



2023 - EQA FOR MOLECULAR INFECTIOUS DISEASE TESTING

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EQA FOR MOLECULAR INFECTIOUS DISEASE TESTING

QCMD (Quality Control for Molecular Diagnostics) is an independent External Quality Assessment (EQA) / Proficiency Testing (PT) scheme specialising in molecular testing of a wide range of infectious diseases.

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IMPORTANCE OF EXTERNAL QUALITY ASSESSMENT

External Quality Assessment (EQA) or Proficiency Testing (PT) provides a means of periodically assessing a laboratory's performance in comparison with other laboratories using the same method and instrument.

Unlike Internal Quality Control (IQC), EQA provides an effective method of monitoring a laboratory's bias or accuracy through the analysis of 'blind samples'. Participation in an EQA scheme like QCMD will also support regulatory requirements and will assist in quality improvements.

EQA plays an essential role in assuring laboratory quality by supporting daily IQC. It facilitates interlaboratory performance comparison and encourages greater standardisation in testing. EQA has a number of functions:

- **Helps maintain and improve the analytical quality of laboratory tests**
- **Provides an objective view of test system performance that IQC alone cannot provide**
- **Helps improve interlaboratory agreement**
- **Initiates corrective and preventative actions to resolve problems**

Furthermore, participating in an EQA scheme is often a prerequisite to gaining accreditation, ISO 15189 states, "the laboratory shall participate in interlaboratory comparisons such as those organised by external quality assessment schemes".

In short, participation in an EQA scheme will give labs greater confidence and will provide evidence that the patient results they are reporting are reliable and accurate.

BENEFITS



EXTENSIVE PROGRAMME OFFERING

Boasting the largest selection of molecular EQA programmes for infectious disease testing, you are sure to find what you're looking for.



FREQUENCY

Choose between one, two and four challenges* per year to suit your laboratory requirements. Reports are available within 2 weeks of the submission deadline (up to 4 weeks for the drug resistance / sequence based schemes), ensuring any corrective actions can be taken quickly.



HIGH QUALITY MATERIAL

The availability of whole pathogen samples in clinically relevant matrices mimics the performance of patient samples and ensures samples can be used to effectively monitor the performance of the entire testing process.



INTERNATIONAL ACCREDITATION

Where appropriate the EQA schemes are accredited to ISO 17043:2010 highlighting the superior quality and organisation of the QCMD scheme.



ONLINE EQA MANAGEMENT SYSTEM

IT EQA Management System (ITEMS) provides an online tool to easily manage all EQA activities from programme registration to submission of results and provision of EQA reports.



HIGH LEVEL OF PARTICIPATION

With over 10,000 participant registrations in more than 100 countries, peer groups are maximised, increasing statistical validity.



COMPREHENSIVE REPORTS

Individual reports are provided with each EQA challenge. In line with the requirements of ISO 17043:2010, they provide the laboratories with their results and performance assessment in relation to their EQA assessment group (peer review group).

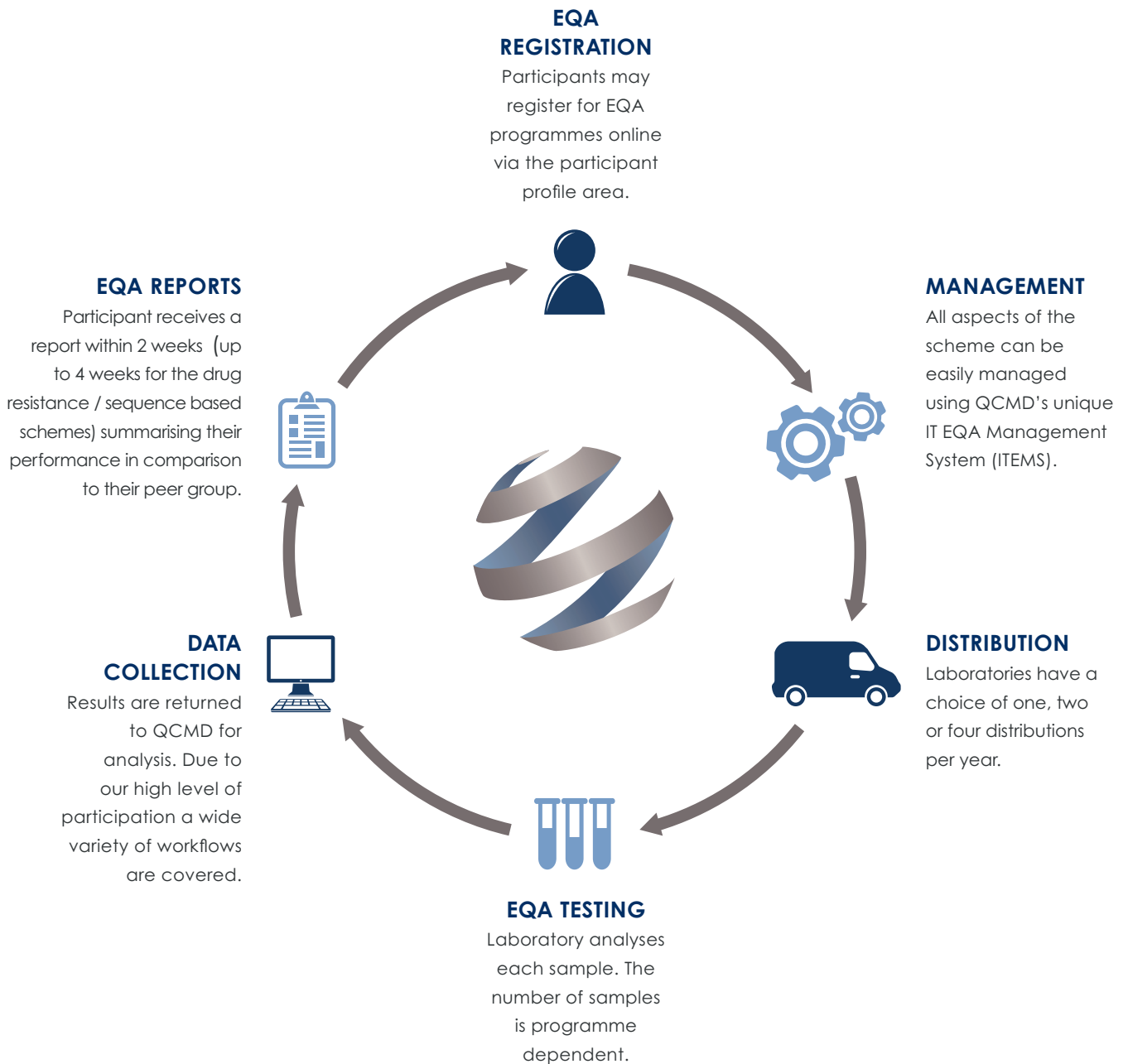
Supplementary reports which include scientific expert commentary may be provided at the end of the EQA cycle if appropriate.

*programme dependent

HOW IT WORKS

The QCMD portfolio is extensive covering over 300 target organisms across more than 90 EQA programmes and pilot studies.

The following diagram provides an overview of the schemes operation.



EQA GROUPS

BLOODBORNE VIRUS

The Bloodborne Virus (BBV) group of QCMD External Quality Assessment (EQA) schemes consists of pathogens that are detected from the blood. This includes human immunodeficiency virus (HIV), hepatitis B virus (HBV), hepatitis C virus (HCV) B19 virus (B19) and more recently hepatitis A virus (HAV), hepatitis E virus (HEV) and hepatitis D virus (HDV).

To compliment the detection and viral load determination schemes above a range of genotyping and drug resistance BBV EQA schemes are available.

For the drug resistance BBV EQA schemes different current resistance markers are included and emphasis is placed on the determination and interpretation of these resistance markers.

	Page Number		Page Number
B19 virus	15	Hepatitis C virus	24
HBV Dried Blood Spots	66	Hepatitis D virus	25
HBV Drug Resistance	21	Hepatitis E virus	25
HBV Genotyping	22	HIV-1 (DNA)	27
HCV Dried Blood Spots	66	HIV-1 (RNA)	27
HCV Drug Resistance	22	HIV-1 Dried Blood Spots	67
HCV Genotyping	23	HIV-1 Drug Resistance	28
Hepatitis A virus	23	HIV-1 Drug Resistance (Integrase)	28
Hepatitis B virus	24	HIV-2	29

EQA GROUPS

CENTRAL NERVOUS SYSTEM

Infections of the Central Nervous System (CNS) can occur indirectly via the blood following damage to the blood brain barrier or directly through intraneuronal routes. Encephalitis and meningitis are important CNS infections which can have viral, bacterial or parasitic origins.

Viral encephalitis can occur as a result of acute infection or as the consequence of latent infection. Common viral causes include herpes simplex virus (HSV), specific enteroviruses (EV), JC and BK virus, as well as Varicella-Zoster virus (VZV). Bacterial infections within the CNS such as meningitis can be a result of direct infection of the brain or may be due to underlying diseases which can lead to secondary CNS infection. Parasites such as *Toxoplasma gondii* can also cause CNS infections particularly in immunocompromised individuals.

In recent years significant advances have been made in understanding CNS pathogenesis with the development of molecular technologies for the diagnosis and monitoring of disease, the introduction of effective treatment therapies and, in some cases, the development of vaccines (e.g. Japanese encephalitis & rabies). The range of QCMD EQA schemes within this area focus on pathogens known to play a significant clinical role in CNS infection. The general aim of this group of EQA schemes is to assess the laboratories' ability in the detection and determination of the selected pathogen. Where appropriate pathogen load estimation is also evaluated.

	Page Number		Page Number
Arthropod-borne viruses	55	Herpes simplex virus 1 & 2	26
BK virus	16	Herpes simplex virus Drug Resistance	26
<i>Borrelia burgdorferi</i> spp. (Lyme Disease)	42	JC virus	33
Central nervous system CNS I (Viral Meningitis and Encephalitis)	56	Measles / Mumps	33
Central nervous system CNS II (Non-Viral Meningitis and Encephalitis)	57	Parechovirus	35
Chikungunya virus	16	<i>Toxoplasma gondii</i>	55
Dengue virus	19	Varicella-Zoster virus	38
Enterovirus	19	West Nile virus	39
Enterovirus typing	20	Zika virus	40

CONGENITAL INFECTIONS

The term congenital infection is used to describe those infections transmitted from mother to child either during pregnancy (Transplacental infection) or immediately after childbirth. They can be caused by viruses, bacteria and on occasion parasites. The ability of a particular pathogen to cross the placenta and infect the foetus /embryo is dependent on many factors including the mother's immune status. Primary infections during pregnancy can result in spontaneous abortion or major developmental disorders if undetected and left untreated.

In recent years the diagnosis of congenital infections has been significantly improved by the ability to obtain clinical samples such as blood through chorionic villus sampling. In addition, the application of molecular technologies has helped significantly in the diagnosis, monitoring, and treatment rationale. CMV Dried Blood Spots is one of the EQAs provided in this disease group.

	Page Number		Page Number
Chagas	64	<i>Toxoplasma gondii</i>	55
Cytomegalovirus Dried Blood Spots	18		

DRUG RESISTANCE

The ability of microorganisms to adapt and develop resistance to antimicrobials is natural and an evolutionary trait they have been employing for thousands of years. Hence there are many examples of drug resistant strains in viral, bacterial and parasitic diseases. However, it is well recognised that the over prescription of antimicrobials within clinical practice and their overuse in domestic products has helped to accelerate drug resistance, and led to the emergence of multidrug resistance.

QCMD has established a range of Drug Resistance EQA schemes covering a variety of pathogen types. The primary aims of these schemes are to assess the laboratory in their ability to detect and determine the presence of drug resistance at the molecular level. In addition some of the schemes also cover drug resistance interpretation.

	Page Number		Page Number
CMV Drug Resistance	17	HIV-1 Drug Resistance	28
Extended Spectrum β -lactamase and Carbapenemase	45	HIV-1 Drug Resistance (Integrase)	28
HBV Drug Resistance	21	Methicillin Resistant <i>Staphylococcus aureus</i>	48
HCV Drug Resistance	22	<i>Mycobacterium tuberculosis</i> Drug Resistance	49
Herpes simplex virus Drug Resistance	26	Vancomycin Resistant Enterococci	52

EQA GROUPS

EXOTIC/EMERGING DISEASES

A complex relationship exists between pathogen genetics, host and the environment. As a result, predicting the future emergence of exotic diseases is difficult. However, globalisation coupled with rapid increases in human populations over the last 50 years has played an important role. Local environmental changes such as deforestation due to urbanisation bring humans into closer contact with potential new pathogen vectors. These factors disturb the subtle balance between pathogen, host and the environment and create the opportunity for the emergence of new disease pathogens or the re-emergence of existing pathogens. These diseases can be caused by newly identified pathogens, pathogen strains such as SARS or the mutation of existing strains such as Influenza virus. In addition, the spread of known pathogens (e.g. West Nile virus & dengue virus) into new geographical areas leading to new potential endemics account for a large number of exotic / emerging diseases. The EQAs within this group focus on those emerging diseases that are frequently being identified within progressive geographic regions.

	Page Number		Page Number
Arthropod-borne viruses	55	MERS coronavirus	34
Babesia	63	Respiratory I Plus	59
Chagas	64	SARS-CoV-2	37
Chikungunya virus	16	SARS-CoV-2 Antigen Testing	37
Dengue virus	19	West Nile virus	39
<i>Francisella tularensis</i>	65	Yellow fever virus	39
Malaria	68	Zika virus	40

GASTROINTESTINAL DISEASES

Gastroenteritis can be caused by a wide variety of bacteria, viruses and parasites. It is often associated with severe inflammation of the gastrointestinal tract involving both the stomach and small intestine. This results in acute diarrhoea and vomiting.

Diagnosis is primarily based on clinical symptoms, but laboratory diagnosis on the etiological cause is often needed in order to support patient care. In recent years molecular diagnostic techniques such as real-time PCR have also been introduced for the laboratory diagnosis of gastroenteritis, including the ability to simultaneously screen for a wide range of enteric pathogens using multiplex assays. As a result, molecular diagnostic techniques are increasingly being used in the routine laboratory setting for detection, determination and surveillance of a wide range of enteric pathogens.

The general aim of this group of EQA schemes is to allow laboratories to assess their ability in the use of molecular diagnostic tests for a range of viral, bacterial and parasitic enteric pathogens.

	Page Number		Page Number
Adenovirus	15	<i>Helicobacter pylori</i>	46
Bacterial Gastroenteritis	56	Norovirus	34
<i>Clostridium difficile</i>	44	Parasitic Gastroenteritis	58
Diarrheagenic <i>Escherichia coli</i>	45	Viral Gastroenteritis	62

IMMUNOCOMPROMISED ASSOCIATED DISEASES

The treatment and management of patients with compromised immune systems has seen important developments in recent years with, for example, the introduction of novel multi-drug treatment regimes. As a result, the healthcare and management of immunocompromised patients has greatly improved. However, pathogen infection or viral reactivation remain significant contributors to morbidity and mortality in these patients.

A number of opportunistic parasitic, fungal and viral pathogens are of concern in the management of immunocompromised patients due to both acute infection and reactivation of latent virus in the immunocompromised host.

Advances in molecular diagnostics have allowed accurate pathogen assessment and quantitative monitoring, particularly of viral activity over time, which allows early and accurate pre-emptive intervention and management of antiviral drug therapy.

The range of QCMD EQA schemes within this area focus on pathogens known to play a significant clinical role in the management of immunocompromised patients. The general aim of this group of EQA schemes is to assess the ability of laboratories in the detection of the selected pathogen and where appropriate quantitative estimation is also evaluated.

	Page Number		Page Number
<i>Aspergillus</i> spp.	52	Epstein-Barr virus Whole Blood	21
Babesia	63	Human cytomegalovirus	29
BK virus	16	Human herpes virus 6	30
Candida spp.	53	JC virus	33
Chagas	64	<i>Pneumocystis jirovecii</i> pneumonia (PCP)	54
CMV Drug Resistance	17	Torque teno virus	38
Cytomegalovirus Whole Blood	18	<i>Toxoplasma gondii</i>	55
Epstein-Barr virus	20	Transplantation (viral)	62

MULTIPLE PATHOGEN/SYNDROMIC

Multiplex based molecular diagnostic tests offer the ability for the detection of a wide range of pathogens within a single diagnostic test.

Syndromic approaches to test respiratory, gastroenteritis and meningitis infections allows clinicians to identify the cause of infection from a wide range of pathogens often in a near patient, point of impact setting where rapid diagnosis aids faster clinical decision making and patient treatment. These technologies are generally used as a screening approach where identification of pathogens allow improved patient management at initial point of contact.

QCMD have introduced multi-pathogen/syndromic schemes to address this growing need in the clinical setting. A range of schemes cover respiratory infections, transplant associated infections, central nervous system infections, sexually transmitted infections and gastroenteritis infections caused by a range of aetiologies.

	Page Number		Page Number
Arthropod-borne viruses	55	Respiratory I plus	59
Bacterial Gastroenteritis	56	Respiratory II	59
Central Nervous System I (Viral Meningitis and Encephalitis)	56	Respiratory III	60
Central Nervous System II (Non-Viral Meningitis and Encephalitis)	57	Sepsis	60
<i>Chlamydia trachomatis</i> and <i>Neisseria gonorrhoea</i>	43	Sexually Transmitted Infections I	61
MALDI-TOF	57	Sexually Transmitted Infections II	61
Parasitic Gastroenteritis	58	Transplantation (viral)	62
Respiratory I	58	Viral Gastroenteritis	62

RESPIRATORY DISEASES

Respiratory tract infections (RTIs) are common conditions, experienced by most adults and children each year. They can affect both the upper and lower respiratory tract and range from the common cold to viral and bacterial pneumonia. For the young, the elderly and the immune compromised, RTIs can be a significant health threat if not managed effectively.

RTIs can be caused by a large number of bacterial, viral and fungal pathogens which have nearly indistinguishable physiological symptoms. This can increase the chances of undiagnosed or misdiagnosed infections leading to patients either not receiving critical medications, or receiving unnecessary antibiotics. The advance of molecular diagnostic techniques has improved our ability to rapidly determine the causative agents of RTIs and has the potential to improve patient management, control of nosocomial transmission and promote targeted therapy.

The Respiratory EQA schemes cover 17 of the major viral, bacterial and fungal causes of RTIs, focusing on the pathogen load and allowing assessment of the laboratories ability to accurately identify the species of interest at clinically relevant levels.

	Page Number		Page Number
Adenovirus	15	<i>Mycobacterium tuberculosis</i> Drug Resistance	49
Atypical mycobacterium	40	<i>Mycoplasma pneumoniae</i>	50
<i>Bordetella pertussis</i>	41	Parainfluenza virus	35
<i>Chlamydia psittaci</i>	43	<i>Pneumocystis jirovecii</i> pneumonia (PCP)	54
<i>Chlamydophila pneumoniae</i>	44	Respiratory I	58
Coronavirus	17	Respiratory I plus	59
Human metapneumovirus	30	Respiratory II	59
Influenza A & B virus	32	Respiratory III	60
Influenza Typing	32	Respiratory syncytial virus	36
<i>Legionella pneumophila</i>	47	Rhinovirus	36
Measles / Mumps	33	SARS-CoV-2	37
MERS coronavirus	34	SARS-CoV-2 Antigen Testing	37
<i>Mycobacterium tuberculosis</i>	48		

SEXUALLY TRANSMITTED INFECTIONS

Sexually transmitted infections (STIs) remain a major public health concern throughout the world with some infections reaching epidemic proportions in sexually active groups. As a result, a number of WHO and UN global strategies have been initiated in an attempt to control the spread of STIs.

STIs are the main preventable cause of infertility, particularly in women. However, some STIs remain asymptomatic before leading to serious reproductive complications and congenital infections, therefore appropriate diagnosis and treatment is essential.

Molecular diagnostic assays allow the accurate assessment of STIs in patients that present with similar symptoms or asymptomatic persons from at risk groups allowing early and accurate intervention and treatment.

The range of QCMD EQA schemes within this area focus on pathogens known to be the most common cause of STIs. The general aim of this group of EQA schemes is to assess the ability of laboratories in the detection of the selected pathogen.

	Page Number		Page Number
<i>Chlamydia trachomatis</i>	43	<i>Mycoplasma genitalium</i>	49
<i>Chlamydia trachomatis</i> and <i>Neisseria gonorrhoeae</i>	43	<i>Neisseria gonorrhoeae</i>	50
Herpes simplex virus 1 & 2	26	Sexually Transmitted Infections I	61
Herpes simplex virus Drug Resistance	26	Sexually Transmitted Infections II	61
Human Papillomavirus (PreservCyt)	31	Syphilis	51
Human Papillomavirus (SurePath)	31	<i>Trichomonas vaginalis</i>	54

TRANSPLANT ASSOCIATED DISEASES

Advances in transplant medicine, including the development of immunosuppressive agents, has greatly improved the prospects of transplant recipients. However, pathogen infection and in particular viral reactivation remain significant contributors to transplant patient morbidity and mortality.

A number of viruses are of particular concern, these include: human herpes virus₆ (HHV₆), human cytomegalovirus (CMV) and Epstein-Barr virus (EBV) along with human adenovirus (ADV), JC virus (JCV) and BK virus (BKV). Other opportunistic infections such as the parasite *Toxoplasma gondii* are also relevant. Advances in molecular diagnostics have allowed accurate pathogen assessment prior to transplant and accurate quantitative monitoring, particularly of viral activity over time, after the transplant has been performed. This in turn allows early and accurate pre-emptive intervention and antiviral drug therapy.

The range of QCMD EQA schemes within this area focus on those pathogens known to play a significant clinical role in transplant medicine. The general aim of this group of EQA schemes is to assess the ability of laboratories in the detection of the selected pathogen and where appropriate quantitative estimation is also evaluated.

	Page Number		Page Number
Adenovirus	15	Human cytomegalovirus	29
BK virus	16	JC virus	33
CMV Drug Resistance	17	Torque teno virus	38
Cytomegalovirus Whole Blood	18	<i>Toxoplasma gondii</i>	55
Epstein-Barr virus	20	Transplantation (viral)	62
Epstein-Barr virus Whole Blood	21		

EQA GROUPS

TYPING

Advances in the treatment and management of patient infection have seen important developments in recent years. In particular the introduction of novel antiviral drug therapies has improved the medium and long- term prospects of infected patients. However, the development of drug resistant pathogens is an increasing complication and remains a significant factor in the treatment of these patient groups.

The use of genotyping and sequencing technologies has allowed accurate pathogen assessment and monitoring of patient samples over time. This allows early and accurate determination of pathogen status. Which in turn allows pre- emptive intervention and management of antiviral drug therapy.

The range of QCMD EQA schemes within this area focus on pathogens known to play a significant clinical role in the management of infection. The general aim of this group of EQA schemes is to assess the ability of laboratories in the genetic determination of the selected pathogen and where appropriate the specific mutation points within the target gene.

	Page Number		Page Number
Bacterial 16S Ribosomal RNA	41	Herpes simplex virus Drug Resistance	26
CMV Drug Resistance	17	HIV-1 Drug Resistance	28
Enterovirus Typing	20	HIV-1 Drug Resistance (Integrase)	28
HBV Drug Resistance	21	Influenza Typing	32
HBV Genotyping	22	MALDI-TOF	57
HCV Drug Resistance	22	Methicillin Resistant <i>Staphylococcus aureus</i> Typing (epidemiology and outbreak studies)	47
HCV Genotyping	23	<i>Staphylococcus aureus</i> spa	51

OTHER

QCMD are continuously expanding our range of EQA schemes, some of which are outside the defined EQA groups listed above.

	Page Number		Page Number
Dermatophytosis	53	Group B Streptococcus	46
Viral Metagenomics NGS	69		

VIRAL EQA

ADENOVIRUS

ADVDNA23 - QAV054133

To assess the proficiency of laboratories in the detection and quantitation of adenovirus.

To assess the proficiency of laboratories in the detection of different adenovirus serotypes including currently circulating serotypes of interest.

Feature	Available format(s)	
Catalogue Number	QAV054133_1	QAV054133_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium and/or Plasma
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Condition	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

B19 VIRUS

B19DNA23 - QAV034116

To assess the proficiency of laboratories in the detection and quantitation of B19 virus.

Feature	Available format(s)	
Catalogue Number	QAV034116_1	QAV034116_2
Total Number of Challenges	1	2
Number of Panel Members	8	4
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Clinical material
Matrix Panel Format	Plasma
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.2 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

BK VIRUS

BKDNA23 - QAV144166

To assess the proficiency of laboratories molecular assays in detecting various types and concentrations of BK virus (BKV). To assess the proficiency of laboratories in the reliable quantitation of BKV viral load.

Feature	Available format(s)	
Catalogue Number	QAV144166_1	QAV144166_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium and/or Plasma and/or Urine
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

CHIKUNGUNYA VIRUS

CHIKV23 - QAV154175

To assess the laboratory's ability to detect chikungunya virus using their routine molecular diagnostic platform and procedures.

Feature	Available format(s)
Catalogue Number	QAV154175_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	Lyophilised
Panel Sample Pre-treatment Requirement	Reconstitution of lyophilised material
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Lyophilised Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

CMV DRUG RESISTANCE

CMVDR23- QAV144169

To assess the ability to detect CMV drug resistance mutations in kinase UL97 and polymerase UL54 genes using sequencing techniques.

Feature	Available format(s)
Catalogue Number	QAV144169_1
Total Number of Challenges	1
Number of Panel Members	5
Distribution / Testing Period	Q2

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma and/or Physiological Buffer
Panel Member Target Range	various mutations - kinase (UL97) and polymerase (UL54) genes
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Sequence Analysis
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Condition	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

CORONAVIRUS

CVRNA23 - QAV064137

To assess the proficiency of laboratories in the detection of coronavirus. To assess the proficiency of laboratories in the detection of different coronavirus genotypes.

Feature	Available format(s)
Catalogue Number	QAV064137_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q2

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering Clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

CYTOMEGALOVIRUS DRIED BLOOD SPOTS

CMVDBS23 - QAV064127

To assess the performance of laboratories in the detection of clinically relevant levels of human cytomegalovirus (CMV) from dried blood spots.

Feature	Available format(s)
Catalogue Number	QAV064127_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Dried Blood Spots
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	2x50µl
Panel Sample Pre-treatment Requirement	DNA extraction from dried blood spot
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

CYTOMEGALOVIRUS WHOLE BLOOD

CMVWB23 - QAV124150

To evaluate the ability of laboratories in the detection of CMV from whole blood samples. To assess the precision of molecular assays at clinically relevant viral loads.

Feature	Available format(s)	
Catalogue Number	QAV124150_1	QAV124150_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Whole Blood
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-30°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

DENGUE VIRUS

DENVRNA23 - QAV114148

To assess the proficiency of laboratories in the detection of dengue virus. To assess the proficiency of laboratories in distinguishing dengue virus from other flaviviruses.

Feature	Available format(s)
Catalogue Number	QAV114148_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	Lyophilised
Panel Sample Pre-treatment Requirement	Reconstitution of lyophilised material
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Lyophilised Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

ENTEROVIRUS

EVRNA23 - QAV984104

To assess the ability of laboratories molecular assays to detect different types and concentrations of enterovirus (EV). To review the performance of laboratories quantitative EV molecular assays.

Feature	Available format(s)	
Catalogue Number	QAV984104_1	QAV984104_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured virus and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

ENTEROVIRUS TYPING

EVTP23 - QAV164185

To assess laboratories ability to correctly identify specific enterovirus types using their routine molecular method and procedures.

Feature	Available format(s)
Catalogue Number	QAV164185_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q1

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering Clinical range
Panel Member Sample Volume	1.0ml
Panel Analysis type	Molecular typing
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

EPSTEIN-BARR VIRUS

EBVDNA23 - QAV024121

To assess the proficiency of laboratories in the detection and quantitation of Epstein-Barr virus (EBV).

Feature	Available format(s)	
Catalogue Number	QAV024121_1	QAV024121_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium and/or Plasma
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

EPSTEIN-BARR VIRUS WHOLE BLOOD

EBVWB23 - QAV134161

To assess the proficiency of laboratories in the detection and quantitation of Epstein-Barr virus (EBV) in whole blood samples.

Feature	Available format(s)	
Catalogue Number	QAV134161_1	QAV134161_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Whole Blood
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-30°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HBV DRUG RESISTANCE

HBVDR23 - QAV124160

To assess the performance of laboratories in the detection of drug resistance mutations in the hepatitis B virus (HBV) DNA polymerase gene using sequencing techniques and/or LiPA technology.

Feature	Available format(s)
Catalogue Number	QAV124160_1
Total Number of Challenges	1
Number of Panel Members	5
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma
Panel Member Target Range	Various mutations – DNA polymerase
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Sequence Analysis
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HBV GENOTYPING

HBVGT23 - QAV064118

To assess the proficiency of laboratories in the correct genotyping of hepatitis B virus (HBV) using molecular methods.

Feature	Available format(s)
Catalogue Number	QAV064118_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q1

Specifications	
Sample NA Target Source	Clinical material
Genotypic Variant	Various HBV genotypes
Matrix Panel Format	Plasma
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.2 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Molecular typing
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HCV DRUG RESISTANCE

HCVDR23 - QAV134167

The aim of the HCVDR EQA is to assess the performance of laboratories in the detection of drug resistance mutations in the hepatitis C virus (HCV) genotypes 1 and 3 (NS3 and NS5 regions) using sequencing techniques.

Feature	Available format(s)
Catalogue Number	QAV134167_1
Total Number of Challenges	1
Number of Panel Members	5
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma
Panel Member Target Range	Various mutations – NS3 and NS5a regions
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Sequence Analysis
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HCV GENOTYPING

HCVGT23 - QAV034117

To assess the proficiency of laboratories in the correct genotyping of hepatitis C virus (HCV) using molecular methods.

Feature	Available format(s)
Catalogue Number	QAV034117_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q1

Specifications	
Sample NA Target Source	Clinical material
Genotypic Variant	Various HCV genotypes and subtypes
Matrix Panel Format	Plasma
Panel Member Target Range	Covering clinical range
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Molecular typing
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HEPATITIS A VIRUS

HAVRNA23 - QAV124156

To evaluate the ability of laboratories in the molecular detection of hepatitis A virus (HAV) in terms of sensitivity and specificity.

Feature	Available format(s)	
Catalogue Number	QAV124156_1	QAV124156_2
Total Number of Challenges	1	2
Number of Panel Members	8	4
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.2 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HEPATITIS B VIRUS

HBVDNA23 - QAV994110

To assess the proficiency of laboratories in the detection and quantitation of hepatitis B virus (HBV). To assess the proficiency of laboratories is the detection and quantitation of different HBV genotypes.

Feature	Available format(s)		
Catalogue Number	QAV994110_1	QAV994110_2	QAV994110_4
Total Number of Challenges	1	2	4
Number of Panel Members	8	4	4
Distribution / Testing Period	Q3	Q1 & Q3	Q1, Q2, Q3 & Q4

Specifications	
Sample NA Target Source	Cultured virus and/or Clinical material
Matrix Panel Format	Plasma
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.2 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HEPATITIS C VIRUS

HCVRNA23 - QAV994112

To assess the proficiency of laboratories in the detection and quantitation of hepatitis B virus (HBV). To assess the proficiency of laboratories is the detection and quantitation of different HBV genotypes.

Feature	Available format(s)		
Catalogue Number	QAV994112_1	QAV994112_2	QAV994112_4
Total Number of Challenges	1	2	4
Number of Panel Members	8	4	4
Distribution / Testing Period	Q3	Q1 & Q3	Q1, Q2, Q3 & Q4

Specifications	
Sample NA Target Source	Clinical material
Matrix Panel Format	Plasma
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.2 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HEPATITIS D VIRUS

HDV23 - QAV144170

To evaluate laboratories in the detection of HDV within the routine clinical setting.

Feature	Available format(s)
Catalogue Number	QAV144170_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Analysis type	Qualitative & Quantitative
Panel Member Sample Volume	1.2 ml
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HEPATITIS E VIRUS

HEVRNA23 - QAV124157

To evaluate the ability of laboratories in the detection and quantification of hepatitis E virus (HEV).

Feature	Available format(s)
Catalogue Number	QAV124157_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma
Panel Member Target Range	Covering Clinical range
Panel Member Sample Volume	0.6 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HERPES SIMPLEX VIRUS 1 & 2

HSVDNA23 - QAV994105

To assess the ability of laboratories molecular assays to detect different types and concentrations of herpes simplex virus (HSV).To review the performance of laboratories quantitative HSV molecular assays.

Feature	Available format(s)	
Catalogue Number	QAV994105_1	QAV994105_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured virus and/or Clinical material
Matrix Panel Format	Transport medium and/or synthetic CSF
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HERPES SIMPLEX VIRUS DRUG RESISTANCE

HSVDR23 - QAV164184

To assess the performance of laboratories in the detection of drug resistance mutations in the herpes simplex virus thymidine kinsase (UL23) and DNA polymerase (UL30) genes using sequencing techniques.

Feature	Available format(s)
Catalogue Number	QAV164184_1
Total Number of Challenges	1
Number of Panel Members	5
Distribution / Testing Period	Q1

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Various mutations - Thymidine Kinase (UL23) and DNA polymerase (UL30)
Panel Member Sample Volume	1.0ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Sequence Analysis
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HIV-1 (DNA)

HIVDNA23 - QAV034114

To assess the proficiency of laboratories in the detection of human immunodeficiency virus type 1 (HIV-1) pro-viral DNA.

Feature	Available format(s)	
Catalogue Number	QAV034114_1	QAV034114_2
Total Number of Challenges	1	2
Number of Panel Members	8	4
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured proviral cells
Matrix Panel Format	Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	0.1 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HIV-1 (RNA)

HIVRNA23 - QAV994108

To assess the proficiency of laboratories in detection and quantitation of human immunodeficiency virus (HIV) RNA. To assess the proficiency of laboratories in detection and quantitation of different HIV genotypes.

Feature	Available format(s)		
Catalogue Number	QAV994108_1	QAV994108_2	QAV994108_4
Total Number of Challenges	1	2	4
Number of Panel Members	8	4	4
Distribution / Testing Period	Q3	Q1 & Q3	Q1, Q2, Q3 & Q4

Specifications	
Sample NA Target Source	Cultured virus and/or Clinical material
Matrix Panel Format	Plasma
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.2 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HIV-1 DRUG RESISTANCE

HIVDR23 - QAV024131

To assess the performance of laboratories in the detection of drug resistance mutations in the HIV-1 protease and reverse transcriptase genes.

Feature	Available format(s)
Catalogue Number	QAV024131_1
Total Number of Challenges	1
Number of Panel Members	5
Distribution / Testing Period	Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma
Panel Member Target Range	Various mutations - reverse transcriptase (RT) and protease (PR) genes
Panel Member Sample Volume	1.0ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Sequence Analysis
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HIV-1 DRUG RESISTANCE (INTEGRASE)

HIVDRint23 - QAV114146

To assess the performance of laboratories in the detection of drug resistance mutations in the HIV-1 integrase gene using sequencing techniques.

Feature	Available format(s)
Catalogue Number	QAV114146_1
Total Number of Challenges	1
Number of Panel Members	5
Distribution / Testing Period	Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma
Panel Member Target Range	Various mutations - integrase (INT) gene
Panel Member Sample Volume	1.0ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Sequence Analysis
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HIV-2

HIV2_23 - QAV204212

To assess the proficiency of laboratories in the detection and quantitation of human immunodeficiency virus type2 (HIV-2).

Feature	Available format(s)	
Catalogue Number	QAV204212_1	QAV204212_2
Total Number of Challenges	1	2
Number of Panel Members	8	4
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured material and/or Clinical material
Matrix Panel Format	Plasma
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.2ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HUMAN CYTOMEGALOVIRUS

CMVDNA23 - QAV014120

To assess the proficiency of laboratories in the detection and quantitation of human cytomegalovirus (CMV)

Feature	Available format(s)	
Catalogue Number	QAV014120_1	QAV014120_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HUMAN HERPES VIRUS 6

HHV6DNA23 - QAV084119

To assess the proficiency of laboratories' molecular assays in the detection of various types of human herpes virus 6 (HHV6). To assess the proficiency of laboratories in the reliable quantitation of HHV6 viral load.

Feature	Available format(s)	
Catalogue Number	QAV084119_1	QAV084119_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Genotypic Variant	Subtypes A and B
Matrix Panel Format	Transport Medium and/or Plasma
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HUMAN METAPNEUMOVIRUS

MPV23 - QAV054135

To assess the sensitivity and specificity of laboratories in the detection of human metapneumovirus (MPV). To assess the ability of laboratories in the detection of different human MPV types.

Feature	Available format(s)
Catalogue Number	QAV054135_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q2

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HUMAN PAPILLOMAVIRUS (PRESERV CYT)

HPVPRES23 - QAV094130

The aim of this EQA programme is to assess the proficiency of laboratories in the detection of different high risk Human Papillomavirus types within a PreservCyt matrix.

Feature	Available format(s)	
Catalogue Number	QAV094130_1	QAV094130_2
Total Number of Challenges	1	2
Number of Panel Members	12	6
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Clinical material and/or cell lines containing HPV
Matrix Panel Format	Transport Medium (PreservCyt)
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	4.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	15-30°C / Liquid Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

HUMAN PAPILLOMAVIRUS (SUREPATH)

HPVSURE23 - QAV184204

To assess the proficiency of laboratories in the detection of different high risk Human Papillomavirus types within a SurePath™ matrix.

Feature	Available format(s)
Catalogue Number	QAV184204_1
Total Number of Challenges	1
Number of Panel Members	12
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Clinical material and/or cell lines containing HPV
Matrix Panel Format	Transport Medium (SurePath)
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	Lyophilised
Panel Sample Pre-treatment Requirement	Reconstitution of lyophilised material
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Lyophilised Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

INFLUENZA A & B VIRUS

INFRNA23 - QAV054134

To assess the proficiency of laboratories in detection of influenza virus RNA.
To assess the proficiency of laboratories in distinguishing influenza virus A and B.

Feature	Available format(s)	
Catalogue Number	QAV054134_1	QAV054134_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

INFLUENZA TYPING

INFTP23 - QAV064138

To assess the proficiency of laboratories in the detection of different influenza virus types, subtypes and lineages. To assess the proficiency of laboratories in the typing and subtyping/lineage determination of influenza viruses.

Feature	Available format(s)
Catalogue Number	QAV064138_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Molecular typing
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

JC VIRUS

JCDNA23 - QAV074106

To assess the proficiency of laboratories molecular assays in detecting various types and concentrations of JC virus (JCV). To assess the proficiency of laboratories in the reliable quantitation of JCV viral load.

Feature	Available format(s)	
Catalogue Number	QAV074106_1	QAV074106_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium and/or Plasma
Units of Measurement	The primary unit is IU/ml however other units will be accepted
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

MEASLES / MUMPS

MM23 - QAV144171

To assess the proficiency of laboratories in the detection of mumps and/or measles using routine molecular methods.

Feature	Available format(s)
Catalogue Number	QAV144171_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

MERS CORONAVIRUS

MERS23 - QAV154181

To assess the proficiency of laboratories molecular technologies for the detection and determination of MERS-CoV from other coronaviruses.

Feature	Available format(s)
Catalogue Number	QAV154181_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q2

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering Clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

NOROVIRUS

NVRNA23 - QAV084139

To assess the specificity and sensitivity of laboratories in the detection of norovirus. To assess the ability of the laboratories to detect different norovirus genogroups.

Feature	Available format(s)	
Catalogue Number	QAV084139_1	QAV084139_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium and/or Physiological Buffer and/or Synthetic Faecal Matrix
Panel Member Sample Volume	1.0 ml VTM, 0.1 ml Buffer
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical or semi-processed samples
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

PARAINFLUENZA VIRUS

PINFRNA23 - QAV064136

To assess the proficiency of laboratories in the detection of parainfluenza virus.

To assess the proficiency of laboratories in the detection of different parainfluenza virus types.

Feature	Available format(s)
Catalogue Number	QAV064136_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q2

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering Clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

PARECHOVIRUS

PEVRNA23 - QAV114145

To assess the ability of laboratories molecular assays to detect different types and concentrations of parechovirus.

Feature	Available format(s)	
Catalogue Number	QAV114145_1	QAV114145_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured virus and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

RESPIRATORY SYNCYTIAL VIRUS

RSV23 - QAV054142

To assess the specificity and sensitivity of laboratories in the detection of respiratory syncytial virus (RSV). To assess the ability of laboratories in the detection of different RSV types.

Feature	Available format(s)	
Catalogue Number	QAV054142_1	QAV054142_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

RHINOVIRUS

RVRNA23 - QAV064143

To assess the proficiency of laboratories in the detection of rhinovirus.

To assess the proficiency of laboratories in the detection of different rhinovirus genotypes

Feature	Available format(s)
Catalogue Number	QAV064143_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q2

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

SARS-COV-2

SCV2_23 - QAV204215

To assess the proficiency of laboratories in the detection of SARS-CoV-2 including variants of concern (VOC).
To assess the proficiency of laboratories in the differentiation of different coronavirus genotypes.

Feature	Available format(s)			
Catalogue Number	QAV204215_1A	QAV204215_1B	QAV204215_1C	QAV204215_1D
Total Number of Challenges	1	1	1	1
Number of Panel Members	5	5	5	5
Distribution / Testing Period	Q1	Q2	Q3	Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

SARS-COV-2 ANTIGEN TESTING

SCV2Ag23 – QAS214224

To assess the proficiency of laboratories in the detection of SARS-CoV-2 antigen including variants of concern (VOC).

This EQA programme is aimed at both laboratory based immunoassays as well as those used within the Point of Care (PoC) setting such as rapid lateral flow antigen tests and PoC analysers.

Feature	Available format(s)			
Catalogue Number	QAS214224_1A	QAS214224_1B	QAS214224_1C	QAS214224_1D
Total Number of Challenges	1	1	1	1
Number of Panel Members	5	5	5	5
Distribution / Testing Period	Q1	Q2	Q3	Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	0.5 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various antigen testing methodologies
Storage / Shipment Conditions	Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

TORQUE TENO VIRUS

TTV23 - QAV184203

The aim of the Torque Teno Virus (TTV) EQA is to assess laboratories ability to detect TTV using routine molecular diagnostic platform and procedures.

Feature	Available format(s)
Catalogue Number	QAV184203_1
Total Number of Challenges	1
Number of Panel Members	6
Distribution / Testing Period	Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma and/or Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

VARICELLA-ZOSTER VIRUS

VZVDNA23 - QAV034103

To assess the ability of laboratories molecular assays to detect different concentrations of Varicella-Zoster virus (VZV). To review the performance of laboratories quantitative VZV molecular assays.

Feature	Available format(s)	
Catalogue Number	QAV034103_1	QAV034103_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured virus and/or Clinical material
Matrix Panel Format	Transport medium and/or synthetic CSF
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

WEST NILE VIRUS

WNVRNA23 - QAV104141

To assess the proficiency of laboratories in the detection of West Nile virus.

To determine the proficiency of laboratories in distinguishing West Nile virus from other flaviviruses.

Feature	Available format(s)
Catalogue Number	QAV104141_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	Lyophilised
Panel Sample Pre-treatment Requirement	Reconstitution of lyophilised material
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Lyophilised Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

YELLOW FEVER VIRUS

YFV23 - QAV194207

To assess the proficiency of laboratories in the detection of yellow fever virus.

To determine the proficiency of laboratories in distinguishing yellow fever virus from other flaviviruses.

Feature	Available format(s)
Catalogue Number	QAV194207_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	Lyophilised
Panel Sample Pre-treatment Requirement	Reconstitution of lyophilised material
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Lyophilised Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

ZIKA VIRUS

ZIKA23 - QAV164186

To assess the proficiency of laboratories in the detection of Zika virus and determine the proficiency of laboratories in distinguishing Zika virus from other flaviviruses.

Feature	Available format(s)
Catalogue Number	QAV164186_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	Lyophilised
Panel Sample Pre-treatment Requirement	Reconstitution of lyophilised material
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Lyophilised Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

ATYPICAL MYCOBACTERIUM

NTM23 - QAB194208

To assess the proficiency of laboratories to detect atypical mycobacterium or non-tuberculous mycobacteria (NTM).

Feature	Available format(s)
Catalogue Number	QAB194208_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q1

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Liquid Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

BACTERIAL 16S RIBOSOMAL RNA

B16SrRNA23 - QAB164183

To assess the proficiency of laboratories to detect, identify and interpret which bacterial species are provided within each panel member using their routine 16S rRNA molecular diagnostic procedures.

Feature	Available format(s)
Catalogue Number	QAB164183_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Physiological Buffer
Panel Member Target Range	Covering Clinical range
Panel Member Sample Volume	0.5 ml
Panel Analysis type	Molecular typing
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

BORDETELLA PERTUSSIS

BPDNA23 - QAB094132

To assess the proficiency of laboratories in the detection of *Bordetella pertussis*.

Feature	Available format(s)
Catalogue Number	QAB094132_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q2

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

BORRELIA BURGdorFERI SPP. (LYME DISEASE)

BbDNA23 - QAB114147

To assess the qualitative detection of *B. burgdorferi* sensu lato genospecies complex at different concentrations.

Feature	Available format(s)
Catalogue Number	QAB114147_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Microbiological Medium and/or Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

CHLAMYDIA PSITTACI

CPS23 - QAB134165

To assess the laboratories ability in the molecular detection of *Chlamydia psittaci*.

Feature	Available format(s)
Catalogue Number	QAB134165_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q2

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

CHLAMYDIA TRACHOMATIS

CTDNA23 - QAB004101

To assess the qualitative performance of laboratories molecular assays in detecting *Chlamydia trachomatis* at various concentrations.

To assess the ability of laboratories molecular assays to correctly identify different *C. trachomatis* strains.

Feature	Available format(s)	
Catalogue Number	QAB004101_1	QAB004101_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured bacteria and/or Clinical material
Matrix Panel Format	Urine and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	4.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

CHLAMYDIA TRACHOMATIS AND NEISSERIA GONORRHOEAE

CTNG23 - QAB174191

To assess proficiency of laboratories in the detection of *Chlamydia trachomatis* and *Neisseria gonorrhoeae* using molecular technologies.

Feature	Available format(s)	
Catalogue Number	QAB174191_1	QAB174191_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured bacteria and/or Clinical material
Matrix Panel Format	Urine and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	4.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

CHLAMYDOPHILA PNEUMONIAE

CP23 - QAB084107

To assess the proficiency of laboratories in the correct detection of *Chlamydomphila pneumoniae*.

Feature	Available format(s)
Catalogue Number	QAB084107_1
Total Number of Challenges	1
Number of Panel Members	5
Distribution / Testing Period	Q2

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Bronchoalveolar Lavage (BAL) and/or Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	0.5 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

CLOSTRIDIUM DIFFICILE

CDDNA23 - QAB084125

A terminology update in the Clostridium field has introduced a name change from *Clostridium difficile* to *Clostridioides difficile* this has been adopted by the European Study Group for *Clostridium difficile*. Please note that QCMD will however continue to refer to this scheme and associated pathogens as *Clostridium difficile* at this time.

To assess the proficiency of laboratories in the molecular detection of *Clostridium difficile*.

Feature	Available format(s)	
Catalogue Number	QAB084125_1	QAB084125_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Microbiological Medium and/or Synthetic Faecal Matrix
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

DIARRHEAGENIC ESCHERICHIA COLI

E.COLI23 - QAB154179

To assess laboratories ability to detect diarrheagenic *E. coli* strains using their routine molecular diagnostic platform and procedures.

Feature	Available format(s)
Catalogue Number	QAB154179_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Synthetic Faecal Matrix and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Molecular Typing
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

EXTENDED SPECTRUM β -LACTAMASE AND CARBAPENEMASE

ESBL23 - QAB134162

To assess the laboratories ability to detect β -lactamase and carbapenemase coding genes in a clinical setting using their routine molecular diagnostic procedures.

Feature	Available format(s)
Catalogue Number	QAB134162_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Genotypic Variant	Various drug resistance strains
Matrix Panel Format	Physiological Buffer
Panel Member Sample Volume	0.5 ml
Panel Analysis type	Molecular typing
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

GROUP B STREPTOCOCCUS

GBS23 - QAB174200

To assess the laboratories ability in the qualitative detection of group B Streptococcus using their routine molecular diagnostic procedures.

Feature	Available format(s)
Catalogue Number	QAB174200_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q4

Specifications	
Sample NA Target Source	Cultured material and/or Clinical material
Matrix Panel Format	Plasma and/or Synthetic CSF and/or Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

HELICOBACTER PYLORI

H.PYLORI23 - QAB164190

To assess the laboratories ability in the qualitative detection of *H. pylori* and where appropriate, the identification of *H. pylori* antibiotic resistance status using their routine molecular diagnostic procedures.

Feature	Available format(s)
Catalogue Number	QAB164190_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Synthetic Faecal Matrix and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

LEGIONELLA PNEUMOPHILA

LPDNA23 - QAB044122

To assess proficiency of laboratories in the detection of *Legionella pneumophila*.

Feature	Available format(s)
Catalogue Number	QAB044122_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q1

Specifications	
Sample NA Target Source	Cultured bacteria and/or Clinical material
Matrix Panel Format	Bronchoalveolar lavage (BAL) and/or Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	0.5 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS TYPING (EPIDEMIOLOGY AND OUTBREAK STUDIES)

MRSATP23 - QAB074128

To assess the proficiency of laboratories in the molecular typing for outbreak analysis of *Methicillin Resistant Staphylococcus aureus*.

Feature	Available format(s)
Catalogue Number	QAB074128_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Microbiological Medium and/or Transport Medium
Panel Member Target Range	Genetic variants of <i>Staphylococcus aureus</i>
Panel Member Sample Volume	0.2 ml
Panel Sample Pre-treatment Requirement	Culture followed by standard NA extraction
Panel Analysis type	Molecular typing
Panel Testing	Evaluated by various methodologies
Storage / Shipment Conditions	2-8°C / Liquid Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS

MRSADNA23 - QAB064124

To assess the performance of laboratories in the detection of *Methicillin Resistant Staphylococcus aureus*.

Feature	Available format(s)
Catalogue Number	QAB064124_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Microbiological Medium and/or Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Liquid Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

MYCOBACTERIUM TUBERCULOSIS

MTBDNA23 - QAB014129

To assess the proficiency of laboratories in the molecular detection of *Mycobacterium tuberculosis* complex.

Feature	Available format(s)	
Catalogue Number	QAB014129_1	QAB014129_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Sputum and/or Synthetic Sputum and/or Synthetic CSF
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Sample Pre-treatment Requirement	Routine respiratory sample treatment
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Liquid Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

MYCOBACTERIUM TUBERCULOSIS DRUG RESISTANCE

MTBDR23 - QAB194209

To assess the proficiency of laboratories to detect and differentiate MTB drug resistance strains using their routine molecular diagnostic procedures.

Feature	Available format(s)
Catalogue Number	QAB194209_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Genotypic Variant	Various drug resistance strains
Matrix Panel Format	Sputum and/or Synthetic Sputum and/or Synthetic CSF
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Molecular typing
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Liquid Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

MYCOPLASMA GENITALIUM

MG23 - QAB184205

To assess the performance of laboratories in the detection of *Mycoplasma genitalium*.

Feature	Available format(s)
Catalogue Number	QAB184205_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured material and/or Clinical material
Matrix Panel Format	Transport medium and/or Urine and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	4.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

MYCOPLASMA PNEUMONIAE

MP23 - QAB174192

To assess the proficiency of laboratories in the correct detection of *Mycoplasma pneumoniae*.

Feature	Available format(s)
Catalogue Number	QAB174192_1
Total Number of Challenges	1
Number of Panel Members	5
Distribution / Testing Period	Q2

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Bronchoalveolar Lavage (BAL) and/or Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	0.5 ml
Panel Sample Pre-treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

NEISSERIA GONORRHOEAE

NGDNA23 - QAB034126

To assess proficiency of laboratories in the detection of *Neisseria gonorrhoeae* using molecular technologies.

Feature	Available format(s)	
Catalogue Number	QAB034126_1	QAB034126_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured bacteria and/or Clinical material
Matrix Panel Format	Urine and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	4.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

STAPHYLOCOCCUS AUREUS SPA

SASPA23 - QAB134164

To assess the laboratories ability in the use of spa typing as a technique for the identification of *Staphylococcus aureus*.

Feature	Available format(s)
Catalogue Number	QAB134164_1
Total Number of Challenges	1
Number of Panel Members	6
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Microbiological Medium and/or Transport Medium
Panel Member Sample Volume	0.2 ml
Panel Analysis type	Molecular typing
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Liquid Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

SYPHILIS

SYPH23 - QAB154180

To assess laboratories ability to detect *Treponema pallidum* using their routine molecular diagnostic platform and procedures.

Feature	Available format(s)
Catalogue Number	QAB154180_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Urine and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL EQA

VANCOMYCIN RESISTANT ENTEROCOCCI

VRE23 - QAB134163

This EQA will focus on the laboratories ability to detect and determine different VRE in clinically relevant sample types using molecular techniques.

Feature	Available format(s)
Catalogue Number	QAB134163_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Genotypic Variant	Various drug resistance strains
Matrix Panel Format	Microbiological Medium and/or Transport Medium
Panel Member Sample Volume	0.5 ml
Panel Analysis type	Molecular typing
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

FUNGAL EQA

ASPERGILLUS SPP.

ASPDNA23 - QAF104140

To assess the qualitative detection of Aspergillus species at different concentrations.

Feature	Available format(s)
Catalogue Number	QAF104140_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma and/or Physiological Buffer and/or Synthetic Sputum
Panel Member Target Range	Covering Clinical Range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative, Quantative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

CANDIDA SPP.

CANDNA23 - QAF124151

To evaluate the ability of laboratories to use molecular techniques for detection of Candida species.

Feature	Available format(s)
Catalogue Number	QAF124151_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma and/or Physiological Buffer
Panel Member Target Range	Covering clinical and analytical range
Sputum	1.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

DERMATOPHYTOSIS

DERMA23 - QAF164187

To assess laboratories ability to detect dermatophytes using their routine molecular diagnostic platform and procedures.

Feature	Available format(s)
Catalogue Number	QAF164187_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

FUNGAL EQA

PNEUMOCYSTIS JIROVECI PNEUMONIA (PCP)

PCPDNA23 - QAF114144

To assess laboratories ability in the molecular detection of *Pneumocystis jirovecii*.

To assess the sensitivity of molecular assays in routine clinical use for the detection of *P. jirovecii*.

Feature	Available format(s)
Catalogue Number	QAF114144_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Clinical material
Matrix Panel Format	Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis Type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

PARASITIC EQA

TRICHOMONAS VAGINALIS

TV23 - QAP184202

To assess the performance of laboratories in the detection of *Trichomonas vaginalis*.

Feature	Available format(s)
Catalogue Number	QAP184202_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport medium, Urine and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	4.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

PARASITIC EQA

TOXOPLASMA GONDII

TGDNA23 - QAP044123

To assess the qualitative detection of *Toxoplasma gondii* at different concentrations.

Feature	Available format(s)	
Catalogue Number	QAP044123_1	QAP044123_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Amniotic Fluid and/or Plasma
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	Lyophilised
Panel Sample Pre-treatment Requirement	Reconstitution of lyophilised material
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Lyophilised Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

MPP EQA

ARTHROPOD-BORNE VIRUSES

ARBO23 - QAM194206

The Arthropod-borne virus EQA will focus on the molecular detection and determination of different arthropod-borne viruses (including viruses from Flavi-, Toga-, Bunya-, and/or Reoviridae families). The panel is designed to represent various clinical scenarios (fever, haemorrhagic symptoms and/or neurological illness) and may include medically important arboviruses such as tick-borne encephalitis viruses, sandfly fever viruses, Japanese encephalitis viruses, Rift Valley fever viruses, Usutu virus, Murray Valley encephalitis virus, or St. Louis encephalitis virus. Participating laboratories will be expected to test each panel using their appropriate molecular methods and report their individual test results to QCMD.

Feature	Available format(s)
Catalogue Number	QAM94206_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	Lyophilised
Panel Sample Pre-Treatment Requirement	Reconstitution of lyophilised material
Panel Analysis Type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C /Lyophilised Ambient
Accreditation/Regulatory Status	Accredited to ISO17043

BACTERIAL GASTROENTERITIS

GASTROB23 - QAB124153

Different species of pathogenic bacteria are known to cause gastroenteritis. The panel members of this EQA will resemble clinical samples and may include current clinically relevant strains of Salmonella, Shigella, Yersinia, E.coli 0157, C. difficile or Campylobacter species. The aim of the Bacterial Gastroenteritis EQA is to assess laboratories ability to detect a range of bacterial pathogens known to cause gastroenteritis using their routine molecular diagnostic platform and procedures.

Feature	Available format(s)	
Catalogue Number	QAB124153_1	QAB124153_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Synthetic Faecal Matrix and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative.
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

CENTRAL NERVOUS SYSTEM I (VIRAL MENINGITIS AND ENCEPHALITIS)

CNSI23 - QAV174195

The central nervous system I (viral meningitis and encephalitis) EQA scheme will focus on the molecular detection and determination of various enterovirus, parechovirus, herpes simplex virus 1/2, Varicella-Zoster virus and JC virus strains. The panel is designed to represent various clinical scenarios. Participating laboratories will be expected to test each panel using their appropriate molecular methods and report their individual test results to QCMD.

Feature	Available format(s)	
Catalogue Number	QAV174195_1	QAV174195_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured material and/or Clinical material
Matrix Panel Format	Synthetic CSF and/or Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

CENTRAL NERVOUS SYSTEM II (NON-VIRAL MENINGITIS AND ENCEPHALITIS)

CNSII23 - QAM174196

The central nervous system II (non-viral meningitis and encephalitis) EQA scheme will focus on the molecular detection and determination of various *Listeria* spp, *Neisseria meningitidis*, *Streptococcus pneumoniae*, *Streptococcus agalactiae*, *Escherichia coli* K1, *Cryptococcus* spp., *Aspergillus* spp. or *Haemophilus influenzae* strains. The panel is designed to represent various clinical scenarios. Participating laboratories will be expected to test each panel using their appropriate molecular methods and report their individual test results to QCMD.

Feature	Available format(s)	
Catalogue Number	QAM174196_1	QAM174196_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured material and/or Clinical material
Matrix Panel Format	Synthetic CSF and/or Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

MALDI-TOF

MALDI23 - QAB124155

The primary aim of this EQA is to evaluate the ability of laboratories in the detection and determination of different clinically relevant isolates using MALDI-TOF and other similar mass spectrometry based technologies in the routine microbiology laboratory.

Feature	Available format(s)
Catalogue Number	QAB124155_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Microbiological Medium and/or Transport Medium
Panel Member Target Range	Clinically relevant range of microorganisms for detection & determination
Panel Member Sample Volume	0.5 ml
Panel Analysis type	Typing
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

PARASITIC GASTROENTERITIS

GASTROP23 - QAP124154

Parasites are a frequent cause of gastroenteritis and are a growing risk in this age of global travel. The panel members of this EQA will resemble clinical samples and may include current clinically relevant strains of *Giardia*, *Cryptosporidium*, *Dientamoeba*, *Blastocystis* and *Entamoeba*. The aim of the Parasitic Gastroenteritis EQA is to assess laboratories' ability to detect a range of parasitic pathogens known to cause gastroenteritis using their routine molecular diagnostic platform and procedures.

Feature	Available format(s)	
Catalogue Number	QAP124154_1	QAP124154_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured material and/or Clinical material
Matrix Panel Format	Synthetic Faecal Matrix and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0 ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

RESPIRATORY I

RESPI23 - QAV164188

The Respiratory I EQA will focus on the molecular detection and determination of various influenza A & B and respiratory syncytial virus strains. The panel is designed to represent various clinical scenarios. Participating laboratories will be expected to test each panel using their appropriate molecular methods and report their individual test results to QCMD.

Feature	Available format(s)	
Catalogue Number	QAB164188_1	QAV164188_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering Clinical Range
Panel Member Sample Volume	1.0ml
Panel Analysis Type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

RESPIRATORY I PLUS

RESPIplus23 - QAM204216

The Respiratory I Plus EQA will focus on the molecular detection and determination of various influenza A & B, respiratory syncytial virus strains and SARS-Cov-2. The panel is designed to represent various clinical scenarios. Participating laboratories will be expected to test each panel using their appropriate molecular methods and report their individual test results to QCMD.

Feature	Available format(s)	
Catalogue Number	QAM204216_1A	QAM204216_1B
Total Number of Challenges	1	1
Number of Panel Members	10	10
Distribution / Testing Period	Q2	Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering Clinical Range
Panel Member Sample Volume	1.0ml
Panel Analysis Type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

RESPIRATORY II

RESPII23 - QAV164189

The Respiratory II EQA will focus on the molecular detection and determination of human metapneumovirus, respiratory adenoviruses, rhinoviruses, coronaviruses, enterovirus and parainfluenza viruses. The panel is designed to represent various clinical scenarios. Participating laboratories will be expected to test each panel using their appropriate molecular methods and report their individual test results to QCMD.

Feature	Available format(s)	
Catalogue Number	QAV164189_1	QAV164189_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

RESPIRATORY III

RESPIII23 - QAM174193

The Respiratory III EQA will focus on the molecular detection and determination of various *Bordetella pertussis*, *Legionella pneumophila*, *Mycoplasma pneumoniae*, *Streptococcus pneumoniae* or *Haemophilus influenzae* strains. The panel is designed to represent various clinical scenarios. Participating laboratories will be expected to test each panel using their appropriate molecular methods and to report their individual test results to QCMD.

Feature	Available format(s)	
Catalogue Number	QAM174193_1	QAM174193_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q3	Q1 & Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

SEPSIS

SEPSIS23 - QAB164178

This EQA scheme consists of a range of pathogens associated with sepsis such as *Staphylococcus*, *Serratia*, *Escherichia coli*, *Enterococcus*, *Streptococcus*, *Klebsiella*, coagulase- negative *Staphylococcus*, *Pseudomonas* and *Candida* spp. The participating laboratory will be required to use their current molecular diagnostic processes and procedures for the detection and identification of microorganisms within blood or plasma based matrices.

Feature	Available format(s)
Catalogue Number	QAB164178_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Whole Blood and/or Plasma and/or Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

SEXUALLY TRANSMITTED INFECTIONS I

STI_I23 - QAB154177

The aim of the Sexually Transmitted Infection (STI) EQA is to assess the laboratories' ability to detect a range of sexual transmitted infections known to cause disease using their routine molecular diagnostic platform and procedures. The panel members will resemble clinical samples and may include current clinically relevant strains of *Mycoplasma genitalium*, *Mycoplasma hominis*, *Trichomonas vaginalis*, *Ureaplasma urealyticum* and *Gardnerella vaginalis*.

Feature	Available format(s)	
Catalogue Number	QAB154177_1	QAB154177_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Urine and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	4.0ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

SEXUALLY TRANSMITTED INFECTIONS II

STI_II23 - QAM174201

The sexually transmitted infection II EQA will focus on the molecular detection and determination of various *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, *Treponema pallidum*, and herpes simplex virus strains. The panel is designed to represent various clinical scenarios. Participating laboratories will be expected to test each panel using their appropriate molecular methods and to report their individual test results to QCMD.

Feature	Available format(s)	
Catalogue Number	QAM174201_1	QAM174201_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Urine and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	4.0ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

TRANSPLANTATION (VIRAL)

TRANS23 - QAM174198

The viral transplant EQA scheme will focus on the molecular detection and determination of various cytomegalovirus, Epstein-Barr virus, human herpes virus 6, BK virus, B19 virus and adenovirus strains. The panel is designed to represent various clinical scenarios. Participating laboratories will be expected to test each panel using their appropriate molecular methods and to report their individual test results to QCMD.

Feature	Available format(s)	
Catalogue Number	QAM174198_1	QAM174198_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Plasma and/or Transport Medium
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0ml
Panel Analysis type	Qualitative & Quantitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

VIRAL GASTROENTERITIS

GASTROV23 - QAV124152

Viruses are a major cause of gastroenteritis outbreaks. It has been estimated that at least 50% of foodborne gastroenteritis cases are caused by noroviruses. Approximately another 20% of cases, and the majority of severe cases in children, are due to rotavirus. Other clinically significant viral enteropathogens include adenovirus, particularly types 40 and 41, and astroviruses. The aim of the Viral Gastroenteritis EQA is to assess laboratories ability to detect a range of viral pathogens known to cause gastroenteritis using their routine molecular diagnostic platform and procedures. The panel members will resemble clinical samples and may include current clinically relevant strains of norovirus, rotavirus, astrovirus, sapovirus and adenovirus.

Feature	Available format(s)	
Catalogue Number	QAV124152_1	QAV124152_2
Total Number of Challenges	1	2
Number of Panel Members	10	5
Distribution / Testing Period	Q4	Q2 & Q4

Specifications	
Sample NA Target Source	Cultured material and/or Clinical material
Matrix Panel Format	Synthetic Faecal Matrix and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	1.0ml
Panel Analysis type	Qualitative
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice
Accreditation/Regulatory Status	Accredited to ISO17043

EQA PILOT STUDIES

BABESIA

BABESIA23 - QAP214219

Pathogens of the genus *Babesia* (Family: Babesiidae, Order: Piroplasmida) are important blood parasites in mammals and less frequently in birds. Of the more than 100 known tick-borne species, only a few have been identified as causing human infections. Of zoonotic importance are parasites of bovine babesiosis (*Babesia divergens* and *B. divergens*-like forms), rodent babesiosis (*B. microti*) and a few other *Babesia* species like *B. venatorum* in wild deer. During a blood meal, hard-bodied ticks (e.g. *Ixodes ricinus*) inoculate sporozoites with their saliva, which, like plasmodia, enter human erythrocytes and undergo asexual reproduction.

In Europe, *B. divergens* is the main pathogen of human babesiosis. Occasionally, there also occur infections with *B. microti* and *B. venatorum* (EU1). Single infections have been reported in various European countries, however, the total number of around 50 documented clinically severe cases from mostly splenectomised patients in Europe is very low. But infections are probably asymptomatic, as indicated by serologic surveys. In the United States, *B. microti* is the agent most frequently identified in more than 300 known clinical manifestations (in the Northeast and Midwest), and can occur in non-splenectomised individuals. *Babesia duncani* has been isolated in patients in Washington and California. MO-1 has been isolated from patients in Missouri. Other cases have been reported from Africa, Mexico, Japan, Taiwan and India (*B. microti* or unidentified *Babesia*).

The diagnosis of an acute infection is confirmed through identification of *Babesia* on microscopic examination of Wright or Giemsa-stained thin blood-film or detection of *Babesia* nucleic acid, whereby nucleic acid testing (NAT) offers a better correlate of active infection. Also, nucleic acid detection-based tests, such as polymerase chain reaction (PCR) and transcription-mediated amplification (TMA), more effectively identify low-level infections than other laboratory tests, making them important for donor screening and donation testing to reduce the risk of transfusion-transmitted babesiosis.

The pilot EQA scheme will assess the proficiency of laboratories in the correct detection and identification of *Babesia* species causing human babesiosis.

Feature	Available format(s)
Catalogue Number	QAP214219_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Whole Blood
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	Lyophilised
Panel Sample Pre-treatment Requirement	Reconstitution of lyophilised material
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Lyophilised Ambient

CHAGAS

CHAGAS23 - QAP214217

Trypanosoma cruzi is the causative agent of Chagas disease or American trypanosomiasis. T. cruzi is primarily transmitted by triatomine bugs, known as "kissing bugs"; other transmission routes such as transplacental, blood transfusion, organ transplantation and contaminated food are known.

Since parasite detection is difficult during both the acute and the latent phase of infection, antibody detection plays a crucial role in laboratory diagnostics. Serologic testing is also the method for blood donor screening. Compared to conventional blood smears techniques, molecular tools such as PCR offer improved sensitivity for detection of acute and early congenital disease and are considered the test of choice in these settings. Also, PCR is maybe useful for monitoring reactivation in immunosuppressed patients or parasitological response to treatment.

The pilot EQA scheme will assess the proficiency of laboratories in the correct detection of Trypanosoma cruzi causing Chagas disease.

Feature	Available format(s)
Catalogue Number	QAP214217_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Whole Blood
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	Lyophilised
Panel Sample Pre-treatment Requirement	Reconstitution of lyophilised material
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Lyophilised Ambient

FRANCISELLA TULARENSIS

FRATUL23 - QAB214220

Tularemia is a severe zoonosis that can affect humans as well as animals. Reservoirs are lagomorphs or rodents, such as wild rabbits and field mice, and blood-sucking arthropods, like ticks and mosquitoes. The pathogen occurs in the northern hemisphere (in Europe, the number of human cases is approximately 800 annually, with Sweden and Finland reporting the highest notification rates). Hunters, people employed in the agriculture and forestry industries, and lab staff are at the highest risk for infection. The pathogens are transmitted through the skin or mucous membrane of infected animals. Transmission occurs when contaminated meat (rabbit) that hasn't been properly heated is eaten, when contaminated water is drunk, by breathing in contaminated dust and through arthropod bites (e.g. ticks).

As the disease is relatively rare and the symptoms non-specific, tularemia can easily be misdiagnosed. Laboratory confirmation of tularemia consists in detecting the bacteria in a biological sample or a specific antibody response. Cultivation of the bacterium is rarely used for the diagnosis as the bacteria are slow growing and require a BSL-3 laboratory. Molecular methods (i.e. PCR) are rapid and can allow identification of the subspecies. Serological methods are routinely used for diagnosis and are considered highly specific despite cross-reactions with Brucella, Yersinia, Proteus, Legionella and Mycoplasma species may occur.

The pilot EQA scheme will assess the proficiency of laboratories in the correct detection of Francisella tularensis.

Feature	Available format(s)
Catalogue Number	QAB214220_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Transport Medium and/or Physiological Buffer
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	Lyophilised
Panel Sample Pre-treatment Requirement	Reconstitution of lyophilised material
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Lyophilised Ambient

EQA PILOT STUDIES

HBV DRIED BLOOD SPOTS

HBVDBS23 - QAV214223

To assess the performance of laboratories in the detection of clinically relevant levels of hepatitis B virus (HBV) from dried blood spots.

Feature	Available format(s)
Catalogue Number	QAV214223_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Dried Blood Spots
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	2x50µl
Panel Sample Pre-treatment Requirement	Material extraction from dried blood spot
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	Ambient

HCV DRIED BLOOD SPOTS

HCVDBS23 - QAV214222

To assess the performance of laboratories in the detection of clinically relevant levels of hepatitis C virus (HCV) from dried blood spots.

Feature	Available format(s)
Catalogue Number	QAV214222_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Clinical material
Matrix Panel Format	Dried Blood Spots
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	2x50µl
Panel Sample Pre-treatment Requirement	Material extraction from dried blood spot
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	Ambient

EQA PILOT STUDIES

HIV DRIED BLOOD SPOTS

HIVDBS23 - QAV214221

To assess the performance of laboratories in the detection of clinically relevant levels of human immunodeficiency virus (HIV) from dried blood spots.

Feature	Available format(s)
Catalogue Number	QAV214221_1
Total Number of Challenges	1
Number of Panel Members	8
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Dried Blood Spots
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	2x50µl
Panel Sample Pre-treatment Requirement	Material extraction from dried blood spot
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	Ambient

EQA PILOT STUDIES

MALARIA

MALARIA23 - QAP214218

Malaria is considered the most important parasitic disease in humans. The pathogens of malaria are protozoans of the genus *Plasmodium* (Order: Haemospororida). The blood parasites are transmitted by female *Anopheles* mosquitoes.

Of the five human pathogenic *Plasmodium* species [*Plasmodium falciparum* (causative agent of Malaria tropica), *Plasmodium ovale* and *Plasmodium vivax* (causative agents of *M. tertiana*), *Plasmodium malariae* (causative agent of *M. quartana*) and in Southeast Asia *Plasmodium knowlesi*], *P. falciparum* causes the majority of malaria and almost all fatal cases.

Malaria occurs primarily in tropical and less frequently in subtropical areas. While *P. falciparum* dominates throughout Africa (90% in Africa, 45% in Asia and Oceania, 5% in Latin America), *P. vivax* is the second most prevalent malaria species in most of the Latin American and Asian malaria areas. The range of *P. ovale* is mainly restricted to West African regions with few foci outside the continent (except Latin America). *P. malariae* is found worldwide, but at a lower incidence compared to the other species. *P. knowlesi* is identified since 2004 as the causative agent of a focal, especially in Malaysia occurring malaria form. Due to the large number of imported cases in Europe, malaria (in particular caused by *P. falciparum*) is mainly a travel medicine issue.

In patients with fever of unknown cause and stay in a malaria area, acute malaria must be excluded, even if the stay was several years ago. The acute diagnosis is based on the detection of the pathogen in thin and thick blood films and / or the detection of *Plasmodium*-specific antigens or its DNA. Serological examinations are not suitable for acute diagnosis. Although microscopy is still the most routinely used method for malaria diagnosis by clinical laboratories, nucleic acid tests (NAT) have become increasingly popular, particularly in reference laboratories and specialised institutes.

The pilot EQA scheme will assess the proficiency of laboratories in the correct detection and identification of *Plasmodium* species causing human malaria.

Feature	Available format(s)
Catalogue Number	QAP214218_1
Total Number of Challenges	1
Number of Panel Members	10
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured and/or Clinical material
Matrix Panel Format	Whole Blood
Panel Member Target Range	Covering clinical range
Panel Member Sample Volume	Lyophilised
Panel Sample Pre-treatment Requirement	Reconstitution of lyophilised material
Panel Analysis type	Qualitative. Quantitative for information purposes only
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	2-8°C / Lyophilised Ambient

EQA PILOT STUDIES

VIRAL METAGENOMICS NGS

NGSMETA_23 - QAV204213

Viral metagenomics has been proposed as an unbiased method with unique clinical opportunities to identify the composition of clinical specimens without introduction of selection bias due to processing methods. The techniques used in these protocols are however complex and analysis methods require standardisation. This EQA pilot study aims to assess performance of existing metagenomics protocols as currently implemented by participating laboratories. Samples will be provided which will mimic cerebrospinal fluid samples containing known viral pathogens including enterovirus, herpes simplex virus and influenza virus.

Performance will be assessed based on the qualitative identification of viruses present in the samples, at the family, genus, species and subtype levels.

Feature	Available format(s)
Catalogue Number	QAV204213_1
Total Number of Challenges	1
Number of Panel Members	5
Distribution / Testing Period	Q3

Specifications	
Sample NA Target Source	Cultured material
Matrix Panel Format	Synthetic CSF + human cell lines
Panel Member Sample Volume	1.0ml
Panel Sample Pre-Treatment Requirement	Ready for analysis. Treat as clinical samples and analyse accordingly
Panel Analysis Type	Sequence analysis
Panel Testing	Evaluated by various molecular methodologies
Storage / Shipment Conditions	<-20°C / Frozen on Dry-ice

APPENDIX I: SUMMARY SPECIFICATIONS AND DISTRIBUTION SCHEDULE

TARGET PATHOGEN							PAGE NUMBER
SCHEME CODE	CATALOGUE NUMBER	NO. OF CHALLENGES	PANEL MEMBERS PER CHALLENGE	DISTRIBUTION DATE(S)/ TESTING PERIOD	SHIPPING CONDITIONS	ANALYSIS TYPE	SCHEME TYPE
Adenovirus							Page 15
ADVDNA23	QAV054133_1	1	10	Q4	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV054133_2	2	5	Q2, Q4			
Arthropod-borne viruses							Page 55
ARBO23	QAM194206_1	1	10	Q3	Ambient	Qualitative	Multi-Pathogen / Syndromic EQA
Aspergillus spp.							Page 52
ASPDNA23	QAF104140_1	1	8	Q3	Dry-ice	Qualitative	Fungal EQA
Atypical mycobacterium							Page 40
NTM23	QAB194208_1	1	10	Q1	Ambient	Qualitative	Bacterial EQA
B19 virus							Page 15
B19DNA23	QAV034116_1	1	8	Q3	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV034116_2	2	4	Q1, Q3			
Babesia							Page 63
BABESIA23	QAP214219_1	1	10	Q3	Ambient	Qualitative	Pilot Study
Bacterial 16S Ribosomal RNA							Page 41
B16SrRNA23	QAB164183_1	1	8	Q3	Dry-ice	Typing	Bacterial EQA
Bacterial Gastroenteritis							Page 56
GastroB23	QAB124153_1	1	10	Q4	Dry-ice	Qualitative	Multi-Pathogen / Syndromic EQA
	QAB124153_2	2	5	Q2, Q4			
BK virus (BKV)							Page 16
BKDNA23	QAV144166_1	1	10	Q4	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV144166_2	2	5	Q2, Q4			
Bordetella pertussis							Page 41
BPDNA23	QAB094132_1	1	10	Q2	Dry-ice	Qualitative	Bacterial EQA
Borrelia burgdorferi spp. (Lyme Disease)							Page 42
BbDNA23	QAB114147_1	1	10	Q3	Dry-ice	Qualitative	Bacterial EQA
Candida spp.							Page 53
CANDNA23	QAF124151_1	1	10	Q3	Dry-ice	Qualitative	Fungal EQA
Central Nervous System I (viral Meningitis and Encephalitis)							Page 56
CNSI23	QAV174195_1	1	10	Q4	Dry-ice	Qualitative	Multi-Pathogen / Syndromic EQA
	QAV174195_2	2	5	Q2, Q4			

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Central Nervous System II (Non-viral Meningitis and Encephalitis)							Page 57
CNSII23	QAM174196_1	1	10	Q4	Dry-ice	Qualitative	Multi-Pathogen / Syndromic EQA
	QAM174196_2	2	5	Q2, Q4			
Chagas							Page 64
CHAGAS23	QAP214217_1	1	10	Q3	Ambient	Qualitative	Pilot Study
Chikungunya virus (CHIKV)							Page 16
CHIKV23	QAV154175_1	1	10	Q3	Ambient	Qualitative	Viral EQA
Chlamydia psittaci							Page 42
CPS23	QAB134165_1	1	8	Q2	Dry-ice	Qualitative	Bacterial EQA
Chlamydia trachomatis							Page 43
CTDNA23	QAB004101_1	1	10	Q3	Dry-ice	Qualitative	Bacterial EQA
	QAB004101_2	2	5	Q1, Q3			
Chlamydia trachomatis and Neisseria gonorrhoeae							Page 44
CTNg23	QAB174191_1	1	10	Q3	Dry-ice	Qualitative	Bacterial EQA
	QAB174191_2	2	5	Q1, Q3			
Chlamydia pneumoniae							Page 44
CP23	QAB084107_1	1	5	Q2	Dry-ice	Qualitative	Bacterial EQA
Clostridium difficile (CD)							Page 47
CDDNA23	QAB084125_1	1	10	Q4	Dry-ice	Qualitative	Bacterial EQA
	QAB084125_2	2	5	Q2, Q4			
Coronavirus (CoV)							Page 17
CVRNA23	QAV064137_1	1	10	Q2	Dry-ice	Qualitative	Viral EQA
Cytomegalovirus (CMV) Dried Blood Spots							Page 18
CMVDBS23	QAV064127_1	1	8	Q3	Ambient	Qualitative	Viral EQA
Cytomegalovirus (CMV) Drug Resistance							Page 17
CMVDR23	QAV144169_1	1	5	Q2	Dry-ice	Drug Resistance / Sequencing	Viral EQA
Cytomegalovirus (CMV)							Page 29
CMVDNA23	QAV014120_1	1	10	Q4	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV014120_2	2	5	Q2, Q4			
Cytomegalovirus (CMV) Whole Blood							Page 18
CMVWB23	QAV124150_1	1	10	Q4	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV124150_2	2	5	Q2, Q4			

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Dengue virus (DENV)							Page 19
DENVRNA23	QAV114148_1	1	10	Q3	Ambient	Qualitative	Viral EQA
Dermatophytosis							Page 53
DERMA23	QAF164187_1	1	8	Q3	Dry-ice	Qualitative	Fungal EQA
Diarrheagenic <i>Escherichia coli</i>							Page 45
E.COLI23	QAB154179_1	1	8	Q3	Dry-ice	Typing	Bacterial EQA
Enterovirus (EV)							Page 19
EVRNA23	QAV984104_1	1	10	Q3	Dry-ice	Qualitative	Viral EQA
	QAV984104_2	2	5	Q1, Q3			
Enterovirus Typing (EV)							Page 20
EVTP23	QAV164185_1	1	8	Q1	Dry-ice	Typing	Viral EQA
Epstein-Barr virus (EBV)							Page 20
EBVDNA23	QAV024121_1	1	10	Q4	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV024121_2	2	5	Q2, Q4			
Epstein-Barr virus (EBV) Whole Blood							Page 21
EBVWB23	QAV134161_1	1	10	Q4	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV134161_2	2	5	Q2, Q4			
Extended Spectrum β-lactamase and Carbapenemase							Page 45
ESBL23	QAB134162_1	1	8	Q3	Dry-ice	Typing	Bacterial EQA
Group B <i>Streptococcus</i>							Page 46
GBS23	QAB174200_1	1	8	Q4	Dry-ice	Qualitative	Bacterial EQA
<i>Francisella tularensis</i>							Page 65
FRATUL23	QAB214220_1	1	10	Q3	Ambient	Qualitative	Pilot Study
<i>Helicobacter pylori</i>							Page 46
H.PYLORI23	QAB164190_1	1	10	Q3	Dry-ice	Qualitative	Bacterial EQA
Hepatitis A virus (HAV)							Page 23
HAVRNA23	QAV124156_1	1	8	Q3	Dry-ice	Qualitative	Viral EQA
	QAV124156_2	2	4	Q1, Q3			
Hepatitis B virus (HBV)							Page 24
HBVDNA23	QAV994110_1	1	8	Q3	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV994110_2	2	4	Q1, Q3			
	QAV994110_4	4	4	Q1, Q2, Q3, Q4			

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Hepatitis B virus (HBV) – Dried Blood Spots							Page 66
HBVDBS23	QAV214223_1	1	8	Q3	Ambient	Qualitative	Pilot Study
Hepatitis B virus (HBV) Drug Resistance							Page 21
HBVDR23	QAV124160_1	1	5	Q3	Dry-ice	Drug Resistance / Sequencing	Viral EQA
Hepatitis B virus (HBV) Genotyping							Page 22
HBVGT23	QAV064118_1	1	8	Q1	Dry-ice	Typing	Viral EQA
Hepatitis C virus (HCV)							Page 24
HCVRNA23	QAV994112_1	1	8	Q3	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV994112_2	2	4	Q1, Q3			
	QAV994112_4	4	4	Q1, Q2, Q3, Q4			
Hepatitis C virus (HCV) – Dried Blood Spots							Page 66
HCVDBS23	QAV214222_1	1	8	Q3	Ambient	Qualitative	Pilot Study
Hepatitis C virus (HCV) Drug Resistance							Page 22
HCVDR23	QAV134167_1	1	5	Q3	Dry-ice	Drug Resistance / Sequencing	Viral EQA
Hepatitis C virus (HCV) Genotyping							Page 23
HCVGT23	QAV034117_1	1	8	Q1	Dry-ice	Typing	Viral EQA
Hepatitis D virus (HDV)							Page 25
HDV23	QAV144170_1	1	8	Q4	Dry-ice	Qualitative & Quantitative	Viral EQA
Hepatitis E virus (HEV)							Page 25
HEVRNA23	QAV124157_1	1	8	Q4	Dry-ice	Qualitative & Quantitative	Viral EQA
Herpes simplex virus 1 & 2 (HSV)							Page 26
HSVDNA23	QAV994105_1	1	10	Q3	Dry-ice	Qualitative	Viral EQA
	QAV994105_2	2	5	Q1, Q3			
Herpes simplex virus Drug Resistance							Page 26
HSVDR23	QAV164184_1	1	5	Q1	Dry-ice	Drug Resistance / Sequencing	Viral EQA
Human herpes virus 6 (HHV6)							Page 30
HHV6DNA23	QAV084119_1	1	10	Q4	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV084119_2	2	5	Q2, Q4			

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Human Immunodeficiency virus type 1 (HIV-1) – DNA							Page 27
HIVDNA23	QAV034114_1	1	8	Q3	Dry-ice	Qualitative	Viral EQA
	QAV034114_2	2	4	Q1, Q3			
Human Immunodeficiency virus type 1 (HIV-1) – Drug Resistance							Page 28
HIVDR23	QAV024131_1	1	5	Q4	Dry-ice	Drug Resistance / Sequencing	Viral EQA
Human Immunodeficiency virus type 1 (HIV-1) – Drug Resistance (Integrase)							Page 28
HIVDRint23	QAV114146_1	1	5	Q4	Dry-ice	Drug Resistance / Sequencing	Viral EQA
Human Immunodeficiency virus type 1 (HIV-1) – Dried Blood Spots							Page 67
HIVDBS23	QAV214221_1	1	8	Q3	Ambient	Qualitative	Pilot Study
Human Immunodeficiency virus type 1 (HIV-1) – RNA							Page 27
HIVRNA23	QAV994108_1	1	8	Q3	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV994108_2	2	4	Q1, Q3			
	QAV994108_4	4	4	Q1, Q2, Q3, Q4			
HIV-2							Page 29
HIV2_23	QAV204212_1	1	8	Q3	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV204212_2	2	4	Q1, Q3			
Human metapneumovirus (MPV)							Page 30
MPV23	QAV054135_1	1	8	Q2	Dry-ice	Qualitative	Viral EQA
Human Papillomavirus (HPV) – PreservCyt							Page 31
HPVPRES23	QAV094130_1	1	12	Q3	Ambient / Specialist	Qualitative	Viral EQA
	QAV094130_2	2	6	Q1, Q3			
Human Papillomavirus (Surepath)							Page 31
HPVSURE23	QAV184204_1	1	12	Q3	Ambient	Qualitative	Viral EQA
Influenza A & B virus (FLU)							Page 32
INFRNA23	QAV054134_1	1	10	Q4	Dry-ice	Qualitative	Viral EQA
	QAV054134_2	2	5	Q2, Q4			
Influenza Typing							Page 32
INFTP23	QAV064138_1	1	8	Q4	Dry-ice	Typing	Viral EQA
JC virus (JCV)							Page 33
JCDNA23	QAV074106_1	1	10	Q4	Dry-ice	Qualitative & Quantitative	Viral EQA
	QAV074106_2	2	5	Q2, Q4			

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<i>Legionella pneumophila</i>							Page 47
LPDNA23	QAB044122_1	1	10	Q1	Dry-ice	Qualitative	Bacterial EQA
Malaria							Page 68
MALARIA23	QAP214218_1	1	10	Q3	Ambient	Qualitative	Pilot Study
MALDI-TOF							Page 57
MALDI23	QAB124155_1	1	10	Q3	Dry-ice	Typing	Multi-Pathogen / Syndromic EQA
Measles / Mumps							Page 33
MM23	QAV144171_1	1	10	Q3	Dry-ice	Qualitative	Viral EQA
MERS coronavirus (MERS-CoV)							Page 34
MERS23	QAV154181_1	1	8	Q2	Dry-ice	Qualitative	Viral EQA
Methicillin Resistant <i>Staphylococcus aureus</i> (MRSA)							Page 48
MRSADNA23	QAB064124_1	1	10	Q3	Ambient	Qualitative	Bacterial EQA
Methicillin Resistant <i>Staphylococcus aureus</i> (MRSA) – Typing							Page 47
MRSATP23	QAB074128_1	1	8	Q3	Ambient	Typing	Bacterial EQA
<i>Mycobacterium tuberculosis</i> (MTB)							Page 48
MTBDNA23	QAB014129_1	1	10	Q3	Ambient	Qualitative	Bacterial EQA
	QAB014129_2	2	5	Q1, Q3			
<i>Mycobacterium tuberculosis</i> Drug Resistance							Page 49
MTBDR23	QAB194209_1	1	8	Q3	Ambient	Typing	Bacterial EQA
<i>Mycoplasma genitalium</i>							Page 49
MG23	QAB184205_1	1	10	Q3	Dry-ice	Qualitative	Bacterial EQA
<i>Mycoplasma pneumoniae</i>							Page 50
MP23	QAB174192_1	1	5	Q2	Dry-ice	Qualitative	Bacterial EQA
<i>Neisseria gonorrhoeae</i>							Page 50
NGDNA23	QAB034126_1	1	10	Q3	Dry-ice	Qualitative	Bacterial EQA
	QAB034126_2	2	5	Q1, Q3			

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Norovirus (NV)							Page 34
NVRNA23	QAV084139_1	1	10	Q4	Dry-ice	Qualitative	Viral EQA
	QAV084139_2	2	5	Q2, Q4			
Parainfluenza virus (PIV)							Page 35
PINFRNA23	QAV064136_1	1	10	Q2	Dry-ice	Qualitative	Viral EQA
Parasitic Gastroenteritis							Page 58
GastroP23	QAP124154_1	1	10	Q4	Dry-ice	Qualitative	Multi-Pathogen / Syndromic EQA
	QAP124154_2	2	5	Q2, Q4			
Parechovirus (HPeV)							Page 35
PeVRNA23	QAV114145_1	1	10	Q3	Dry-ice	Qualitative	Viral EQA
	QAV114145_2	2	5	Q1, Q3			
Pneumocystis jirovecii pneumonia (PCP)							Page 54
PCPDNA23	QAF114144_1	1	10	Q3	Dry-ice	Qualitative & Quantitative	Fungal EQA
Respiratory I							Page 58
RESPI23	QAV164188_1	1	10	Q3	Dry-ice	Qualitative	Multi-Pathogen / Syndromic EQA
	QAV164188_2	2	5	Q1, Q3			
Respiratory I Plus							Page 59
RESPIplus23	QAM204216_1A	1	10	Q2	Dry-ice	Qualitative	Multi-Pathogen / Syndromic EQA
	QAM204216_1B	1	10	Q4			
Respiratory II							Page 59
RESPII23	QAV164189_1	1	10	Q3	Dry-ice	Qualitative	Multi-Pathogen / Syndromic EQA
	QAV164189_2	2	5	Q1, Q3			
Respiratory III							Page 60
RESPIII23	QAM174193_1	1	10	Q3	Dry-ice	Qualitative	Multi-Pathogen / Syndromic EQA
	QAM174193_2	2	5	Q1, Q3			
Respiratory syncytial virus (RSV)							Page 36
RSV23	QAV054142_1	1	10	Q4	Dry-ice	Qualitative	Viral EQA
	QAV054142_2	2	5	Q2, Q4			
Rhinovirus (RV)							Page 36
RVRNA23	QAV064143_1	1	10	Q2	Dry-ice	Qualitative	Viral EQA

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SARS-CoV-2							Page 37
SCV2_23	QAV204215_1A	1	5	Q1	Dry-ice	Qualitative	Viral EQA
	QAV204215_1B	1	5	Q2			
	QAV204215_1C	1	5	Q3			
	QAV204215_1D	1	5	Q4			
SARS-CoV-2 Antigen Testing							Page 37
SCV2Ag23	QAS214224_1A	1	5	Q1	Ambient	Qualitative	Viral EQA
	QAS214224_1B	1	5	Q2			
	QAS214224_1C	1	5	Q3			
	QAS214224_1D	1	5	Q4			
Sepsis							Page 60
SEPSIS23	QAB164178_1	1	10	Q3	Dry-ice	Qualitative	Multi-Pathogen / Syndromic EQA
Sexually Transmitted Infections I							Page 61
STI_I23	QAB154177_1	1	10	Q4	Dry-ice	Qualitative	Multi-Pathogen / Syndromic EQA
	QAB154177_2	2	5	Q2, Q4			
Sexually Transmitted Infections II							Page 61
STI_II23	QAM174201_1	1	10	Q4	Dry-ice	Qualitative	Multi-Pathogen / Syndromic EQA
	QAM174201_2	2	5	Q2, Q4			
Staphylococcus aureus spa							Page 51
SASPA23	QAB134164_1	1	6	Q3	Ambient	Typing	Bacterial EQA
Syphilis							Page 51
SYPH23	QAB154180_1	1	8	Q3	Dry-ice	Qualitative	Bacterial EQA
Torque teno virus (TTV)							Page 38
TTV23	QAV184203_1	1	6	Q4	Dry-ice	Qualitative	Viral EQA
Toxoplasma gondii							Page 55
TGDNA23	QAP044123_1	1	10	Q3	Ambient	Qualitative	Parasitic EQA
	QAP044123_2	2	5	Q1, Q3			
Transplantation (viral)							Page 62
TRANS23	QAM174198_1	1	10	Q4	Dry-ice	Qualitative & Quantitative	Multi-Pathogen / Syndromic EQA
	QAM174198_2	2	5	Q2, Q4			
Trichomonas vaginalis							Page 54
TV23	QAP184202_1	1	8	Q3	Dry-ice	Qualitative	Parasitic EQA

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Vancomycin Resistant Enterococci (VRE)							Page 52
VRE23	QAB134163_1	1	10	Q3	Dry-ice	Typing	Bacterial EQA
Varicella-Zoster virus (VZV)							Page 38
VZVDNA23	QAV034103_1	1	10	Q3	Dry-ice	Qualitative	Viral EQA
	QAV034103_2	2	5	Q1, Q3			
Viral Gastroenteritis							Page 62
GastroV23	QAV124152_1	1	10	Q4	Dry-ice	Qualitative	Multi-Pathogen / Syndromic EQA
	QAV124152_2	2	5	Q2, Q4			
Viral Metagenomics NGS							Page 69
NGSmeta_23	QAV204213_1	1	5	Q3	Dry-ice	Sequencing	Pilot Study
West Nile virus (WNV)							Page 39
WNVRNA23	QAV104141_1	1	10	Q3	Ambient	Qualitative	Viral EQA
Yellow Fever Virus							Page 39
YFV23	QAV194207_1	1	8	Q3	Ambient	Qualitative	Viral EQA
Zika Virus							Page 40
ZIKA23	QAV164186_1	1	10	Q3	Ambient	Qualitative	Viral EQA



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