PUBLIC HEALTH LABORATORY, DUBLIN
HEALTH SERVICE EXECUTIVE

USER MANUAL

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FOREWORD

The aim of this manual is to aid all users of the Public Health Laboratory, Health Service Executive, Dublin (PHL, HSE, Dublin) gain the optimum service from the laboratory appropriate to their needs and public health priority. In particular, it will aid the user in selecting and obtaining the most appropriate specimen for microbiological analysis. The user needs to submit the appropriate requestor, patient unique identifiers and sample information on the relevant PHL Dublin forms for the optimum test selection. Transporting the appropriate sample to the laboratory under the correct conditions, packaging and within the acceptable time frames will aid quality analysis and appropriate interpretation of results. The value of a particular bacteriology test result is still greatly dependent on these pre-analytical, analytical and post analytical processes.

Document control:
All changes made to this new issue (Issue 009 2025) document are highlighted in yellow.

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GENERAL INFORMATION AND SCOPE OF PHL, DUBLIN

This user manual provides information on the activities and structure of the Public Health Laboratory, Dublin.

The Public Health Laboratory is a Health Service Executive laboratory, located within the grounds of Cherry Orchard Hospital, Ballyfermot, Dublin 10, and is administered by HSE Community Healthcare East, CHO 6. It incorporates INAB (Irish National Accreditation Board) accredited National reference microbiology laboratory services, regional and local clinical and environment microbiology services and is a designated Official Food testing laboratory (OFML - S.I. 79/2020 -EU Official Control of Foods). The laboratory **microbiology** scope is for:

1. A National VTEC (Verotoxigenic *E. coli*) Reference Laboratory (NRL-VTEC) clinical service. Clinical and environmental samples are analysed for VTEC utilising molecular and culture techniques. The VTEC service is accredited to ISO 15189 for clinical enteric specimens and ISO 17025 for food, water and environmental samples.
2. A National sentinel Reference clinical service for Campylobacter characterisation, which commenced in 2019 and has now been incorporated into our routine service.
3. A National *Clostridioides difficile* Reference Laboratory service.
4. A detailed gastro-enteric clinical microbiology diagnostic service (including bacteria, viruses, ova and parasites) accredited to ISO 15189, for clinical management, surveillance and to support and advise on the investigation of gastro-enteric outbreaks both nationally and regionally.
5. An ISO 17025 accredited Regional Public Health food and water microbiology analytical service. This is accessed by the Environmental Health Service (EHS), Public Health Doctors and Acute Hospital Facilities.
6. Whole Genome Sequencing is carried out for typing of VTEC, *Campylobacter sp.* and *C. difficile* – our WGS service is currently unaccredited.

Clinical samples, bacterial isolates, food and water samples are tested for **microbiological analysis only**.

The results of any unaccredited tests are clearly marked by an asterisk on test reports.

Clients will be informed of any change to the accreditation status of the Public Health Laboratory Dublin.

It is the policy of the laboratory not to refer tests within the scope of the laboratory, to external laboratories. If, in exceptional circumstances, the PHL must subcontract tests for which it is accredited, PHL would ensure that the work was sent to an accredited laboratory where possible and clients would be informed.

REQUIRMENTS REGARDING PATIENTS

Laboratory management ensures that patients' well- being, safety and rights are the primary consideration. The PHL will always uphold the rights of the patient to care that is free from discrimination in accordance with the Code of Ethics, Public Office Act 1995. Medical Scientists and Consultant Microbiologists have compulsory state registration with professional bodies- CORU & IMO, which enforce standards of training and ethics in their respective profession.

It is PHL policy to make information available to a patient / healthcare provider at the request of the patient. The PHL will periodically review examinations offered to ensure they are clinically appropriate and necessary. The Laboratory will ensure the ongoing availability and integrity of retained patient samples and records in the event of a closure, acquisition or merger of the laboratory.

CONFIDENTIALITY

The laboratory is responsible, through legally enforceable agreements, for the management of all patient/ client information obtained or created during the performance of laboratory activities. Management of patient information includes privacy and confidentiality. The laboratory shall inform the user and/or the patient in advance, of the information it intends to place in the public domain. Except for information that the user and/or the patient makes publicly available, or when agreed between the laboratory and the patient (e.g. for the purpose of responding to complaints), all other information is considered proprietary information and shall be regarded as confidential.

Under the Infectious Diseases Regulations 1981, the Health Protection Surveillance Centre (HSPC) is authorised by law to collect information from laboratories, about diagnoses of certain infectious diseases in Ireland. These diseases are referred to as notifiable diseases. The law exists to monitor and control the occurrence of infectious diseases, and to protect the health and safety of the community by preventing further illness. Causative pathogens listed on the notifiable disease include: *Campylobacter spp*., VTEC, *Clostridium difficile*, Norovirus, Rotavirus, Gardia, Influenza A & B, *Shigella spp*., and *Salmonella spp.*
The PHL is required to notify the detection of a notifiable diseases electronically through the Computerised Infectious Disease Reporting System (CIDR) to the HSPC. Access to the information in CIDR is controlled so that personally identifiable information is visible only to those with a need to manage the individual case. All CIDR information is protected by appropriate security and confidentiality mechanisms and complies with Data Protection legislation.

All data is protected by appropriate security and confidentiality mechanisms and complies with Data Protection legislation at all times.

REQUIRMENTS FOR OBTAINING CONSENT

Patient consent is obtained when the patient willingly submits a sample to the PHL for diagnostic or Public Health reasons and completes a request form with their personal information. With respect to samples received from referring laboratories and hospitals, consent is inferred when the patient submits a sample in that location. With respect to samples received from children, consent is inferred from the parent/guardian responsible for submitting the sample. Referred tests are under the remit of the sending hospital and is it their legal obligation to notify CIDR of infectious diseases.

DATA PROTECTION

The Public Health Laboratory complies with the data protection and confidentiality policies of the HSE, thus ensuring all data is processed in line with the principles of the General Data Protection Regulation (GDPR) and relevant Irish legislation.

IMPARTIALITY

The laboratory functions as a distinct entity to carry out a range of services, thus guaranteeing its impartiality. Staff are required to sign a declaration of impartiality. The requirement for on-going impartiality is documented within the PHL's quality management systems. The PHL is accredited to two standards- ISO 15189 and ISO 17025. Both standards have a requirement for impartiality and the PHL will not favour one system over the other. PHL management are committed to ensuring all activities are carried out in a manner that ensures impartiality.

OPENING HOURS:

The PHL's routine service is provided from 9.00 a.m. to 5.00 p.m. Monday-Friday. A limited service is provided on Saturday mornings from 9.30 a.m. to 12.30 pm and Sundays from 10.00 to 12.00 mid-day. Urgent samples are facilitated outside of these hours. Please contact the laboratory to arrange the receipt of all urgent specimens in advance of sending them by contacting Cherry Orchard Hospital (COH) switch. See 'out of hours' contact details below or if during working hours, please phone PHL HSE Dublin at 01-7955174/5 Out of hours, non urgent specimens may be delivered to the gate lodge of COH and refrigerated overnight until collection by PHL staff.
PHL clerical staff are available for phone queries about validated results or for general enquiries etc. from 9.00 a.m. to 5 p.m. Monday to Friday at 01 7955175/6.

OUT OF HOURS SERVICE

A Consultant Microbiologist approved emergency 'out of hours' service is available between 5 p.m. and 9 a.m. Monday to Friday and between 12.30 p.m. on Saturday to 9.00 a.m. on Monday (i.e.7/7). This service is accessed only by contacting the Laboratory Director or the Consultant Microbiologist on-call.
Note: The Consultant Microbiologist must be telephoned in advance for approval to analyse urgent specimens to be processed out of hours. Users should not telephone the laboratory as telephones are not staffed out of routine hours.

CLINICAL ADVICE:

Advice regarding diagnosis and treatment of infection is available at all times for requesting clinicians. Contact numbers and email addresses are given overleaf. For out of hours advice including infection control advice, please contact the on-call Consultant Microbiologist via switchboard (01 7955000).
PHL does not discuss results with patients directly.

ENVIRONMENTAL RESULT INTERPRETATION (FOOD AND WATERS)

Advice regarding interpretation of environmental results on the final report is available at all times. Contact numbers are given overleaf.

USER SATISFACTION:

The Public Health Laboratory operates an on-going process of service evaluation and improvement to meet the needs and requirements of users. Laboratory management regularly assesses contributions and complaints received in the laboratory from users of the Microbiology service. User satisfaction is assessed by either periodical questionnaires or User open days. Open days are targeted to specific clients.
Please write or email the Chief Medical Scientist or Quality manager if there are issues which you would like addressed.

COMPLAINTS PROCEDURE:

A complaints procedure is in place in the Public Health Laboratory. Complaints should be made in writing and be clearly identified as a complaint. Complaints made over the phone will be requested to be put in writing, to ensure that there is no miscommunication and there is an appropriate record of events. This will ensure that it is dealt with and fully investigated through our quality management system.

PHL CONTACT NUMBERS

NAME	EXT.	E MAIL
MAIN OFFICE General enquiries/results	01 7955175/6	phl.dublin@hse.ie
CONSULTANT MICROBIOLOGIST		
Dr. Tee Keat Teoh	01 7955214	teekeat.teoh@hse.ie
Dr. Brian O'Connell	01 7955214	boconnell@stjames.ie
CHIEF MEDICAL SCIENTIST Anne Carroll	01 7955247	anne.carroll@hse.ie
NATIONAL REFERENCE LABORATORY (NRL) SERVICE Dr. Tee Keat Teoh Anne Carroll	01 7955214 01 7955247	teekeat.teoh@hse.ie anne.carroll@hse.ie
CLINICAL LABORATORY SENIOR MEDICAL SCIENTIST Donal Lanigan	01 7955174	donal.lanigan@hse.ie
FOOD LABORATORY SENIOR MEDICAL SCIENTIST Aidan Gibson	01 7955249 01 7955216	aidan.gibson@hse.ie
WATER LABORATORY SENIOR MEDICAL SCIENTIST Lucy Devlin	01 7955217 01 7955248	lucy.devlin@hse.ie
QUALITY MANAGER Lucy Devlin	01 7955248	lucy.devlin@hse.ie
INFECTION CONTROL NURSE SPECIALIST Triona Mills	01 7955215	triona.mills@hse.ie

SUMMARY OF CLINICAL SERVICE, INCORPORATING THE VTEC, CAMPYLOBACTER AND *CLOSTRIDIOIDES DIFFICILE* NATIONAL REFERENCE LABORATORY SERVICES:

The PHL provides National Clinical Reference services for VTEC, Campylobacter and *Clostridioides difficile.* These services are accessed by Directors/ Clinical Microbiologists/ Chief Medical Scientists of regional and primary clinical laboratories, and Public Health Doctors, who submit samples or presumptive isolates for confirmatory VTEC, Campylobacter and *C. difficile* studies and detailed molecular strain characterisation. The Environmental Health Service send environmental samples for VTEC analysis under our ISO 17025 scope of testing.

Verotoxin producing *E. coli* (VTEC), Campylobacter and *C. difficile* isolates

The range of services includes:

- Identification to genus and species level.
- Phenotypic and molecular typing.
- Whole genome sequencing for antimicrobial resistance determinants, virulence factors and cluster analysis of potential public health significance. Whole Genome Sequencing is not currently accredited.

The following are some recommended samples to be sent from patients with particular clinical syndromes –

GASTROINTESTINAL TRACT INFECTION

Gastroenteritis

Please note that this laboratory employs a cost-effective approach to the diagnosis of infectious diarrhoea. Not all specimens are examined for every pathogen. It is therefore important that clinical details or suspected diagnoses are included on the request form. Information that is of use when processing specimens includes: travel history, occupation, relationship to a particular food, prolonged diarrhoea, antibiotic use, suspected outbreak. The laboratory examines stool samples routinely for:

- *Salmonella sp.*
- *Shigella sp.*
- *VTEC (Verotoxigenic E. coli)*
- *Campylobacter sp.*
- *Clostridium difficile* toxin detection by PCR and culture of PCR positive samples is performed on all specimens from patients over 2 years of age.
- EPEC – *Enteropathogenic E. coli* is tested on samples from patients under 2 years of age or in discussion with the Consultant Microbiologist.

Samples are tested using molecular methods for the above pathogens and all PCR positive samples are further tested by culture methods in order to isolate the organism if possible.

- Other pathogens e.g. *Yersinia, Vibrio, Aeromonas*, enteric viruses, ova and parasites (O/P) etc. are only examined if the clinical details suggest that possibility or if specifically requested.
- An O/P PCR method is used for Cryptosporidium, Giardia, Entaomoeba Histolytica and Dientamoeba fragilis. Ova and Parasite testing may be requested if the patient has had chronic unexplained diarrhoea, if the patient is immunocompromised or if there is a history of foreign travel. Traditional wet prep O/P microscopy is also available. This will be carried out when there is travel history or if clinically relevant in consultation with the Consultant Microbiologist.
- *Rotavirus/Adenovirus* PCR stool detection is performed on patients under 5 years of age.
- Norovirus and other enteric viruses (adenovirus, sapovirus, enterovirus, rotavirus) PCR stool detection is available when clinically indicated.

When to send a stool specimen: Send a stool specimen to the laboratory when there are ≥3 liquid or very loose stools (ie. stool takes up the shape of the container) per day. There may be other symptoms suggestive of infectious diarrhoea e.g. abdominal pain or discomfort, nausea, faecal urgency, tenesmus, fever, blood or mucus in stools. Asymptomatic patients may be requested to submit stool samples in outbreak investigations. Hospital specimens should be sent to the laboratory immediately. In General Practice, please refrigerate stools if there is to be a delay in transporting the specimen.

How much stool to send: Please fill the specimen container to between ¼ and ½ full. Please do not fill to the brim.

RECTAL SWABS

Rectal swabs are used to detect enteric carriage of multi drug resistant organism's (MDRO's) e.g. vancomycin resistant Enterococci (VRE) or carbapenem producing Enterobacteriaceae (CPE). The tip of a sterile swab is passed approximately 2.5 cm beyond the anal sphincter. Rotate the swab gently and withdraw it and place the swab into the container with the appropriate transport medium.

CLINICAL SAMPLE SUBMISSION

Samples should be submitted with the appropriate accompanying PHL request form. There is a form for each service provided - see PHL website.

- VTEC NRL Request form

- Campylobacter NRL Request form
- *Clostridioides* difficile NRL request form
- Routine Enteric request form
- Swab and miscellaneous sample request form

Collect appropriate clinical specimens in sterile containers before commencement of antimicrobial therapy if possible. This is usually possible for most mild infections. For more serious infections, antimicrobial therapy should not be withheld pending collection of a specific specimen.

If in any doubt as to the appropriate container, please contact the laboratory for advice.

Please send an adequate amount of specimen. As a general rule – 'the more specimen the better'.

Completion of Request Forms:

Adequate identification of patient and completion of request forms is essential for patient identification – at least 2 patient identifiers are required. Patient name must be on both request form and sample container.
The following details should be recorded on the request form:

- **Full Patient Name**
- **DOB**
- Patients Address
- **External laboratory number**/**MRN** (where available)
- **Gender**
- **Date of sample collection**
- Ward/Source
- **Requesting Clinician and contact details** (all clinical samples must be requested by a named medical Doctor).
- Specimen Type
- Tests requested with relevant clinical details.

Those highlighted in **bold** are mandatory and include patient identifiers.

Please include details if the specimen is associated with an outbreak (provide outbreak code) investigation, in an 'at risk' occupation (Health Care or Food Worker) or if there is a history of foreign travel, or a specific diagnosis is being considered. All of the above may influence the type of test that the laboratory performs.

Please ensure that relevant clinical details are included on the request form and at least 2 patient identifiers included on the sample container.
The following details should be recorded on all specimen containers:

- **Full Patient Name**
- **DOB**
- **MRN** (where available)
- **Date of collection**

Specimens cannot be processed unless there is a minimum of two patient identifiers on the specimen which match those on the request form, one of which must be the full patient name. If the sample does not have sufficient patient identifiers or is unsuitable (i.e. leaking) the sample will be rejected and a repeat sample requested. The sample will be registered and recorded as a rejected sample on our Laboratory Information Management System (LIMS). The doctor or hospital laboratory will be phoned to inform them that the sample is not being processed and repeat testing offered. A report will be generated for the sender stating that the sample was rejected.

It is laboratory policy **NOT** to process unlabelled or mislabelled specimens. However, in the circumstance where a decision is made to process a sample which does not meet acceptance criteria e.g. 2 identifiers not available, DOB on request form but not on sample container – following consultation with the Chief or Consultant - a comment should be added by the authoriser stating that this was the case. This comment should be visible on the CoA so that the client is aware of the deviation. The name of the patient must be on both the request form and the sample container.
If the integrity of a sample has been compromised and there is a health risk, the organisation responsible for the transport of the sample will be notified immediately and action taken to reduce the risk and to prevent recurrence.

Transport of clinical samples to the laboratory:

- All samples must be packaged appropriately. It is the responsibility of the person dispatching the sample to the laboratory to ensure that it is packaged correctly and does not pose a risk to anyone coming in contact with it during transport or on receipt in the laboratory (Ref: S.I. No.617 of 2010 Carriage of Dangerous Goods by Road Regulations 2010).
- Specimens should be transported and processed as soon as possible; individual test requirements may invalidate the test request if the samples are too old (48-72h).
- All Category B biological substances should be packaged according to UN3373 IATA Packaging Instruction 620. Clinical samples should be put into a small plastic specimen bag with enough absorbent material to soak up the entire sample if a leak occurs. Isolates

should be on a suitable growth medium (e.g. Nutrient Agar slope) and sealed with Parafilm beforehand.

- The Primary container is then placed into a secondary screw top plastic container.
- The secondary container should be certified leak proof at 95KPa and filled with paper towel or cotton wool so that the specimen is secure and does not rattle in the container.
- The Secondary container is put into a Category B labelled cardboard box which has an address label, UN3373 label and orientation label.
- Faeces samples are held at room temperature if they are to be processed on the day of arrival in the laboratory. Other sample types are refrigerated at 2 - 8º C.
- If processing is delayed sample should be refrigerated at 2 - 8º C for a maximum of 72 hours.
- Urgent samples will be processed upon receipt or discussed with Consultant Microbiologist if received out of hours. Clients sending urgent samples should notify the laboratory in advance as outlined above.
- 1-2g is sufficient for culture of faeces. As multiple samples are rarely indicated for detection of faecal pathogens, if more than one sample is taken on the same day they may be pooled.
- For ova and parasite analysis, ideally three stool samples should be collected over no more than a 10-day period. It is usually recommended that samples are collected every other day. Unless the patient has severe diarrhoea or dysentery, no more than one sample should be examined within a single 24 hour period, as shedding of cysts and ova tends to be intermittent. If *E. histolytica* or *G. duodenalis* are suspected and the first 3 samples are negative, ideally 3 additional samples should be submitted at weekly intervals. There are no prescribed limits for the size of sample required, but some laboratory procedures will require larger quantities than others.
- For Sellotape slides/perianal swabs suspecting *E. vermicularis* ova, the sample should be taken between 10pm and midnight, or early in the morning, before defecation or bathing. To prevent deterioration, refrigeration or storage of sample at room temperature for up to 48hrs is advised. It is recommended that samples should be taken for at least 4 to 6 consecutive days. If the results of all these are negative the patient can be considered free from infection. In practice, more than one sample is rarely received.
- Samples requesting detection of *S. haematobium* - it is preferable to obtain total urine collected over the time period between 10am and 2pm. A minimum of 10ml is required. In patients with haematuria, eggs may be found trapped in the blood and mucus in the terminal portion of the urine sample. If the urine cannot be examined within an hour of collection, it is advisable to add 1mL of undiluted formalin to preserve any eggs that may be present. For duodenal/jejunal aspirates, a minimum volume of 1mL is required.
- Fresh faeces samples are essential for the examination of trophozoites ideally within 30 minutes from the time of collection.

Swabs/containers used in PHL Dublin

1. **Universal container** – two types with different apertures are used for collection of bodily fluids.
2. **Amies Transport swabs** for routine collection of rectal swabs.
3. **Lysed viral swabs** (containing guanidine thiocyanate) **–** for COVID/Flu/RSV testing (limited service available for some clients). Swabs that do not contain guanidine thiocyanate will be rejected.

If you have any other queries, please contact the laboratory.

Sample retention and additional testing requests:

Following testing, routine clinical samples are stored at 2 - 8º C for a week or until the final report has been authorised.
Samples processed in the CL3 laboratory are stored at 2 - 8º C for a minimum of a week.
Requests for additional testing on samples may be possible on a case-by-case basis, once agreed by PHL staff, up to 72 hours after receipt. Please contact the laboratory as soon as possible if the need for additional testing is identified. If a client/user requests additional testing verbally, it must be followed up by a written confirmation. If there is a delay in processing a sample, that could compromise patient care, then the requestor will be informed of this by PHL.

VTEC, Campylobacter and *C. difficile* Isolates:

VTEC, Campylobacter and *C. difficile* isolates are logged using our in–house PHL code and stored indefinitely on freezer beads at -70ºC.

Turnaround Times:

Turnaround times vary depending on the sample type and the tests requested, and is the maximum number of days between sample receipt and issue of result. Results will generally be reported in a shorter timeframe than defined below.

When sending a culture to PHL for VTEC testing, please pick from a non-selective medium or check the purity of the isolate before sending. Submitting a pure culture ensures that VTEC PCR results are available within 24 hours. The turnaround time for VTEC isolates is 4 working days.
The turnaround time for VTEC and/or routine stools is 8 working days.
The turnaround time for culture results for Campylobacter for confirmation and phenotypic antimicrobial sensitivity (routine and NRL) samples is 6 working days.
The turnaround time for culture result for NRL *C. difficile* samples is 10 working days.

The turnaround time for enteric viral PCR screen is 3 working days.
The turnaround time for whole genome sequencing from recovery of an isolate is generally two weeks. However, during outbreaks periods of heavy workloads, this will be longer for routine isolates, as urgent outbreak isolates will be prioritised.

Faeces/Duodenal Aspirates

Turnaround times for Ova and Parasites - microscopy and/or PCR result within 3 working days. If a sample is for routine culture or VTEC studies as well as O/P, it may take up to 6 working days before the result is reported. Any positive parasites will be phoned straight away.

Sellotape Slide/Perianal Swab

Results will be reported within 72hrs

TEST REQUESTED	TURNAROUND TIME
VTEC	
Stool	8 working days
Isolate	4 working days
Campylobacter sp.	
Stool	7 working days
Isolate	7 working days
Swab	7 working days
C. difficile NRL	
Stool	10 working days
Isolate	10 working days
Swab	10 working days
Routine Enteric screen (bacterial)	8 working days
Ova and Parasite	PCR screen and/or microscopy – 3 working days
WGS	2 weeks (from recovery of an isolate)

PHL protocol for phoning clinical results:

All preliminary positive results of clinical significance are phoned within 24 hrs to the relevant requesting Doctor (i.e. the requesting medical doctor-GP or relevant Public Health doctor). Positive results of samples, received from clinical laboratories, are phoned to the requesting laboratory scientific staff or medical personnel. Such phone calls are documented on LIMS and the final report/cert. of analysis. Please ensure an up-to-date, monitored phone number and email address are included on the request from

submitted with samples. Communication will occur via the telephone routinely. However, in the setting where there is an agreed upon email address that the user will monitor during working hours, an email will be used for communication. A reasonable attempt (3 unanswered calls) will be made to contact the relevant PH Doctor or laboratory by phone, however if contact is not made the result will be authorised and report issued.

Please note – PHL no longer routinely phone preliminary results of VTEC positive samples to laboratories that already have a positive PCR result. There are some exceptions to this. Please contact the Consultant microbiologist on-call if there is any query with this.

The phone limits in phoning first positive PCR results for VT1 and VT2 are:

1. Any first positives where a previous PCR was not performed previously. This may include but not exclusively:

· Samples submitted from public health for screening or outbreak management.

· Samples received from laboratories that do not have a commercial PCR assay.

· First positives from the community setting

2. First positive result where it is documented that the patient has haemolytic-uremic syndrome (HUS) on the referring form.

3. First positive result where the referring laboratory has reported a negative PCR result, indeterminate result or not recorded on the referring form.

4. First positive of isolates sent for confirmation.

5. Specific requests by individual laboratories.

PHL policy on faxing and e-mailing reports:

The public health laboratory complies with the Health Service Executive's policies on electronic transmission of results.
Outbreak reports are sent by agreed upon encrypted email to Public Health Departments and Environmental Health Offices.

Summary of Food Testing Service:

The Public Health Laboratory is designated an "Official Laboratory" approved for Microbiological testing under Statutory Instrument (SI) 79/2020: European Communities (Official Control of Foodstuffs) Regulations 2020.

ISO 17025 Accreditation:

The Public Health Laboratory is accredited to ISO 17025 by the Irish National Accreditation Board. ISO 17025 section 6.6 requires laboratories to review the competency of referral laboratories. A competent referral laboratory is one that complies with this International Standard.

For information:

The current scope of accreditation for the PHL, HSE Dublin Laboratory is freely available as a "pdf" download from the INAB web site at:

https://www.inab.ie/inab-directory/laboratory-accreditation/testing-laboratories/

Food samples are tested for a comprehensive microbiological scope in accordance with the FSAI/HSE service contract. In addition a significant food safety surveillance programme of food samples from hospitals is carried out. Environmental swabs procured from food business operators are also processed.
A schedule of testing is agreed locally on an annual basis with the environmental health service (EHS) and hospital catering managers. National surveys are agreed annually with the Food Safety Authority of Ireland (FSAI).

See Appendix 1 for the list of accredited microbiological food tests available.

FOOD SAMPLES:

Foods should be sampled and transported to the laboratory as per "FSAI/HSE Guidance on Sampling of Food for Microbiological Testing (Current Issue)

Official Food Sample

- Under the terms of the Official Control of foodstuffs Directive 93/99/EEC and EU 2017/625 an official food sample must be examined in an official Food Control Laboratory. The Public Health Laboratory is designated as an official food testing laboratory under S.I.79 of 2020. Official food samples should have a documented chain of custody as all food sample results are legally actionable and all food results are copied to the Food Safety Authority of Ireland as the competent Authority.

Request Form for Food samples:

A specimen request form (National Sample Submission Form (NSSF)) should accompany each sample of food to be tested. The receiving PHL staff member must record the following details on the requisition form:

1. Date and time of receipt of sample.
2. Temperature of sample on receipt if appropriate
3. Receivers name
4. Storage condition on receipt
5. Tick box once sample and form information has been crosschecked.

By the EHO:

1. Name of the person delivering sample
2. Name of EHO for reporting to
3. Food type and code
4. Packaging conditions etc
5. Reason for sampling
6. Supplementary information if food poisoning outbreak
7. Premises name and sample description.
8. Any other comments about the sample

Sample Size:

The standard minimum routine food sample size in a sterile container for the PHL is 100g (25g x 4). This may vary depending on sample availability, for example, if the sample is related to a complaint.

Sample Rejection:

Referred samples that don't meet the required acceptance criteria will be registered and discussed with a Senior Scientist or Consultant staff. If the decision is to reject the sample, it will be discarded and the reason for rejection noted and informed to the referring doctor/laboratory/environmental health officer. It is laboratory policy **NOT** to process unlabelled or mislabelled samples. Where deviating samples are chosen to be processed, this will be recorded as such and, if applicable, an interpretation will be applied cautiously.

Sample Retention and additional testing requests:

Food Samples;

Where practicable, food samples are frozen at -20ºC on the day of testing and retained in the laboratory for up to three weeks.

PHL protocol for phoning results:

Environmental results

If a significant pathogen is detected, a preliminary result will be phoned to the Environmental Health Officer or sending laboratory. A reasonable attempt (3 unanswered calls) will be made to contact the relevant EHO or lab by phone, however if contact is not made a result will be sent via email. A final report will be sent when all testing is complete. Any phone calls made or emails sent are documented on LIMS which will appear on the final report/cert of analysis. Please ensure an up-to-date, monitored phone number and email address are available on the request from submitted with samples.

PHL policy on faxing and e-mailing reports:

The public health laboratory complies with the Health Service Executive's policies on electronic transmission of results.

Outbreak reports are sent by agreed upon encrypted email to Public Health Departments and Environmental Health Offices.

Summary of Water Testing Service:

A comprehensive accredited microbiological surveillance of many water types is undertaken annually. This includes potable, bottled, therapeutic (Endoscopy, dialysis), Legionella and waters requiring VTEC testing. A local schedule of water testing is reviewed and agreed annually with the HSE, EHS and hospital clients.

See Appendix 1 for the list of accredited microbiological water tests available.

Water samples must be submitted in sterile containers. The sample container must contain sodium thiosulphate if the water sample has been treated with a biocide (e.g. chlorine).

If in any doubt as to the appropriate container or transport conditions, please contact the laboratory for advice.

Sample Request Form for Water samples

A PHL Dublin request form should accompany each sample of water to be tested. The receiving PHL staff member will record the temperature of the container that was used to transport the sample, where applicable.

See Table 1 for the minimum volume of sample required and the type of container required.

TABLE 1

Sample type	Min. Vol. required	Sodium Thiosulphate	Sterile Container
Mains/ Drinking Water	500ml	Required	YES
Endoscopy water	500ml	Required(If biocide)	YES
Heater cooler water	300ml	Required(If biocide)	YES
Swimming Pools	500ml	Required	YES
Hydrotherapy pools	500ml	Required	YES
Well Water (microbiologically treated)	500ml	Required(If biocide)	YES
Well water untreated	500ml	Not Required	YES
Group Scheme (treated)	500ml	Required(If biocide)	YES
Group Scheme (untreated)	500ml	Not Required	YES
Seawater	500ml/1000ml/2000ml	Not Required	YES
Surface water	500ml	Not Required	YES
Water for pathogens (eg. VTEC, *Salmonella, Campylobacter)*	At least 1 litre	If biocide present	YES
Bottled water	At least 1 litre		YES
Pre bottled water	At least 1 litre	If biocide present	YES
Water for dialysis	500ml	If biocide present	YES
Water for Legionella testing	At least 1 litre		YES
Dental water testing	500ml		YES

Please ensure that relevant details are included on the request form. All of the above may influence the type of tests that the laboratory performs.

The current PHL Dublin food and water sample request forms are available to download from the website:
https://www.hse.ie/eng/services/list/5/publichealth/publichealthlabs/public-health-laboratory-dublin/request-forms.html

Sample Rejection of water samples:

Referred samples that don't meet the required acceptance criteria will be registered and discussed with a Senior Scientist or Consultant staff. If the decision is to reject the sample, it will be discarded and the reason for rejection noted and informed to the referring laboratory/environmental health officer or doctor. It is laboratory policy **NOT** to process unlabelled or mislabelled samples. Where deviating samples are chosen to be processed, this will be recorded as such and, if applicable, an interpretation will be applied cautiously.

Sample Retention and additional testing requests:

Water samples are stored in the fridge for up to a week. A sample will be held for longer than a week should further testing be required and/or until the final confirmed results are obtained.

PHL protocol for phoning/Reporting results:

If there is an unsatisfactory result, this will be phoned or emailed to the relevant EHO or laboratory, with a final result sent out when testing is completed. Such phone calls or emails are documented on LIMS and the final report/cert of analysis.

A reasonable attempt (3 unanswered calls) will be made to contact the relevant EHO or lab by phone, however if contact is not made a result will be sent via email. A final report will be sent when all testing is complete. Any phone calls made are documented on LIMS which will appear on the final report/cert of analysis. Please ensure an up-to-date, monitored phone number and email address are available on the request from submitted with samples.

PHL policy on faxing and e-mailing reports:

The public health laboratory complies with the Health Service Executive's policies on electronic transmission of results.

Outbreak reports are sent by agreed upon encrypted email to Public Health Departments and Environmental Health Offices.

Appendix 1 Scope of microbiological testing at PHL, Dublin

Food Tests

PHL Test number	Test name	Primary Reference	Accredited Yes/No
SFM001	Aerobic Colony Count	ISO 4833-2:2013 Amd:2022	Yes
SFM002	Enumeration of *Escherichia coli*	ISO 16649-2:2001 Amd 2017	Yes
SFM003	Enumeration of *Staphylococcus aureus*	ISO 6888-1:1999/Amd 2:2018	Yes
SFM004	Enumeration of *Bacillus cereus* includi *Bacillus* species	ISO 7932:2005 AMD 1 2020	Yes
SFM005	Enumeration of *Clostridium perfringens*	ISO 15213-2:2023	Yes
SFM006	Detection of *Salmonella* species	ISO 6579-1:2017 Amd. 2020	Yes
SFM007(E)	Enumeration of *Listeria monocytogenes* and other *Listeria species*	ISO 11290-2:2017	Yes
SFM007(D)	Detection of *Listeria monocytogenes* and other *Listeria species*	ISO11290-1:2017	Yes
SFM008	Detection of Campylobacter species	ISO 10272-1:2017 Amd.1: 2023	Yes
SFM009	Enumeration of Enterobacteriaecae	ISO 21528-2:2017	Yes
SMM006 Molecular	Detection of *Salmonella species* in food samples by DNA extraction PCR	ISO 13136:2012	Yes

Environmental swab tests

SEM001	Detection of *Pseudomonas aeruginosa* environmental swabs	ISO 18593:2004 ISO 16266:2008	Yes

Water tests

PHL Test number	Test name	Primary Reference	Accredited Yes/No
WSOP 1	General Techniques for the Detection Bacteria by Membrane Filtration	ISO 8199:2018	Yes
SWM001	Enumeration of Coliform Bacteria and *E coli* by Membrane Filtration	ISO 9308-1:2014 Amendment 1:2016	Yes
SWM003	Enumeration and confirmation of Enterococci	ISO 7899-2:2000	Yes
SWM004	Enumeration and confirmation of *Clostridium perfringens*	ISO 14189:2013	Yes
SWM005	Detection of *Salmonella spp.* by culture	ISO 19250:2010	Yes
SWM006	Enumeration of Total Plate Counts 22ºC	ISO 6222:1999	Yes
SWM007	Enumeration of Total Plate Counts 37ºC	ISO 6222:1999	Yes
SWM008	Enumeration and confirmation of *Ps.*	ISO 16266:2006	Yes

	aeruginosa		
SWM009	Detection and enumeration of Coliform Bacteria and *E. coli* by IDEXX Quantitray	ISO 9308-2:2012	Yes
SWM0012	Detection and enumeration of *Legionella* species by membrane filtration	ISO 11731:2017	Yes
SWM0017	Total Viable Count for Environmental/Endoscopy water	ISO 15883-4 :2018	Yes
SWM0018	Detection of *Mycobacterium* species membrane filtration	ISO 15883-4:2018 ISO 15883-1:2024	Yes
SWM0018M	Detection of slow-growing Mycobacterium spp. from waters from heater-cooler units	ISO 15883-4:2018 ISO 15883-1:2024	Yes
SWM0019	Enumeration of *S. aureus* by Membrane Filtration	HPA W10	**No**
SWM0023	Total Viable Count/ml for Dialysis waters	ISO 23500:2014 ISO 13959:2014 ISO 11663: 2014	Yes
SMM007 Molecular	Detection of *Salmonella spp* in water samples using automated DNA extraction and real-Time PCR	ISO 13136:2012	Yes

Clinical tests

PHL Test number	**Test name**	**Accredited Yes/No**
SCM001	Investigation of faecal specimens for enteric pathogens	Yes
SCM002	Investigation of faecal specimens for the detection and isolation of verotoxigenic *E. coli* (VTEC) and Enteropathogenic *E. coli* (EPEC)	Yes
SCM003	Investigation of Ova and Parasites in specimens other than blood	Yes
SCM004	Antimicrobial Susceptibility Testing	Yes

Molecular Tests

PHL Test number	**Test name**	**Accredited Yes/No**
SMM001	Detection of *vt1, vt2, vt2f, E. coli* serogroups O157, O26, O104, O145, O111 and O103 by PCR from bacterial isolates.	Yes
SMM002	Detection of VTEC in food using automated DNA extraction and Real-Time PCR	Yes
SMM003	Detection of VTEC in water using automated DNA and Real-Time PCR.	Yes
SMM004	Detection of VTEC from faecal specimens using automated DNA extraction and Real-Time PCR	Yes
SMM005	Detection of enteric pathogens using automated DNA extraction and Real-time PCR	Yes

SMM008	WGS VTEC	**No**
SMM008	WGS Campylobacter	**No**
SMM008	WGS *C. difficile*	**No**
SMM009	SARS- CoV-2	**No**
SMM009	Influenza A/B	**No**
SMM009	RSV	**No**
	Diptheria toxin testing	**No**