all participants.



*Legionella* spp. are fastidious organisms and the isolation and enumeration procedures are intricate, requiring multiple steps including concentration of the bacteria, resuspension, selective pre-treatments and the use of complex selective plating media. Methods used by many laboratories are based on ISO 11731:1998 (Water Quality – Detection and enumeration of *Legionella*).

## Sample Format

The samples are LENTICULE discs that consist of control-dried discs containing mixtures of biologically active bacteria in a water-soluble matrix. The stability and activity of the viable micro-organisms can be preserved over long periods of time. LENTICULE discs have the advantages of suitability for batch production and ease of distribution, prolonged shelf-life and can be used with liquid and solid media, dissolving within 10 minutes leaving no residue. The samples require storage at  $-20^{\circ}\text{C}\pm 5^{\circ}\text{C}$  on receipt.

## Schedule

Four distributions of three samples are dispatched per year. The samples may be tested at the convenience of the participant, provided results are returned by the stipulated date. A preliminary report

informing participants of the intended results is issued immediately after results have been received. A more comprehensive report that provides an analysis of participants' results, guidance on methods and general advice is issued three weeks after results have been received.

## Sample Examination

Easy-to-follow instruction sheets are provided with every distribution. Participants reconstitute the LENTICULE disc in 1 litre of either Page's solution or 1:40 Ringers solution, then examine the sample according to their routine methods for Legionella isolation, enumeration and identification.

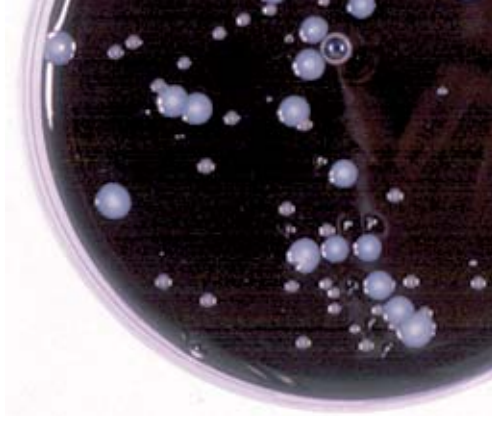
## Legionella Isolates

Identifications of *Legionella* isolates included in the EQA samples are confirmed by the Atypical Pneumonia Unit at the Health Protection Agency's Centre for Infections.

## Performance Assessment

A scoring system facilitates the assessment of participants' performance with each distribution of samples and over a number of distributions. Participants who appear to be experiencing problems with their examinations are offered additional help and advice.





### Expert Advice

Health Protection Agency staff include a number of renowned experts on the epidemiology of *Legionella* spp., the role of *Legionella* in infectious disease and *Legionella* in the environment. Those experts support the scheme and can be called upon for advice as part of the EQA service.

### Safety

*Legionella* species are microbiological pathogens of Hazard Group 2 as classified by the Advisory Committee on Dangerous Pathogens. Although Hazard Group 2 organisms can, in general, be handled on the open bench, patients become infected with *Legionella* species by inhaling an aerosol generated from water containing the organism. Participants must assure themselves that their laboratory facilities and expertise are adequate to ensure the safe handling of these organisms.

### Research and Development

Research into technical aspects of the Scheme and development of the analysis and presentation of results is a continuing process.

### External Quality Assessment

Quality assessment is an essential element of good laboratory practice; a scheme that is organised externally enables laboratories to assess their performance against that of other participants. Health Protection Agency EQA Schemes provide stable samples of appropriate organisms within agreed schedules and with comprehensive, confidential follow-up. Participants are invited to regular user group meetings. Each Scheme has been developed with Health Protection Agency microbiological expertise. As well as The Legionella Isolation Scheme, the Health Protection Agency offers four other Water EQA Schemes, and a range of Food EQA Schemes.

### Registration

To register for The Legionella Isolation Scheme, please complete the attached registration form, first reading the Conditions of Participation. Completed forms should be returned to the Organisers.



LENTICULE is a trademark of the Health Protection Agency

## Conditions of Participation

1. Samples distributed as part of the Scheme may contain microbiological pathogens of Hazard Groups 1 and 2 as classified by the Advisory Committee on Dangerous Pathogens (The Approved List of biological agents, 2004, HMSO, Norwich). Participants must ensure that their laboratory facilities and expertise are adequate to ensure the safe handling of these organisms during their participation in the Scheme.
2. Membership of the Scheme starts on 1 April each year and continues until 31 March in the next year. If a participant joins part way through the annual period, a reduced fee is payable reflecting the number of samples to be supplied for that part year. A participant may withdraw from the Scheme at any time on giving 30 days' written notice, but no refund will be given of fees paid.
3. The Health Protection Agency ("Agency") reserves the right to decline renewal of participant's membership at the end of each annual period or to change the annual fee, but, in either case, will give the participant at least 2 months' notice of its intention to do so. Unless such notice is given the contract shall be automatically renewed.
4. Membership of a Scheme is offered with the understanding that participants will process quality assessment samples in the same way as their routine samples. This is necessary to achieve the primary purpose of the Scheme, which is to allow participants an insight into their levels of performance in routine work.
5. Each laboratory will be registered under a unique code number. This code number and the assessment of individual performance is confidential to the participant and will not be released by the Agency to third parties other than under any agreed and defined mechanism for providing counselling to "poor performers". Participants are free to release information concerning their own individual performance to whoever they wish. The fact of actual participation in the Scheme is not regarded as confidential and may be revealed by the Agency to those with legitimate reasons for knowing.
6. All reports, and the data they contain, issued by the Quality Assessment Scheme are Copyright and may not be published in any form without permission of the Agency.
7. In the event of a participant failing to pay the membership fee by the due date the Agency reserves the right to terminate, without notice, the membership of that participant without prejudice to any claim for payment for samples already provided.
8. The Agency shall not be liable in any circumstances for indirect or consequential loss howsoever caused, including, without limitation, loss of anticipated profits, goodwill, reputation, business receipts or contracts, or losses or expenses resulting from third party claims.
9. Participants in the Scheme have entire responsibility for all samples distributed to them under the Scheme and all activities carried out by them or any third party in relation to the samples from the time of delivery of the samples.
10. The Agency warrants that all work carried out by it in relation to the Scheme will be carried out using all reasonable care and skill. All conditions, terms and warranties implied by common law, statute or otherwise are, to the extent permitted by law, hereby excluded.
11. The liability of the Agency to the participant in any annual period resulting from or in connection with the provision of the Scheme by the Agency to the participant shall under no circumstances exceed the amount of the annual fee paid by the participant in respect of that annual period.
12. These conditions shall be governed by, and construed in accordance with English law and the Agency and the participant submit to the exclusive jurisdiction of the English Courts.

# Water EQA The Legionella Isolation Scheme

**The EQUAL Scheme for Indicator  
Organisms**

**The EQUAL Scheme for Surface  
Water**

**The Legionella Isolation Scheme  
The Cryptosporidium & Giardia  
Detection Scheme**

**The Virus Isolation Scheme**

Health Protection Agency  
Legionella Isolation EQA Scheme  
Food and Environmental Proficiency Testing Unit  
(FEPTU)  
Centre for Infections  
61 Colindale Avenue  
London NW9 5EQ  
United Kingdom

Tel +44 (0)20 8327 7119  
Fax +44 (0)20 8200 8264  
Email: legionellaeqa@hpa.org.uk  
www.hpa.org.uk

## The Legionella Isolation Scheme

The Scheme is open to all *bona fide* water microbiology laboratories in both public and private sectors. Laboratories of all sizes benefit from EQA. The Scheme is of paramount importance to laboratories seeking accreditation for microbiological testing.

Please send no remittance with this form. You will be invoiced separately.

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Name

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Company

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Address

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Postcode

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Country

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Tel

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Fax

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Email

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VAT Registration No.

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Order No.

I have read the conditions of participation (listed overleaf) for the Health Protection Agency Water External Quality Assessment Scheme (The Legionella Isolation Scheme) and agree to abide by them. I understand that samples issued by the Scheme may contain virulent pathogenic organisms of ACDP categories 1 and 2 and confirm that my laboratory facilities and staff expertise are adequate for safe handling of these organisms.

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Signed

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Date

If you are a member of any other HPA Water EQA Schemes please indicate by ticking the appropriate box(es)

- The EQUAL Scheme for Indicator Organisms  
 The EQUAL Scheme for Surface Water  
 The Virus Isolation Scheme  
 The Cryptosporidium and Giardia Detection Scheme

Please return completed form to:

**Health Protection Agency  
Food and Environmental Proficiency  
Testing Unit (FEPTU)**  
Centre for Infections  
61 Colindale Ave  
London NW9 5EQ  
United Kingdom