Panel Composition

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>CNSI22S-01</td>
<td>Varicella-Zoster Virus (Ellen)</td>
<td>Transport medium</td>
<td>88.7</td>
<td>110</td>
<td>3.2</td>
<td>4</td>
</tr>
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<td>Echovirus 30</td>
<td>Transport medium</td>
<td>91.1</td>
<td>113</td>
<td>1.6</td>
<td>2</td>
</tr>
<tr>
<td>CNSI22S-03</td>
<td>Varicella-Zoster Virus (9/84)</td>
<td>Transport medium</td>
<td>91.1</td>
<td>113</td>
<td>0.8</td>
<td>1</td>
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<tr>
<td>CNSI22S-04</td>
<td>Varicella-Zoster Virus (Ellen)</td>
<td>Transport medium</td>
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<td>113</td>
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<td>CNSI22S-07</td>
<td>Parechovirus Type 3</td>
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<td>Herpes Simplex Virus Type 1</td>
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<td>114</td>
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<td>Herpes Simplex Virus Type 2</td>
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<td>113</td>
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<td>CNSI22S-10</td>
<td>Herpes Simplex Virus Type 1</td>
<td>Transport medium</td>
<td>91.1</td>
<td>113</td>
<td>3.2</td>
<td>4</td>
</tr>
</tbody>
</table>

[1] Sample Relationships: Indicates the relationships of the samples within this challenge. The highest titre member of dilution series DS1 is indicated by DS1_1 and further members of the series as DS1_2, DS1_3 etc. in order of reducing titre. Additional dilution series are indicated by DS2 (e.g. DS2_1, DS2_2 etc.), DS3 (e.g. DS3_1, DS3_2 etc.). If one duplicate pair is present this is indicated by 'D1'. Further duplicate pairs are indicated by 'D2', 'D3' etc.

[2] Detected / Determined; Not Detected / Not Determined; Not Tested: The percentage (%) of datasets reported by all participants in relation to the assigned status of the panel member i.e. ‘positive’ or ‘negative’ and the expected pathogen type as defined through pre-testing and the total number of datasets (n) for each panel member.

For further details please refer to the current participant manual.

EQA Assessment Group[1] N/A (Refer to My Workflow details section below)
## Your Summary Results (Core Samples)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CNSI22S-01</td>
<td>Positive</td>
<td>Varicella-zoster virus</td>
<td>Yes</td>
<td>Positive</td>
<td>Varicella-zoster virus</td>
<td>Core</td>
<td>Frequently Detected</td>
<td>3</td>
</tr>
<tr>
<td>CNSI22S-02</td>
<td>Positive</td>
<td>Enterovirus</td>
<td>Yes</td>
<td>Positive</td>
<td>Enterovirus</td>
<td>Core</td>
<td>Frequently Detected</td>
<td>3</td>
</tr>
<tr>
<td>CNSI22S-03</td>
<td>Positive</td>
<td>Varicella-zoster virus</td>
<td>Yes</td>
<td>Positive</td>
<td>Varicella-zoster virus</td>
<td>Core</td>
<td>Frequently Detected</td>
<td>3</td>
</tr>
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<td>Positive</td>
<td>Varicella-zoster virus</td>
<td>Yes</td>
<td>Positive</td>
<td>Varicella-zoster virus</td>
<td>Core</td>
<td>Frequently Detected</td>
<td>3</td>
</tr>
<tr>
<td>CNSI22S-05</td>
<td>Positive</td>
<td>Parechovirus</td>
<td>No</td>
<td>Negative</td>
<td></td>
<td>Core</td>
<td>Frequently Detected</td>
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<td>CNSI22S-06</td>
<td>Negative</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td>Core</td>
<td>Negative</td>
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</tr>
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<td>CNSI22S-07</td>
<td>Positive</td>
<td>Parechovirus</td>
<td>No</td>
<td>Negative</td>
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<td>Core</td>
<td>Frequently Detected</td>
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<tr>
<td>CNSI22S-08</td>
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<td>Herpes simplex virus</td>
<td>Yes</td>
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<td>Herpes simplex virus</td>
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<tr>
<td>CNSI22S-09</td>
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<td>Core</td>
<td>Frequently Detected</td>
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<td>CNSI22S-10</td>
<td>Positive</td>
<td>Herpes simplex virus</td>
<td>Yes</td>
<td>Positive</td>
<td>Herpes simplex virus</td>
<td>Core</td>
<td>Frequently Detected</td>
<td>3</td>
</tr>
</tbody>
</table>

[1] **EQA Assessment Group:** To aid analysis participant results are grouped according to the molecular amplification/detection method specified within their molecular workflow for this challenge/distribution. For further details refer to the Additional Information: Individual Panel Member Analysis section of this report.

[2] **Expected Result:** positive / negative result and the specific pathogen present within each panel member.

[3] **Your Final Laboratory Reported Result:** the final reported result which may be based on one or more workflows used to test each panel member.

[4] **Pathogen included in workflow(s):** Yes / No answer to whether the expected pathogen was tested for.

[5] **Qualitative:** The final qualitative result you reported for each sample within this EQA challenge/distribution.

[6] **Reported Pathogen ID:** The final pathogen(s) identification you reported for each sample within this EQA challenge/distribution.

[7] **Sample Status:** Sample Status: EQA samples are defined as "CORE" or "EDUCATIONAL". Core proficiency samples are reviewed by the QCMD Scientific Expert(s). This is on the basis of scientific information, clinical relevance, current literature and, where appropriate, professional clinical guidelines. Participating laboratories are expected to report core proficiency samples correctly within the EQA challenge/distribution.

[8] **Detection Frequency:** To aid qualitative analysis each panel member is assigned a frequency of detection. This is based on the peer group consensus of all qualitative results returned by participants within the EQA challenge/distribution. Note that the detection frequency is assigned using only datasets submitted using workflows including the target pathogen.

[9] **Detection Score:** Your detection scores are based on the assigned detection frequency of each panel member, where 0 is "highly satisfactory" and 3 (three) is "highly unsatisfactory"

For further details please refer to the current participant manual.
Multiple Pathogen Programme - Qualitative Assessment of Results

Results are categorised based on the workflow used and the pathogen(s) targeted as shown in the table below.

<table>
<thead>
<tr>
<th>Expected Qualitative Result</th>
<th>Laboratory Reported Results</th>
<th>Result Category</th>
<th>Sample Weighting</th>
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<tbody>
<tr>
<td></td>
<td>Expected pathogen(s) included in workflow(s)</td>
<td>Detected / Determined</td>
<td>Frequently Detected (&gt;95% positive)</td>
</tr>
<tr>
<td>Positive</td>
<td>Detected</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Negative</td>
<td>Not Determined</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Negative</td>
<td>Expected pathogen(s) not detected</td>
<td>False Positive</td>
<td>3</td>
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<tr>
<td>Positive</td>
<td>Reported Pathogen(s) not as expected</td>
<td>False Positive</td>
<td>3</td>
</tr>
<tr>
<td>Positive or Negative</td>
<td>Result reported as not determined</td>
<td>Not Determined</td>
<td>3</td>
</tr>
<tr>
<td>Positive</td>
<td>No pathogen reported</td>
<td>False Negative</td>
<td>3</td>
</tr>
<tr>
<td>Positive</td>
<td>Expected pathogen not tested for</td>
<td>Not Tested</td>
<td>Not Scored</td>
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</table>

My Workflow Details:

Name: GeneProof JC Virus (JCV) PCR Kit + croBEE (v4)

Description

Targets: JC virus
**Assays**

*Extraction* - GeneProof - croBEE NA16 Nucleic Acid Extraction System
- Commercial
  - Kit Manufacturer: GeneProof
  - Kit Type: croBEE 201A Nucleic Acid Extraction Kit

*Amplification* - GeneProof - croBEE Real-Time PCR System
- Commercial
  - Kit Manufacturer: GeneProof
  - Kit Type: GeneProof JC Virus (JCV) PCR Kit
  - Kit Version: ISEX

**Used to test samples:**
CNSI22S-01, CNSI22S-02, CNSI22S-03, CNSI22S-04, CNSI22S-05, CNSI22S-06, CNSI22S-07, CNSI22S-08, CNSI22S-09, CNSI22S-10

**Name**
Herpes Simplex Virus - croBEE (v2)

**Description**
Targets
- herpes simplex virus

**Assays**

*Extraction* - GeneProof - croBEE NA16 Nucleic Acid Extraction System
- Commercial
  - Kit Manufacturer: GeneProof
  - Kit Type: croBEE 201A Nucleic Acid Extraction Kit

*Amplification* - GeneProof - croBEE Real-Time PCR System
- Multiplex
  - Commercial
    - Kit Manufacturer: GeneProof
    - Kit Type: Herpes Simplex Virus (HSV-1/2) PCR Kit
    - Kit Version: ISEX

**Used to test samples:**
CNSI22S-01, CNSI22S-02, CNSI22S-03, CNSI22S-04, CNSI22S-05, CNSI22S-06, CNSI22S-07, CNSI22S-08, CNSI22S-09, CNSI22S-10

**Name**
Enterovirus PCR Kit-croBEE (v4)

**Description**

**Targets**
- enterovirus
**Assays**

- **Extraction** - GeneProof - croBEE NA16 Nucleic Acid Extraction System
  - Commercial
  - Kit Manufacturer: GeneProof
  - Kit Type: croBEE 201A Nucleic Acid Extraction Kit

- **Amplification** - GeneProof - croBEE Real-Time PCR System
  - Commercial
  - Kit Manufacturer: GeneProof
  - Kit Type: GeneProof Enterovirus PCR Kit
  - Kit Version: ISEX

**Used to test samples:**
CNSI22S-01, CNSI22S-02, CNSI22S-03, CNSI22S-04, CNSI22S-05, CNSI22S-06, CNSI22S-07, CNSI22S-08, CNSI22S-09, CNSI22S-10

**Name**
Varicella-Zoster Virus (VZV) PCR Kit-croBEE (v3)

**Description**

- **Targets**
  - V varicella-zoster virus

**Assays**

- **Extraction** - GeneProof - croBEE NA16 Nucleic Acid Extraction System
  - Commercial
  - Kit Manufacturer: GeneProof
  - Kit Type: 201A Nucleic Acid Extraction Kit

- **Amplification** - GeneProof - croBEE Real-Time PCR System
  - Commercial
  - Kit Manufacturer: GeneProof
  - Kit Type: GeneProof VZV PCR Kit
  - Kit Version: Not Applicable

**Used to test samples:**
CNSI22S-01, CNSI22S-02, CNSI22S-03, CNSI22S-04, CNSI22S-05, CNSI22S-06, CNSI22S-07, CNSI22S-08, CNSI22S-09, CNSI22S-10

**Name**
GeneProof BK/JC Virus (BK/JC) PCR Kit-croBEE (v3)

**Description**

- **Targets**
  - V BK virus
  - V JC virus
Assays

Extraction - GeneProof - croBEE NA16 Nucleic Acid Extraction System
- Commercial
  - Kit Manufacturer: GeneProof
  - Kit Type: 201A Nucleic Acid Extraction Kit

Amplification - GeneProof - croBEE Real-Time PCR System
- Multiplex
- Commercial
  - Kit Manufacturer: GeneProof
  - Kit Type: GeneProof BK/JC Virus (BK/JC) PCR Kit
  - Kit Version: GP

Used to test samples: CNSI22S-01, CNSI22S-02, CNSI22S-03, CNSI22S-04, CNSI22S-05, CNSI22S-06, CNSI22S-07, CNSI22S-08, CNSI22S-09, CNSI22S-10

Further Programme Details

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<tr>
<td>Number of Participants</td>
<td>131</td>
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<tr>
<td>Number of Countries</td>
<td>29</td>
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<tr>
<td>Number of Respondents</td>
<td>112</td>
</tr>
<tr>
<td>Number of Datasets Submitted</td>
<td>124</td>
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EQA Programme Aims

The central nervous system I (viral meningitis and encephalitis) EQA programme will focus on the molecular detection and determination of various enterovirus, parechovirus, herpes simplex virus 1/2, Varicella-Zoster virus and JC virus strains.

Feedback and Enquiries

Participants are encouraged to read the QCMD Participants' Manual, which can be downloaded from the QCMD website.

Any enquiries should be submitted through the ‘Contact Us’ form that you can find in the ‘Help’ section of your QCMD (ITEMS) Participant Profile Area.

Panel member analysis is separated into CORE samples followed by EDUCATIONAL samples.
Individual Panel Member Analysis (Core Samples)

Qualitative analysis for each panel member is provided in relation to your EQA assessment group. EQA assessment groups are established using the molecular workflow information reported by all participants within this EQA challenge / distribution.

To allow meaningful assessment at the individual method level the EQA assessment group must consist of 5 or more datasets. If there are not sufficient datasets at the individual method level then your results will be included within a higher EQA assessment group based on whether it is a commercial or in house technology/method. The highest level assessment grouping is “All” participant reported qualitative results.

A breakdown of qualitative results reported for all workflows used by participants on each of the panel members within this EQA challenge / distribution is provided below. Note: participants may use multiple workflows for each sample.

The final laboratory result indicates the final reported result which may be based on one or more workflows used to test each panel member.
CNSI22S-01 Varicella-Zoster Virus (Ellen) Transport medium Varicella-zoster virus 88.7 110 3.2 4 8.1 10

Final laboratory result (All)

All

Commercial
- Altona Diagnostics
  - Altona Diagnostics RealStar
- Cepheid
- Certest
- ELITech Group
  - Elitech Elite Real Time kit
- GeneProof
  - GeneProof Real Time PCR kit
- QIAGEN
  - Qiagen QIAstat-Dx
- Seegene
  - Seegene Allplex
- bioMerieux
  - BioFire FilmArray ME
  - bioMerieux R-gene Kit

In-House
- Real-time In-House PCR

Score Breakdown

Detected / Determined Not Detected / Not Determined Not Tested

Number of Values in Groups

0% 20% 40% 60% 80% 100%

218 157 7 6 8 13 23 22 9 9 12 12 3 53 45 5 61 60

QAV174195 Ref Code: CNSI22 Challenge: S Analysis Type: Multiple Pathogen Qualitative Dataset: 614606 Report UID: 2677/66137/5353 Laboratory CZ023

QCMD, Technology Terrace, Todd Campus, West of Scotland Science Park, Glasgow, G20 0XA Tel: +44 (0) 141 945 6474, Fax: +44 (0) 141 945 5795 Web: www.qcmd.org

Page 8 of 27 Issue Date: 19 Jan 2023 Report authorised by the QCMD Executive (1) A UKAS accredited proficiency testing provider No.4385
Groups below n=5: Altona Diagnostics - Altona Diagnostics AltoStar (n=1), Anatolia Geneworks (n=3), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=3), AusDiagnostics (n=3), AusDiagnostics - AusDiagnostics TandemPlex (n=3), BIOEKSEN (n=1), BIOEKSEN - BIOEKSEN Real Time PCR (n=1), Bio-Rad (n=1), Bio-Rad - Bio-Rad Dx (n=1), BioGX (n=2), BioGX - BioGX Sample-Ready (n=2), DiaSorin (n=2), DiaSorin - DiaSorin Simplexa (n=2), Diagenode (n=1), Diagenode - Diagenode Real Time kit (n=1), ELITech Group - Elitech Alert Oligomix kit (n=1), PathoFinder (n=1), PathoFinder - PathoFinder Real Time PCR (n=1), QIAGEN - QIAGEN Artus Real Time (n=3), Roche (n=1), Roche - Roche Cobas 4800 (n=1), Sacace (n=1), Sacace - Sacace Real TM (n=1), Seegene - Seegene Seeplex (n=1), TIB MOLBIOL (n=1), TIB MOLBIOL - TIB MOLBIOL LightMix (n=1), bioMerieux - bioMerieux R-gene Quant Kit (n=3), fast-track DIAGNOSTICS (n=3), fast-track DIAGNOSTICS - FTD real time PCR (n=3), In-House - Conventional In-House PCR (n=1)

Groups Rolled Up: Cepheid - Cepheid Xpert kit (n=8), Certest - Certest Real Time PCR (n=13)
**Individual Report**

**QCMD 2022 Central Nervous System I (Viral Meningitis and Encephalitis) EQA Programme**

- **Catalogue Code:** QAV174195
- **Ref Code:** CNSI22
- **Challenge:** S
- **Analysis Type:** Multiple Pathogen Qualitative
- **Dataset:** 614606
- **Report UID:** 2677/66137/5353
- **Laboratory:** CZ023

### Sample Code and Content

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<thead>
<tr>
<th>Sample Code</th>
<th>Sample Content</th>
<th>Matrix</th>
<th>Expected Relationships</th>
<th>Detected / Determined</th>
<th>Not Detected / Not Determined</th>
<th>Not Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNSI22S-02</td>
<td>Echovirus 30</td>
<td>Transport medium</td>
<td>Enterovirus</td>
<td>91.1 / 113</td>
<td>1.6 / 2</td>
<td>7.3 / 9</td>
</tr>
</tbody>
</table>

### Score Breakdown

- **Final laboratory result (All)**: 124

#### All

- **Commercial**
  - Altona Diagnostics
  - Altona Diagnostics RealStar
  - Cepheid
  - Certest
  - ELITech Group
    - Elitech Elite Real Time kit
  - GeneProof
    - GeneProof Real Time PCR kit
  - Qiagen
    - Qiagen QIAstat-Dx
  - Seegene
    - Seegene Allplex
  - bioMerieux
    - BioFire FilmArray ME
    - bioMerieux R-gene Kit

- **In-House**
  - Real-time In-House PCR

**Number of Values in Groups**

**Score Breakdown**

- **Detected / Determined**
- **Not Detected / Not Determined**
- **Not Tested**
| Catalogue Code: | QAV174195 | Ref Code: | CNSI22 | Challenge: | S | Analysis Type: | Multiple Pathogen Qualitative | Dataset: | 614606 | Report UID: | 2677/66137/5353 | Laboratory: | CZ023 |

**Groups below n=5:**
- Altona Diagnostics - Altona Diagnostics AltoStar (n=1), Anatolia Geneworks (n=3), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=3), AusDiagnostics (n=3), AusDiagnostics - AusDiagnostics TandemPlex (n=3), BIOEKSEN (n=1), BIOEKSEN - BIOEKSEN Real Time PCR (n=1), Bio-Rad (n=1), Bio-Rad - Bio-Rad Dx (n=1), BioGX (n=2), BioGX - BioGX Sample-Ready (n=2), DiaSorin (n=2), DiaSorin - DiaSorin Simplexa (n=2), Diagenode (n=1), Diagenode - Diagenode Real Time kit (n=1), ELTech Group - Elitech Alert Oligomix kit (n=1), PathoFinder (n=1), PathoFinder - PathoFinder Real Time PCR (n=1), QIAGEN - QIAGEN Artus Real Time (n=3), Roche (n=1), Roche - Roche Cobas 4800 (n=1), Sacace (n=1), Sacace - Sacace Real TM (n=1), Seegene - Seegene Seeplex (n=1), TIB MOLBIOL (n=1), TIB MOLBIOL - TIB MOLBIOL LightMix (n=1), bioMerieux - bioMerieux R-gene Quant Kit (n=3), fast-track DIAGNOSTICS (n=3), fast-track DIAGNOSTICS - FTD real time PCR (n=3), In-House - Conventional In-House PCR (n=1)

**Groups Rolled Up:**
- Cepheid - Cepheid Xpert kit (n=9), Certest - Certest Real Time PCR (n=13)
**QCMD 2022 Central Nervous System I (Viral Meningitis and Encephalitis) EQA Programme**

**Catalogue Code:** QAV174195  
**Ref Code:** CNSI22  
**Challenge:** S  
**Analysis Type:** Multiple Pathogen Qualitative  
**Dataset:** 614606  
**Report UID:** 2677/66137/5353  
**Laboratory:** CZ023

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<thead>
<tr>
<th>Sample Code</th>
<th>Sample Content</th>
<th>Matrix</th>
<th>Sample Relationships</th>
<th>Expected targets</th>
<th>Detected / Determined (%)</th>
<th>Not Detected / Not Determined (%)</th>
<th>Not Tested (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNSI22S-03</td>
<td>Varicella-Zoster Virus (9/84)</td>
<td>Transport medium</td>
<td>Varicella-zoster virus</td>
<td></td>
<td>91.1 (113) 0.8 (1) 8.1 (10)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Final laboratory result (All)**

- **Number of Values in Groups**
  - **Total:** 124
  - **Commercial:** 218
    - Altona Diagnostics: 157
    - Cepheid: 8
    - Certest: 8
    - ELITech Group: 23
    - GeneProof: 22
    - GeneProof Real Time PCR kit: 9
    - QIAGEN: 12
    - Qiagen QIAstat-Dx: 9
    - Seegene: 12
    - Seegene Allplex: 11
    - bioMerieux: 53
      - BioFire FilmArray ME: 45
      - bioMerieux R-gene Kit: 5
    - In-House: 61
      - Real-time In-House PCR: 60
  - **In-House:** 22
Groups below n=5: Altona Diagnostics - Altona Diagnostics AltoStar (n=1), Anatolia Geneworks (n=3), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=3), AusDiagnostics (n=3), AusDiagnostics - AusDiagnostics TandemPlex (n=3), BIOEKSEN (n=1), BIOEKSEN - BIOEKSEN Real Time PCR (n=1), Bio-Rad (n=1), Bio-Rad - Bio-Rad Dx (n=1), BioGX (n=2), BioGX - BioGX Sample-Ready (n=2), DiaSorin (n=2), DiaSorin - DiaSorin Simplexa (n=2), Diagenode (n=1), Diagenode - Diagenode Real Time kit (n=1), ELITech Group - Elitech Alert Oligomix kit (n=1), PathoFinder (n=1), PathoFinder - PathoFinder Real Time PCR (n=1), QIAGEN - QIAGEN Artus Real Time (n=3), Roche (n=1), Roche - Roche Cobas 4800 (n=1), Sacace (n=1), Sacace - Sacace Real TM (n=1), Seegene - Seegene Seeplex (n=1), TIB MOLBIOL (n=1), TIB MOLBIOL - TIB MOLBIOL LightMix (n=1), bioMerieux - bioMerieux R-gene Quant Kit (n=3), fast-track DIAGNOSTICS (n=3), fast-track DIAGNOSTICS - FTD real time PCR (n=3), In-House - Conventional In-House PCR (n=1)

Groups Rolled Up: Cepheid - Cepheid Xpert kit (n=8), Certest - Certest Real Time PCR (n=13)
## Sample Code: CNSI22S-04
### Varicella-Zoster Virus (Ellen)
#### Transport medium

**Expected targets:** Varicella-zoster virus

<table>
<thead>
<tr>
<th>Detected / Determined</th>
<th>Not Detected / Not Determined</th>
<th>Not Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>91.1 (113)</td>
<td>0.8 (1)</td>
<td>8.1 (10)</td>
</tr>
</tbody>
</table>

### Final laboratory result (All)

- **219** values in groups
- **158** detected/determined
- **7** not detected/not determined
- **6** not tested

### Score Breakdown

- **0%**
- **20%**
- **40%**
- **60%**
- **80%**
- **100%**

#### Commercial

- **Altona Diagnostics**
- **Altona Diagnostics RealStar**
- **Cepheid**
- **CerTest**
- **ELITech Group**
- **Elitech Elite Real Time kit**
- **GeneProof**
- **GeneProof Real Time PCR kit**
- **QIAGEN**
- **Qiagen QIAstat-Dx**
- **Seegene**
- **Seegene Allplex**
- **bioMerieux**
- **BioFire FilmArray ME**
- **bioMerieux R-gene Kit**

#### In-House

- **Real-time In-House PCR**

### Individual Report

**Catalogue Code:** QAV174195
**Ref Code:** CNSI22
**Challenge:** S
**Analysis Type:** Multiple Pathogen Qualitative
**Dataset:** 614606
**Report UID:** 2677/66137/5353
**Laboratory:** CZ023

- **Number of Values in Groups:**
  - **219**
  - **158**
  - **7**
  - **6**
  - **23**
  - **22**
  - **9**
  - **9**
  - **12**
  - **9**
  - **12**
  - **11**
  - **54**
  - **46**
  - **5**
  - **61**
  - **60**

**QCMD, Technology Terrace, Todd Campus, West of Scotland Science Park, Glasgow, G20 0XA Tel: +44 (0) 141 945 6474, Fax: +44 (0) 141 398 3759 Web: www.qcmd.org**

**Issue Date: 19 Jan 2023**
**Report authorised by the QCMD Executive (1) A UKAS accredited proficiency testing provider No.4385**
<table>
<thead>
<tr>
<th>Groups below n=5:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altona Diagnostics - AltoStar (n=1), Anatolia Geneworks (n=3), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=3), AusDiagnostics (n=3), AusDiagnostics - AusDiagnostics TandemPlex (n=3), BIOEKSEN (n=1), BIOEKSEN - BIOEKSEN Real Time PCR (n=1), Bio-Rad (n=1), Bio-Rad - Bio-Rad Dx (n=1), BioGx (n=2), BioGx - BioGx Sample-Ready (n=2), DiaSorin (n=2), DiaSorin - DiaSorin Simplexa (n=2), Diagenode (n=1), Diagenode - Diagenode Real Time kit (n=1), ELITech Group - Elitech Alert Oligomix kit (n=1), PathoFinder (n=1), PathoFinder - PathoFinder Real Time PCR (n=1), QIAGEN - QIAGEN Artus Real Time (n=3), Roche (n=1), Roche - Roche Cobas 4800 (n=1), Sacace (n=1), Sacace - Sacace Real TM (n=1), Seegene - Seegene Seeplex (n=1), TIB MOLBIOL (n=1), TIB MOLBIOL - TIB MOLBIOL LightMix (n=1), bioMerieux - bioMerieux R-gene Quant Kit (n=3), fast-track DIAGNOSTICS (n=3), fast-track DIAGNOSTICS - FTD real time PCR (n=3), In-House - Conventional In-House PCR (n=1)</td>
</tr>
<tr>
<td>Groups Rolled Up:</td>
</tr>
<tr>
<td>Cepheid - Cepheid Xpert kit (n=8), Certest - Certest Real Time PCR (n=13)</td>
</tr>
</tbody>
</table>
Sample Code: CNSI22S-05
Sample Content: Parechovirus Type 1
Matrix: Transport medium
Expected relationships: Parechovirus
Detected / Determined: 76.6 / 95
Not Detected / Not Determined: 2.4 / 3
Not Tested: 21 / 26

Score Breakdown:
- Detected / Determined
- Not Detected / Not Determined
- Not Tested
<table>
<thead>
<tr>
<th>Challenge</th>
<th>Analysis Type</th>
<th>Dataset</th>
<th>Report UID</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Multiple Pathogen Qualitative</td>
<td>614606</td>
<td>2677/66137/5353</td>
<td>CZ023</td>
</tr>
</tbody>
</table>

**Groups below n=5:**

- Altona Diagnostics - Altona Diagnostics AltoStar (n=1), Anatolia Geneworks (n=3), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=3), AusDiagnostics (n=4), AusDiagnostics - AusDiagnostics TandemPlex (n=4), BIOEKSEN (n=1), BIOEKSEN - BIOEKSEN Real Time PCR (n=1), Bio-Rad (n=1), Bio-Rad - Bio-Rad Dx (n=1), BioGX (n=2), BioGX - BioGX Sample-Ready (n=2), DiaSorin (n=2), DiaSorin - DiaSorin Simplexa (n=2), Diagenode (n=1), Diagenode - Diagenode Real Time Kit (n=1), ELITech Group - Elitech Alert Oligomix kit (n=1), PathoFinder (n=1), PathoFinder - PathoFinder Real Time PCR (n=1), Qiagen - QIAGEN Artus Real Time (n=3), Roche (n=1), Roche - Roche Cobas 4800 (n=1), Sacace (n=1), Sacace - Sacace Real TM (n=1), Seegene - Seegene Seeplex (n=1), TIB MOLBIOL (n=1), TIB MOLBIOL - TIB MOLBIOL LightMix (n=1), bioMerieux - bioMerieux R-gene Quant Kit (n=3), fast-track DIAGNOSTICS (n=3), fast-track DIAGNOSTICS - FTD real time PCR (n=3), In-House - Conventional In-House PCR (n=1)

**Groups Rolled Up:**

- Cepheid - Cepheid Xpert kit (n=8), Certest - Certest Real Time PCR (n=13)
### Sample Code: CNSI22S-06
- **Sample Content:** Negative
- **Matrix:** Transport medium

<table>
<thead>
<tr>
<th>Sample Code</th>
<th>Sample Content</th>
<th>Matrix</th>
<th>Sample Relationships</th>
<th>Detected / Determined (%)</th>
<th>Not Detected / Not Determined (%)</th>
<th>Not Tested (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNSI22S-06</td>
<td>Negative</td>
<td>Transport medium</td>
<td></td>
<td>96</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Score Breakdown

- **Detected / Determined**
- **Not Detected / Not Determined**
- **Not Tested**

---

**Final laboratory result (All)**

- Number of Values in Groups:
  - **Detected / Determined:** 230
  - **Not Detected / Not Determined:** 161
  - **Not Tested:** 7

- **Score Breakdown:**
  - **All Commercial**
    - Altona Diagnostics: 7
    - Altona Diagnostics RealStar: 6
    - Cepheid: 9
    - Certest: 13
    - ELITech Group: 23
    - Elitech Elite Real Time kit: 22
    - GeneProof: 9
    - GeneProof Real Time PCR kit: 9
    - QIAGEN: 12
    - QIAGEN QIAstat-Dx: 9
    - Seegene: 12
    - Seegene Allplex: 11
    - bioMerieux: 55
    - BioFire FilmArray ME: 47
    - bioMerieux R-gene Kit: 5
  - **In-House**
    - Real-time In-House PCR: 69

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**Catalogue Code:** QAV174195  
**Ref Code:** CNSI22  
**Challenge:** S  
**Analysis Type:** Multiple Pathogen Qualitative  
**Dataset:** 614606  
**Report UID:** 2677/66137/5353  
**Laboratory:** CZ023

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Report authorised by the QCMD Executive (1)  
A UKAS accredited proficiency testing provider No.4385
Groups below n=5: Altona Diagnostics - Altona Diagnostics AltoStar (n=1), Anatolia Geneworks (n=3), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=3), AusDiagnostics (n=4), AusDiagnostics - AusDiagnostics TandemPlex (n=4), BIOEKSEN (n=1), BIOEKSEN - BIOEKSEN Real Time PCR (n=1), Bio-Rad (n=1), Bio-Rad - Bio-Rad Dx (n=1), BioGX (n=2), BioGX - BioGX Sample-Ready (n=2), DiaSorin (n=2), DiaSorin - DiaSorin Simplexa (n=2), Diagenode (n=1), Diagenode - Diagenode Real Time kit (n=1), ELITech Group - Elitech Alert Oligomix kit (n=1), PathoFinder (n=1), PathoFinder - PathoFinder Real Time PCR (n=1), QIAGEN - QIAGEN Artus Real Time (n=3), Roche (n=1), Roche - Roche Cobas 4800 (n=1), Sacace (n=1), Sacace - Sacace Real TM (n=1), Seegene - Seegene Seeplex (n=1), TIB MOLBIOL (n=1), TIB MOLBIOL - TIB MOLBIOL LightMix (n=1), bioMerieux - bioMerieux R-gene Quant Kit (n=3), fast-track DIAGNOSTICS (n=3), fast-track DIAGNOSTICS - FTD real time PCR (n=3), In-House - Conventional In-House PCR (n=1)

Groups Rolled Up: Cepheid - Cepheid Xpert kit (n=9), Certest - Certest Real Time PCR (n=13)
<table>
<thead>
<tr>
<th>Sample Code</th>
<th>Sample Content</th>
<th>Matrix</th>
<th>Sample Relationships</th>
<th>Expected targets</th>
<th>Detected / Determined (%)</th>
<th>Not Detected / Not Determined (%)</th>
<th>Not Tested (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNSI22S-07</td>
<td>Parechovirus Type 3</td>
<td>Transport medium</td>
<td>Parechovirus</td>
<td>75.8</td>
<td>94</td>
<td>3.2</td>
<td>21</td>
</tr>
</tbody>
</table>

**Score Breakdown**

- **Detected / Determined**
- **Not Detected / Not Determined**
- **Not Tested**

**Number of Values in Groups**

- Commercial
  - Altona Diagnostics
  - Altona Diagnostics RealStar
  - Cepheid
  - Certest
  - ELITech Group
  - Elitech Elite Real Time kit
- GeneProof
  - GeneProof Real Time PCR kit
- QIAGEN
  - Qiagen QIAstat-Dx
  - Seegene
  - Seegene Allplex
- bioMerieux
  - BioFire FilmArray ME
  - bioMerieux R-gene Kit
- In-House
  - Real-time In-House PCR
**Groups below n=5:**
Altona Diagnostics - Altona Diagnostics AltoStar (n=1), Anatolia Geneworks (n=3), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=3), AusDiagnostics (n=4), AusDiagnostics - AusDiagnostics TandemPlex (n=4), BIOEKSEN (n=1), BIOEKSEN - BIOEKSEN Real Time PCR (n=1), Bio-Rad (n=1), Bio-Rad - Bio-Rad Dx (n=1), BioGX (n=2), BioGX - BioGX Sample-Ready (n=2), DiaSorin (n=2), DiaSorin - DiaSorin Simplexa (n=2), Diagenode (n=1), Diagenode - Diagenode Real Time kit (n=1), ELITech Group - Elitech Alert Oligomix kit (n=1), PathoFinder (n=1), PathoFinder - PathoFinder Real Time PCR (n=1), QIAGEN - QIAGEN Artus Real Time (n=3), Roche (n=1), Roche - Roche Cobas 4800 (n=1), Sacace (n=1), Sacace - Sacace Real TM (n=1), Seegene - Seegene Seeplex (n=1), TIB MOLBIOL (n=1), TIB MOLBIOL - TIB MOLBIOL LightMix (n=1), bioMerieux - bioMerieux R-gene Quant Kit (n=3), fast-track DIAGNOSTICS (n=3), fast-track DIAGNOSTICS - FTD real time PCR (n=3), In-House - Conventional In-House PCR (n=1)

**Groups Rolled Up:**
Cepheid - Cepheid Xpert kit (n=8), Certest - Certest Real Time PCR (n=13)
### Sample Code Details

<table>
<thead>
<tr>
<th>Sample Code</th>
<th>Sample Content</th>
<th>Matrix</th>
<th>Sample Relationships</th>
<th>Expected targets</th>
<th>Detected / Determined (%)</th>
<th>Not Detected / Not Determined (%)</th>
<th>Not Tested (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNSI22S-08</td>
<td>Herpes Simplex Virus Type 1</td>
<td>Transport medium</td>
<td>Herpes simplex virus</td>
<td>91.9</td>
<td>114</td>
<td>2.4</td>
<td>3</td>
</tr>
</tbody>
</table>

### Score Breakdown

- **Detected / Determined**
- **Not Detected / Not Determined**
- **Not Tested**

#### Final laboratory result (All)

- **All**
  - **Commercial**
    - Altona Diagnostics
    - Cepheid
    - Certest
    - ELITech Group
    - GeneProof
    - Qiagen
    - Seegene
    - bioMerieux
    - BioFire FilmArray ME
  - **In-House**
    - Real-time In-House PCR

### Number of Values in Groups

- **Commercial**
  - Altona Diagnostics: 159
  - Cepheid: 8
  - Certest: 13
  - ELITech Group: 23
  - GeneProof: 9
  - Qiagen: 12
  - Seegene: 12
  - bioMerieux: 55
  - BioFire FilmArray ME: 47

- **In-House**
  - Real-time In-House PCR: 61
Groups below n=5: Altona Diagnostics - Altona Diagnostics AltoStar (n=1), Anatolia Geneworks (n=3), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=3), AusDiagnostics (n=3), AusDiagnostics - AusDiagnostics TandemPlex (n=3), BIOEKSEN (n=1), BIOEKSEN - BIOEKSEN Real Time PCR (n=1), Bio-Rad (n=1), Bio-Rad - Bio-Rad Dx (n=1), BioGX (n=2), BioGX - BioGX Sample-Ready (n=2), DiaSorin (n=2), DiaSorin - DiaSorin Simplexa (n=2), Diagenode (n=1), Diagenode - Diagenode Real Time kit (n=1), ELITech Group - Elitech Alert Oligomix kit (n=1), PathoFinder (n=1), PathoFinder - PathoFinder Real Time PCR (n=1), QIAGEN - QIAGEN Artus Real Time (n=3), Roche (n=1), Roche - Roche Cobas 4800 (n=1), Sacace (n=1), Sacace - Sacace Real TM (n=1), Seegene - Seegene Seeplex (n=1), TIB MOLBIOL (n=1), TIB MOLBIOL - TIB MOLBIOL LightMix (n=1), bioMerieux - bioMerieux R-gene Quant Kit (n=3), fast-track DIAGNOSTICS (n=3), fast-track DIAGNOSTICS - FTD real time PCR (n=3), In-House - Conventional In-House PCR (n=1)

Groups Rolled Up: Cepheid - Cepheid Xpert kit (n=8), Certest - Certest Real Time PCR (n=13)
<table>
<thead>
<tr>
<th>Sample Code</th>
<th>Sample Content</th>
<th>Matrix</th>
<th>Expected targets</th>
<th>Detected / Determined</th>
<th>Not Detected / Not Determined</th>
<th>Not Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNSI22S-09</td>
<td>Herpes Simplex Virus Type 2</td>
<td>Transport medium</td>
<td>Herpes simplex virus</td>
<td>91.1% (113)</td>
<td>3.2% (4)</td>
<td>5.6% (7)</td>
</tr>
</tbody>
</table>

### Final laboratory result (All)

- **Score Breakdown**
  - Detected / Determined
  - Not Detected / Not Determined
  - Not Tested

### All

#### Commercial
- Altona Diagnostics
- Altona Diagnostics RealStar
- Cepheid
- Certest
- ELITech Group
- Epitech Elite Real Time kit
- GeneProof
- GeneProof Real Time PCR kit
- QIAGEN
- Qiagen QIAstat-Dx
- Seegene
- Seegene Allplex
- bioMerieux
- BioFire FilmArray ME
- bioMerieux R-gene Kit

#### In-House
- Real-time In-House PCR

**Number of Values in Groups**

- **Total**: 218
- ** Detected / Determined**: 157
- ** Not Detected / Not Determined**: 6
- ** Not Tested**: 55

---

**Catalogue Code:** QAV174195

**Ref Code:** CNSI22

**Challenge:** S

**Analysis Type:** Multiple Pathogen Qualitative

**Dataset:** 614606

**Report UID:** 2677/66137/5353

**Laboratory:** CZ023

**QCMD, Technology Terrace, Todd Campus, West of Scotland Science Park, Glasgow, G20 0XA**

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**Web:** www.qcmd.org

**Issue Date:** 19 Jan 2023

**Report authorised by the QCMD Executive (1)**

**A UKAS accredited proficiency testing provider No.4385**
Groups below n=5: Altona Diagnostics - Altona Diagnostics AltoStar (n=1), Anatolia Geneworks (n=3), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=3), AusDiagnostics (n=3), AusDiagnostics - AusDiagnostics TandemPlex (n=3), BIOEKSEN (n=1), BIOEKSEN - BIOEKSEN Real Time PCR (n=1), Bio-Rad (n=1), Bio-Rad - Bio-Rad Dx (n=1), BioGX (n=2), BioGX - BioGX Sample-Ready (n=2), DiaSorin (n=2), DiaSorin - DiaSorin Simplexa (n=2), Diagenode (n=1), Diagenode - Diagenode Real Time kit (n=1), ELITech Group - Elitech Alert Oligomix kit (n=1), PathoFinder (n=1), PathoFinder - PathoFinder Real Time PCR (n=1), QIAGEN - QIAGEN Artus Real Time (n=3), Roche (n=1), Roche - Roche Cobas 4800 (n=1), Sacace (n=1), Sacace - Sacace Real TM (n=1), Seegene - Seegene Seeplex (n=1), TIB MOLBIOL (n=1), TIB MOLBIOL - TIB MOLBIOL LightMix (n=1), bioMerieux - bioMerieux R-gene Quant Kit (n=3), fast-track DIAGNOSTICS (n=3), fast-track DIAGNOSTICS - FTD real time PCR (n=3), In-House - Conventional In-House PCR (n=1)

Groups Rolled Up: Cepheid - Cepheid Xpert kit (n=8), Certest - Certest Real Time PCR (n=13)
### Sample Code | Sample Content | Matrix | Sample Relationships | Expected targets | Detected / Determined (%) | Not Detected / Not Determined (%) | Not Tested (%) |
--- | --- | --- | --- | --- | --- | --- | --- |
CNSI22S-10 | Herpes Simplex Virus Type 1 | Transport medium | Herpes simplex virus | 91.1 | 3.2 | 5.6 | 7 |

#### Score Breakdown

- **Detected / Determined**
- **Not Detected / Not Determined**
- **Not Tested**

### Final laboratory result (All)

- **Number of Values in Groups**
- **Challenge:** S
- **Analysis Type:** Multiple Pathogen Qualitative
- **Dataset:** 614606
- **Report UID:** 2677/66137/5353
- **Laboratory:** CZ023

#### All

- **Commercial**
  - Altona Diagnostics
  - Altona Diagnostics RealStar
  - Cepheid
  - Certest
  - ELITech Group
  - Elitech Elite Real Time kit
- **GeneProof**
  - GeneProof Real Time PCR kit
- **QIAGEN**
  - Qiagen QIAstat-Dx
- **Seegene**
  - Seegene Allplex
- **bioMerieux**
  - BioFire FilmArray ME
  - bioMerieux R-gene Kit
- **In-House**
  - Real-time In-House PCR
### Groups below n=5:
- Altona Diagnostics - Altona Diagnostics AltoStar (n=1)
- Anatolia Geneworks (n=3)
- Anatolia Geneworks - Anatolia Geneworks
- Bosphore (n=3)
- AusDiagnostics (n=3)
- AusDiagnostics - AusDiagnostics TandemPlex (n=3)
- BIOEKSEN (n=1)
- BIOEKSEN - BIOEKSEN Real Time PCR (n=1)
- Bio-Rad (n=1)
- Bio-Rad - Bio-Rad Dx (n=1)
- BioGX (n=2)
- BioGX - BioGX Sample-Ready (n=2)
- DiaSorin (n=2)
- DiaSorin - DiaSorin Simplexa (n=2)
- Diagenode (n=1)
- Diagenode - Diagenode Real Time kits (n=1)
- ELITech Group - Elitech Alert Oligomix kit (n=1)
- PathoFinder (n=1)
- PathoFinder - PathoFinder Real Time PCR (n=1)
- QIAGEN - QIAGEN Artus Real Time (n=3)
- Roche (n=1)
- Roche - Roche Cobas 4800 (n=1)
- Sacace (n=1)
- Sacace - Sacace Real TM (n=1)
- Seegene - Seegene Seeplex (n=1)
- TIB MOLBIOL (n=1)
- TIB MOLBIOL - TIB MOLBIOL LightMix (n=1)
- bioMerieux (n=1)
- bioMerieux R-gene QuantiKits (n=1)
- fast-track DIAGNOSTICS (n=3)
- fast-track DIAGNOSTICS - FTD real time PCR (n=3)
- In-House - Conventional In-House PCR (n=1)

### Groups Rolled Up:
- Cepheid - Cepheid Xpert kit (n=8)
- Certest - Certest Real Time PCR (n=13)

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