QCMD 2023 Hepatitis B Virus DNA EQA Programme



Catalogue Code: QAV994110

Ref Code: HBVDNA23 Challenge:

C1

Analysis Type:

Qualitative and Quantitative

Dataset: 626002

Report UID: 2677/626002/5520

Laboratory CZ023

Intended Results / Panel Composition

Sample Code	Sample Content	Matrix	Sample Relationships ^[1]	Detection Frequency ^[2]	Sample Status ^[3]		Consensus (IU/ml) ^[4]		
						(Log ₁₀)	(n)		
HBVDNA23C1-01	HBV Type D	Plasma		Frequently Detected	CORE	2.625	216	1.000 - 3.289	
HBVDNA23C1-02	HBV Type A	Plasma		Frequently Detected	CORE	2.772	216	1.799 - 3.057	
HBVDNA23C1-03	HBV Type A	Plasma		Frequently Detected	CORE	2.770	217	1.973 - 3.452	
HBVDNA23C1-04	HBV Type D	Plasma		Frequently Detected	CORE	2.670	217	1.301 - 3.303	

[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] **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 from participants within the EQA challenge / distribution.
- [3] **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.
- [4] **Consensus (IU/ml):** Mean consensus (Log₁₀) calculated from data returned by participants with outliers removed and number of quantitative results (n) returned for each panel member.
- [5] Range: Maximum and minimum quantitative value (IU/ml) reported by participants within this challenge without outliers removed.

For further details please refer to the current participant manual.

Your Summary Results

Units	IU/ml
EQA Assessment Group [1]	GeneProof Real Time PCR kit
Core Panel Detection (Qualitative) Score [2]	0
Core Panel Estimation (Quantitative) Score [3]	4

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Core Panel Members Results

Sample Code	Unitage	EQA Assessment Group Consensus [4]	SD [5]	Quantitative Result		Qualitative Result			
		Croup consensus		Your Result	Estimation Score ^[7]	Percentage Correct (AII)	Your Result	Detection Score ^[10]	
HBVDNA23C1-01	IU/ml	2.561	0.237	2.220	1	100.0	Positive	0	
HBVDNA23C1-02	IU/ml	2.663	0.196	2.377	1	99.3	Positive	0	
HBVDNA23C1-03	IU/ml	2.586	0.228	2.310	1	100.0	Positive	0	
HBVDNA23C1-04	DNA23C1-04 IU/ml 2.344		0.119	2.225	1	100.0	Positive	0	

All quantitative values above expressed in Log 10 IU/ml.

- [1] **EQA Assessment Group:** To aid data 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] Core Panel Detection (Qualitative) Score: An overall core panel detection score provided per challenge / distribution.
- [3] Core Panel Estimation (Quantitative) Score: An overall core panel estimation score provided per challenge / distribution.
- [4] EQA Assessment Group Consensus: The mean value for all results within your EQA assessment group.
- [5] SD: The standard deviation for results from your EQA assessment group.
- [6] Your Quantitative Result: The quantitative result you returned for each sample within this EQA challenge. LOD/NR (limit of detection or not reported).
- [7] **Estimation Score:** Your estimation (quantitative) scores are calculated based on your variation from the consensus for your EQA assessment group. With 0 (zero) scored if the quantitative value you reported is within one standard deviation (SD) from your EQA assessment group consensus, 1 (one) if your quantitative value is between one and two SDs, 2 (two) if your quantitative value is within two and three SDs and 3 (three) if your quantitative value is more than three SDs from the mean of your EQA assessment group.
- [8] Percentage Correct (All): Percentage of datasets (%) reporting the correct qualitative results for each panel member.
- [9] Your Qualitative Result: The qualitative result you reported for each sample within this EQA challenge / distribution.
- [10] **Detection Score:** Your detection (qualitative) scores are based on the assigned detection frequency of each panel members, where 0 (zero) is "highly satisfactory" and 3 (three) is "highly unsatisfactory". Scores are provided for individual panel members.

For further details please refer to the current participant manual.

QCMD 2023 Hepatitis B Virus DNA EQA Programme



Catalogue Code: QAV994110

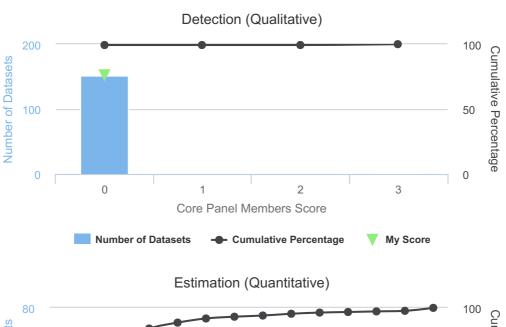
Ref Code: HBVDNA23 Challenge: C1 Analysis Type:
Qualitative and Quantitative

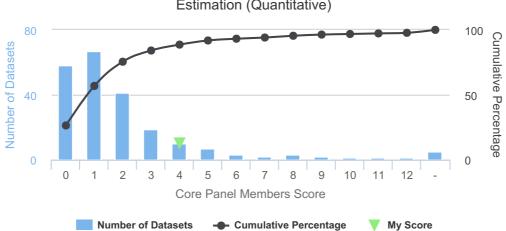
Dataset: 626002

Report UID: 2677/626002/5520

Laboratory CZ023

Core Panel Member Score Breakdown





Core Panel Member Score Breakdown - Detection: This figure gives you a breakdown of the qualitative detection scores for all qualitative datasets returned within this EQA challenge / distribution independent of the EQA assessment group. Panel detection scores are generated from only those panel members that are defined as "CORE".

Core Panel Member Score Breakdown - Estimation: This figure gives you a breakdown of the quantitative estimation scores for all quantitative datasets returned within this EQA challenge / distribution independent of the EQA assessment group. Panel estimation scores are based on positive core panel members only. Those datasets that did not return quantitative values for all core samples are represented by '-'.

For further details please refer to the current participant manual.

QCMD 2023 Hepatitis B Virus DNA EQA Programme



Catalogue Code: QAV994110

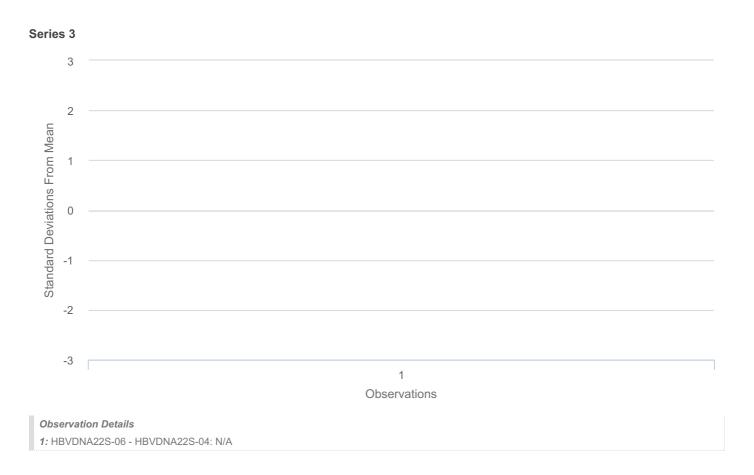
Ref Code: HBVDNA23 Challenge: C1 **Analysis Type:**Qualitative and Quantitative

Dataset: 626002

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Laboratory CZ023

Duplicate Sample Performance Over Time



QCMD 2023 Hepatitis B Virus DNA EQA Programme



Catalogue Code: QAV994110

Ref Code: HBVDNA23 Challenge: C1

1

Analysis Type:

Qualitative and Quantitative 626

Dataset: 626002

Report UID: 2677/626002/5520

2

Laboratory CZ023



Observation Details

-3

1: HBVDNA22C3-03 - HBVDNA22C1-02: N/A

2: HBVDNA23C1-03 - HBVDNA22C3-03: N/A

QCMD monitors your laboratory's performance over time based on the reported quantitative variation between duplicate panel members within the EQA challenge and, where appropriate, across EQA challenges.

Observations

The mean variation and standard deviation are calculated from the quantitative variation reported by each participant between duplicate panel members in the same unit of measurement once outliers have been removed. (See 'Observation Details')

Previous and current observations are plotted on the chart as the number of standard deviations your variation was from the mean variation for all participants who submitted corresponding results in the same unitage.

Any reported variation greater than ±3 SD will not be shown on the graph, but your variation value will be provided in red in the *Observation Details*. When "N/A" is displayed for an observation, either no valid quantitative results were provided or there was a change in reported unitage.

Note: This feature generates comparisons to previous challenge participation based on taking the first dataset submitted regardless of workflow. This context should be considered for participants who routinely submit for multiple workflows.

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My Workflow Details

The details of the workflow(s) used to submit your results for this challenge.

Name	Hepatitis B Virus (HBV) PCR Kit - croBEE (v4)
Description	
Targets	V hepatitis B 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: Hepatitis B Virus (HBV) PCR Kit Kit Version: GP

Further Programme Details

Number of Participants	268
Number of Countries	36
Number of Respondents	239
Number of Datasets Submitted	262
Quantitative Results Returned (All)	220 (84.0%)
- Quantitative Results Returned (IU/mI)	217 (98.6%)
- Quantitative Results Returned (Copies/ml)	3 (1.4%)
Qualitative Results Returned	153 (58.4%)

EQA Programme Aims

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

QCMD 2023 Hepatitis B Virus DNA EQA Programme



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Laboratory CZ023

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.

QCMD 2023 Hepatitis B Virus DNA EQA Programme



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Ref Code: HBVDNA23 Challenge: C1 Analysis Type:

Qualitative and Quantitative

Dataset: 626002

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Laboratory CZ023

Panel member analysis is separated into CORE samples followed by EDUCATIONAL samples.

Additional Core Samples Information

The following section has been categorised as shown below:

Core ► Quantitative ► IU/ml ► Qualitative

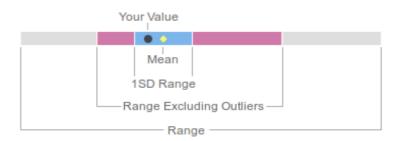
Individual Panel Member Analysis (Quantitative)

Quantitative 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. The principal level of assessment is at the individual method level which is defined based on your reported "amplification/detection method" and other laboratories using the same or similar amplification/detection methods.

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 reported results using the same unit of measurement (i.e. Copies/ml or IU/ml).

The results below provide a breakdown of participant reported values on each of the panel members within this EQA challenge / distribution. Your result for each panel member is indicated by "your value". You can compare your value to the "mean" within your EQA assessment group and the overall consensus for each sample within this EQA challenge / distribution.

Key



QCMD 2023 Hepatitis B Virus DNA EQA Programme



Catalogue Code: QAV994110

Ref Code: HBVDNA23 Challenge: C1 **Analysis Type:**Qualitative and Quantitative

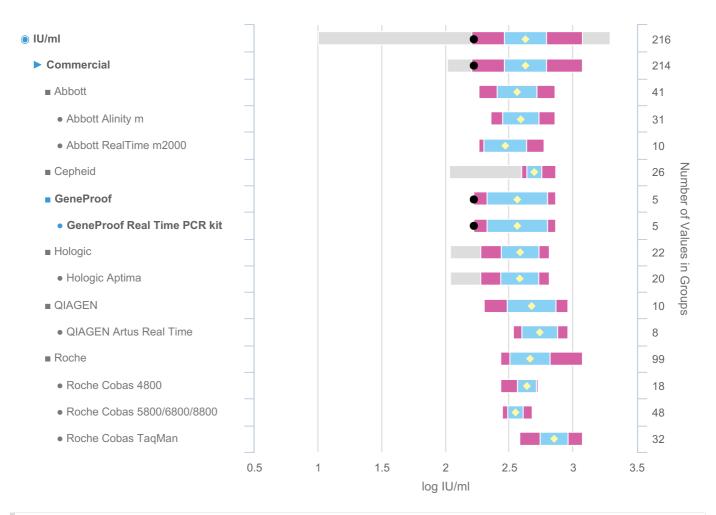
Dataset: 626002

Report UID: 2677/626002/5520

Laboratory CZ023

HBVDNA23C1-01 - Quantitative Results Breakdown (IU/ml)

Sample Code	Sample Content	Matrix	Sample Relationships	Detection Frequency	Sample Status	Consensus (IU/mI)		Range
						(Log ₁₀)	(n)	
HBVDNA23C1-0	I HBV Type D	Plasma		Frequently Detected	CORE	2.625	216	1.000 - 3.289



Groups below n=5: Anatolia Geneworks (n=4), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=4), ELITech Group (n=2), ELITech Group - ELITech Elite InGenius (n=2), Hologic - Hologic Panther Fusion (n=2), Iontek (n=1), Iontek - Iontek Fluorion (n=1), QIAGEN - Qiagen NeuMoDx (n=2), Roche - Roche Cobas SARS-CoV 2 (n=1), Sansure Biotech (n=2), Sansure Biotech - Sansure Real time PCR (n=2), Vector-Best (n=1), Vector-Best - Vector-Best Real Time PCR (n=1), In-House (n=2), In-House - Real-time In-House PCR (n=2)

QCMD 2023 Hepatitis B Virus DNA EQA Programme



Catalogue Code: QAV994110

Ref Code: HBVDNA23

Challenge: C1 Analysis Type:
Qualitative and Quantitative

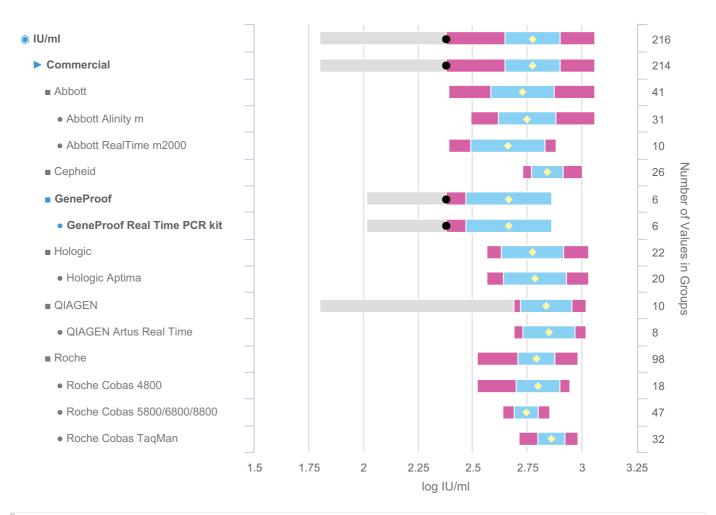
Dataset: 626002

Report UID: 2677/626002/5520

Laboratory CZ023

HBVDNA23C1-02 - Quantitative Results Breakdown (IU/ml)

Sample Code	Sample Content	Matrix	Sample Relationships	Detection Frequency	Sample Status	Consensus (IU/ml)		Range
						(Log ₁₀)	(n)	
HBVDNA23C1-02	HBV Type A	Plasma		Frequently Detected	CORE	2.772	216	1.799 - 3.057



Groups below n=5: Anatolia Geneworks (n=4), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=4), ELITech Group (n=2), ELITech Group - ELITech Elite InGenius (n=2), Hologic - Hologic Panther Fusion (n=2), Iontek (n=1), Iontek - Iontek Fluorion (n=1), QIAGEN - Qiagen NeuMoDx (n=2), Roche - Roche Cobas SARS-CoV 2 (n=1), Sansure Biotech (n=2), Sansure Biotech - Sansure Real time PCR (n=2), Vector-Best (n=1), Vector-Best - Vector-Best Real Time PCR (n=1), In-House (n=2), In-House - Real-time In-House PCR (n=2)

QCMD 2023 Hepatitis B Virus DNA EQA Programme



Catalogue Code: QAV994110

Ref Code: HBVDNA23 Challenge: C1 Analysis Type:
Qualitative and Quantitative

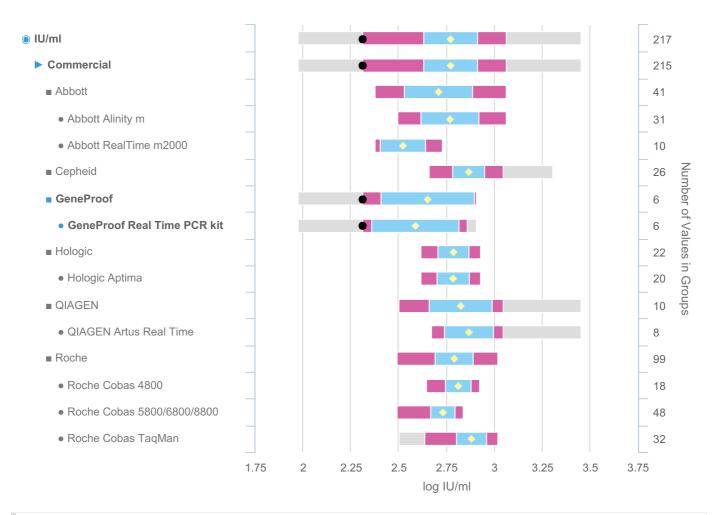
Dataset: 626002

Report UID: 2677/626002/5520

Laboratory CZ023

HBVDNA23C1-03 - Quantitative Results Breakdown (IU/ml)

Sample Code	e Sample Content	Matrix	Sample Relationships	Detection Frequency	Sample Status	Consensus (IU/mI)		Range
						(Log ₁₀)	(n)	
HBVDNA23C	HBV Type A	Plasma		Frequently Detected	CORE	2.770	217	1.973 - 3.452



Groups below n=5: Anatolia Geneworks (n=4), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=4), ELITech Group (n=2), ELITech Group - ELITech Elite InGenius (n=2), Hologic - Hologic Panther Fusion (n=2), Iontek (n=1), Iontek - Iontek Fluorion (n=1), QIAGEN - Qiagen NeuMoDx (n=2), Roche - Roche Cobas SARS-CoV 2 (n=1), Sansure Biotech (n=2), Sansure Biotech - Sansure Real time PCR (n=2), Vector-Best (n=1), Vector-Best - Vector-Best Real Time PCR (n=1), In-House (n=2), In-House - Real-time In-House PCR (n=2)

QCMD 2023 Hepatitis B Virus DNA EQA Programme



Catalogue Code: QAV994110

Ref Code: HBVDNA23 Challenge: C1 Analysis Type:
Qualitative and Quantitative

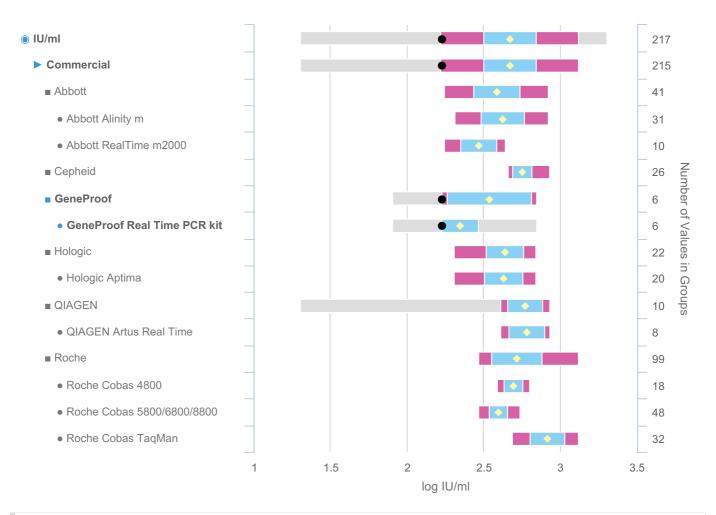
Dataset: 626002

Report UID: 2677/626002/5520

Laboratory CZ023

HBVDNA23C1-04 - Quantitative Results Breakdown (IU/ml)

Sample Code	Sample Content	Matrix	Sample Relationships	Detection Frequency	Sample Status	Consensus (IU/ml)		Range
						(Log ₁₀)	(n)	
HBVDNA23C1-04	HBV Type D	Plasma		Frequently Detected	CORE	2.670	217	1.301 - 3.303



Groups below n=5: Anatolia Geneworks (n=4), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=4), ELITech Group (n=2), ELITech Group - ELITech Elite InGenius (n=2), Hologic - Hologic Panther Fusion (n=2), Iontek (n=1), Iontek - Iontek Fluorion (n=1), QIAGEN - Qiagen NeuMoDx (n=2), Roche - Roche Cobas SARS-CoV 2 (n=1), Sansure Biotech (n=2), Sansure Biotech - Sansure Real time PCR (n=2), Vector-Best (n=1), Vector-Best - Vector-Best Real Time PCR (n=1), In-House (n=2), In-House - Real-time In-House PCR (n=2)

QCMD 2023 Hepatitis B Virus DNA EQA **Programme**



Catalogue Code: QAV994110

Ref Code: HBVDNA23

Challenge: **Analysis Type:** Qualitative and Quantitative Dataset: 626002

Report UID: 2677/626002/5520 Laboratory CZ023

Individual Panel Member Analysis (Qualitative)

C1

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. The principal level of assessment is at the individual method level which is defined based on your reported "amplification/detection method" and other laboratories using the same or similar amplification/detection methods.

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 by participants on each of the panel members within this EQA challenge / distribution is provided below. You can compare your results to those within your EQA assessment group and those obtained within other EQA assessment groups or to the overall consensus for each sample within this EQA challenge / distribution.

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Catalogue Code: QAV994110

Ref Code: HBVDNA23 Challenge: C1 Analysis Type:
Qualitative and Quantitative

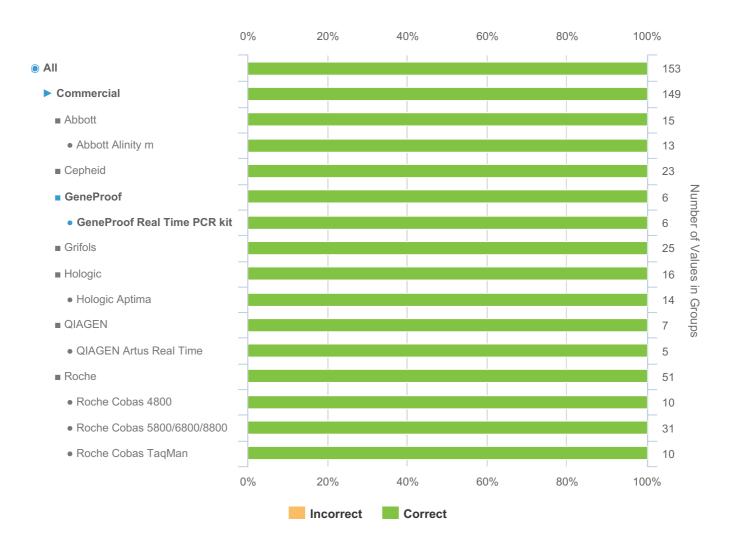
Dataset: 626002

Report UID: 2677/626002/5520

Laboratory CZ023

HBVDNA23C1-01 - Qualitative Results Breakdown

Sample Code	Sample Content	Matrix	Sample Relationships	Detection Frequency	Sample Status	Percentage Correct (AII)	
						(%)	(n)
HBVDNA23C1-01	HBV Type D	Plasma		Frequently Detected	CORE	100.0	153



Groups below n=5: Abbott - Abbott RealTime m2000 (n=2), AmpliSens (n=1), AmpliSens - AmpliSens Real Time PCR (n=1), Anatolia Geneworks (n=1), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=1), ELITech Group (n=1), ELITech Group - ELITech Elite InGenius (n=1), GFE Blut (n=1), GFE Blut - GFE Blut PoET (n=1), Hologic - Hologic Panther Fusion (n=2), Iontek (n=1), Iontek - Iontek Fluorion (n=1), QIAGEN - Qiagen NeuMoDx (n=2), fast-track DIAGNOSTICS (n=1), fast-track DIAGNOSTICS (n=1), In-House - Real-time In-House PCR (n=4)

QCMD 2023 Hepatitis B Virus DNA EQA Programme



Catalogue Code: QAV994110

Ref Code: HBVDNA23 Challenge: C1 Analysis Type:
Qualitative and Quantitative

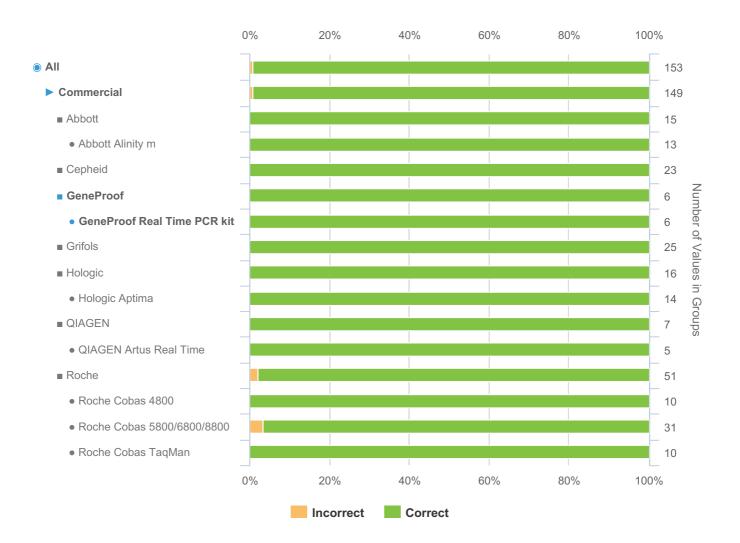
Dataset: 626002

Report UID: 2677/626002/5520

Laboratory CZ023

HBVDNA23C1-02 - Qualitative Results Breakdown

Sample Code	Sample Content	Matrix	Sample Relationships	Detection Frequency	Sample Status	Percentage Correct (AII)	
						(%)	(n)
HBVDNA23C1-02	HBV Type A	Plasma		Frequently Detected	CORE	99.3	153



Groups below n=5: Abbott - Abbott RealTime m2000 (n=2), AmpliSens (n=1), AmpliSens - AmpliSens Real Time PCR (n=1), Anatolia Geneworks (n=1), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=1), ELITech Group (n=1), ELITech Group - ELITech Elite InGenius (n=1), GFE Blut (n=1), GFE Blut - GFE Blut PoET (n=1), Hologic - Hologic Panther Fusion (n=2), Iontek (n=1), Iontek - Iontek Fluorion (n=1), QIAGEN - Qiagen NeuMoDx (n=2), fast-track DIAGNOSTICS (n=1), fast-track DIAGNOSTICS (n=1), In-House (n=4), In-House - Real-time In-House PCR (n=4)

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Ref Code: HBVDNA23 Challenge: C1 Analysis Type:
Qualitative and Quantitative

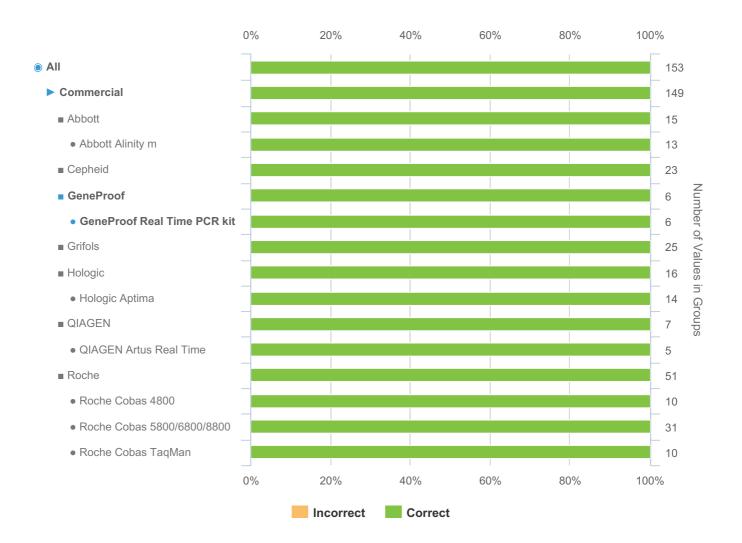
Dataset: 626002

Report UID: 2677/626002/5520

Laboratory CZ023

HBVDNA23C1-03 - Qualitative Results Breakdown

Sample Code	Sample Content	Matrix	Sample Relationships	Detection Frequency	Sample Status	Percentage Correct (AII)	
						(%)	(n)
HBVDNA23C1-03	HBV Type A	Plasma		Frequently Detected	CORE	100.0	153



Groups below n=5: Abbott - Abbott RealTime m2000 (n=2), AmpliSens (n=1), AmpliSens - AmpliSens Real Time PCR (n=1), Anatolia Geneworks (n=1), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=1), ELITech Group (n=1), ELITech Group - ELITech Elite InGenius (n=1), GFE Blut (n=1), GFE Blut - GFE Blut PoET (n=1), Hologic - Hologic Panther Fusion (n=2), Iontek (n=1), Iontek - Iontek Fluorion (n=1), QIAGEN - Qiagen NeuMoDx (n=2), fast-track DIAGNOSTICS (n=1), fast-track DIAGNOSTICS (n=1), In-House - Real-time In-House PCR (n=4)

QCMD 2023 Hepatitis B Virus DNA EQA Programme



Catalogue Code: QAV994110

Ref Code: HBVDNA23 Challenge: C1 Analysis Type:
Qualitative and Quantitative

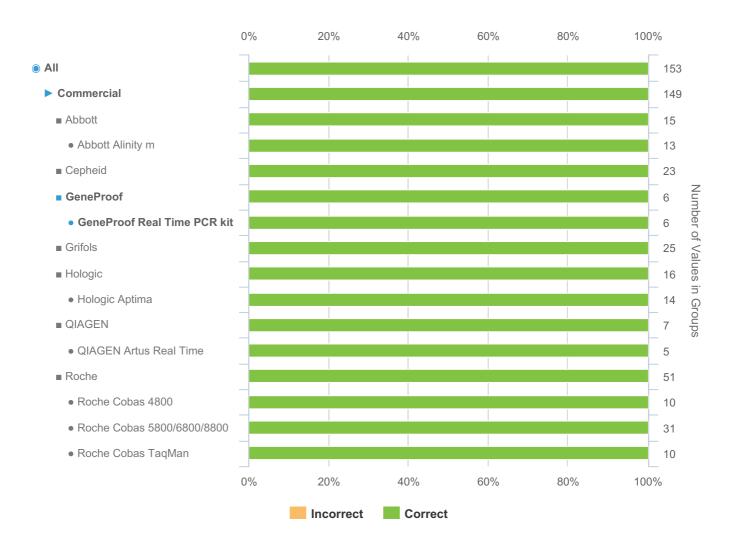
Dataset: 626002

Report UID: 2677/626002/5520

Laboratory CZ023

HBVDNA23C1-04 - Qualitative Results Breakdown

Sample Code		Sample Content	Matrix	Sample Relationships	Detection Frequency	Sample Status	Percentage Correct (All)	
							(%)	(n)
HBVD	NA23C1-04	HBV Type D	Plasma		Frequently Detected	CORE	100.0	153



Groups below n=5: Abbott - Abbott RealTime m2000 (n=2), AmpliSens (n=1), AmpliSens - AmpliSens Real Time PCR (n=1), Anatolia Geneworks (n=1), Anatolia Geneworks - Anatolia Geneworks Bosphore (n=1), ELITech Group (n=1), ELITech Group - ELITech Elite InGenius (n=1), GFE Blut (n=1), GFE Blut - GFE Blut PoET (n=1), Hologic - Hologic Panther Fusion (n=2), Iontek (n=1), Iontek - Iontek Fluorion (n=1), QIAGEN - Qiagen NeuMoDx (n=2), fast-track DIAGNOSTICS (n=1), fast-track DIAGNOSTICS (n=1), In-House (n=4), In-House - Real-time In-House PCR (n=4)

QCMD 2023 Hepatitis B Virus DNA EQA Programme



Catalogue Code: QAV994110

Ref Code: HBVDNA23 Challenge: Ar

C1

Analysis Type:
Qualitative and Quantitative

Dataset: 626002

Report UID: 2677/626002/5520

Laboratory CZ023

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