LABQUALITY

External Quality Assessment Scheme

Ammonium ion
Round 1, 2023

Specimens
Please find enclosed 2 liquid preparations à 1mL.

Caution
For in vitro diagnostic use only. Observe the same safety precautions used when handling potentially infectious biological material.

Examinations
Ammonium ion

Storage and use
The samples are ready to use. Preservatives have been added. Remove the control from the refrigerator and allow it to come to room temperature for 10 to 15 minutes. Gently invert the control to assure homogeneity of the contents. Avoid foaming the control.
Analyse immediately after opening the vial as patient sample.

Result reporting
Please enter the results and methods via LabScala. If you can't find your instrument or reagent from the registry, please contact the EQA Coordinator.

S001:

S002:

2023-04-24

INSTRUCTIONS

Product no. 2105
LQ750123011-012/NL

If the kit is incomplete or contains damaged specimens, please report immediately to info@labquality.fi.

The results should be reported no later than **May 18, 2023**.

Inquiries
EQA Coordinator
Satu Eklund
satu.eklund@labquality.fi

Labquality
Kumpulantie 15
FI-00520 HELSINKI
Finland

Tel. + 358 9 8566 8200
Fax + 358 9 8566 8280

info@labquality.fi
www.labquality.com

FINAS
Finnish Accreditation Service
PT02 (EN ISO/IEC 17043)

Quality Management
ISO 9001:2015

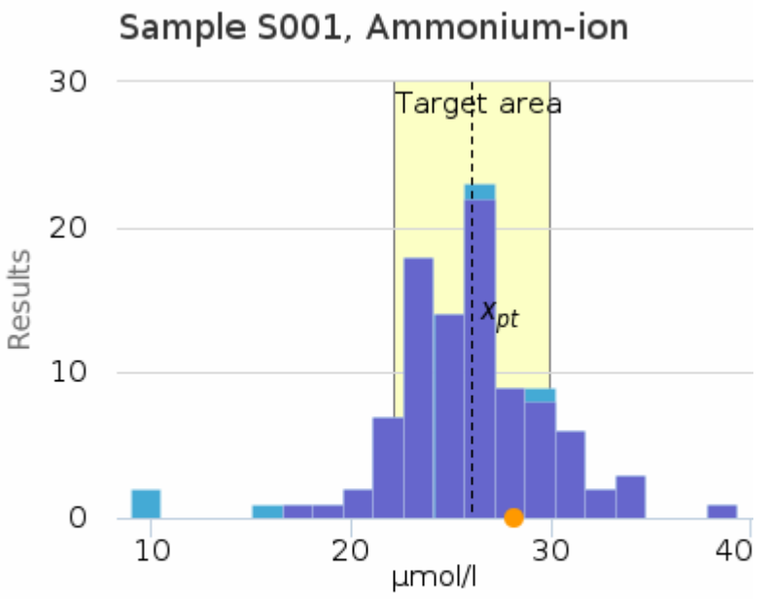
LABQUALITY

Ammonium ion, April, 1-2023

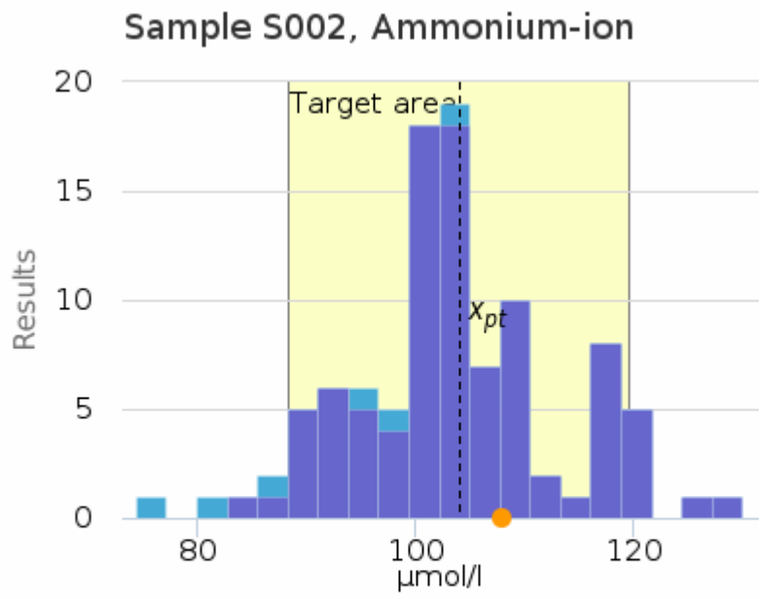
Quantitative report

XXXX

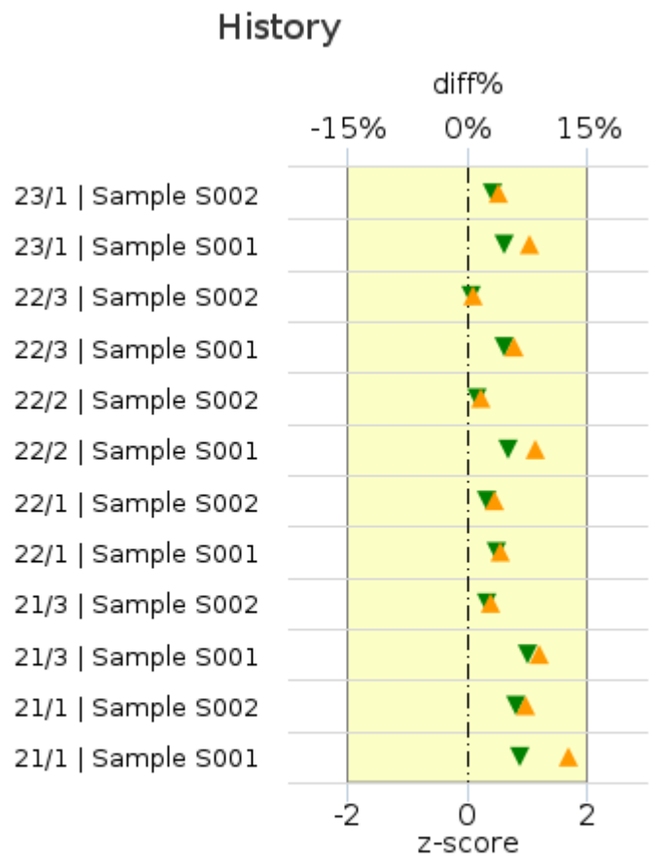
Ammonium-ion



All method groups Photometry, enzymatic
Own result: 28.1 (28.04.2023)
Diff%: 7.8 | x_{pt}: 26.1
Target area: 22.1-30.0 | Target: ±15%



All method groups Photometry, enzymatic
Own result: 108.0 (28.04.2023)
Diff%: 3.8 | x_{pt}: 104.1
Target area: 88.4-119.7 | Target: ±15%



diff%
z-score

	x_{pt}	sd	SEM	CV%	n
Photometry, enzymatic	26.1 µmol/l	3.3	0.3	12.5	94
All methods	26.0 µmol/l	3.4	0.3	13.0	99

	x_{pt}	sd	SEM	CV%	n
Photometry, enzymatic	104.1 µmol/l	9.2	1.0	8.8	93
All methods	103.2 µmol/l	9.8	1.0	9.5	99

Round	Sample	x_{pt}	Result	diff%	z-score
23/1	Sample S002	104.1	108.0	3.8%	0.43
23/1	Sample S001	26.1	28.1	7.8%	0.63
22/3	Sample S002	101.3	102.0	0.7%	0.07
22/3	Sample S001	60.5	64.0	5.9%	0.63
22/2	Sample S002	182.1	185.0	1.6%	0.17
22/2	Sample S001	25.8	28.0	8.6%	0.69
22/1	Sample S002	61.9	64.0	3.4%	0.34
22/1	Sample S001	102.6	107.0	4.2%	0.50
21/3	Sample S002	185.9	191.0	2.8%	0.32
21/3	Sample S001	61.4	66.9	8.9%	0.99
21/1	Sample S002	188.3	202.0	7.3%	0.82
21/1	Sample S001	27.2	30.6	12.6%	0.88

Report info

Participants

106 participants from 14 countries.

Report info

Your own result should be compared to others using the same method.
Assigned values (x_{pt}, target values) are means of the results where results deviating more than +/- 3*standard deviation from the median are removed. The standard uncertainty (u) of the assigned value is reported as standard error of the mean (SEM). Additionally, if the measurement uncertainty of the target value is large an automatic text is printed on the report: “The uncertainty of the assigned value is not negligible, and evaluations could be affected.”
In case the client’s result is the only one in the method group, no assigned value will be calculated, no target area shown, and no statistics calculated. In case there are only a few results in the client’s own method group, the result can be compared to all method mean or to a group that is similar to the own method.
Results reported with < or > -signs cannot be included in the statistics.

For information on report interpretation and performance evaluation, please see the " EQAS Interpretation guidelines" LabScala User instructions (top right corner ?Help link).

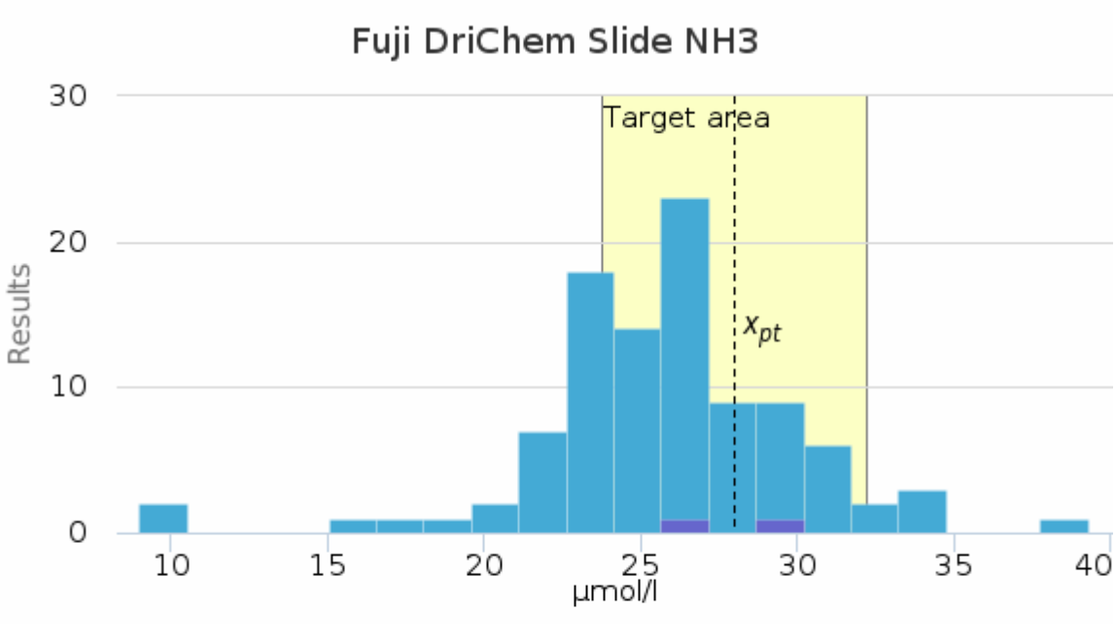
Ammonium ion, April, 1-2023

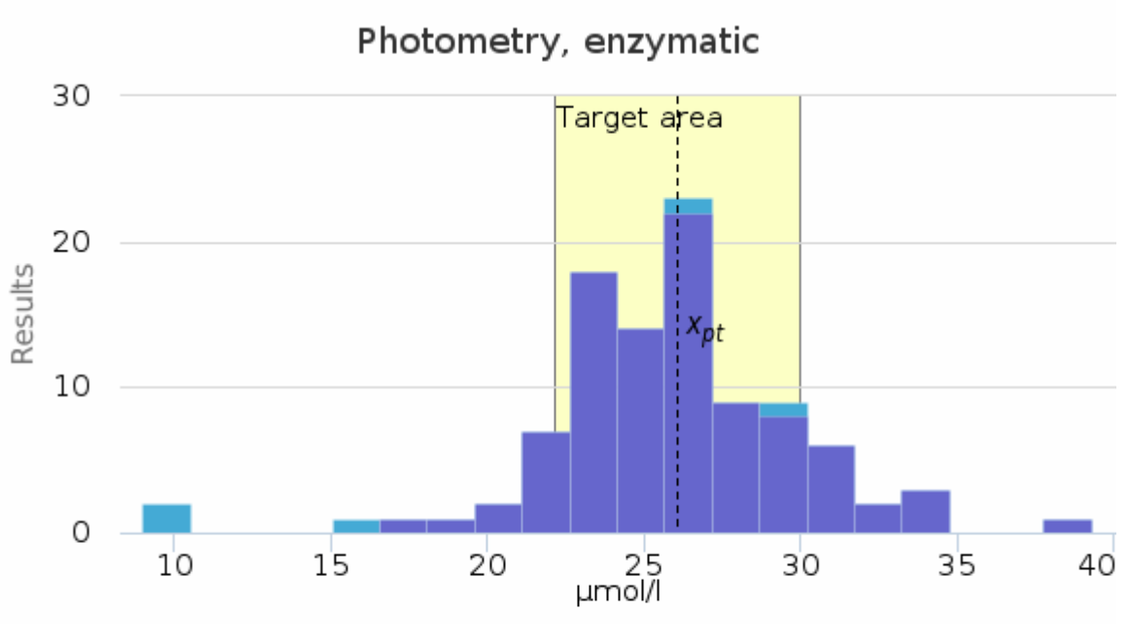
Quantitative report

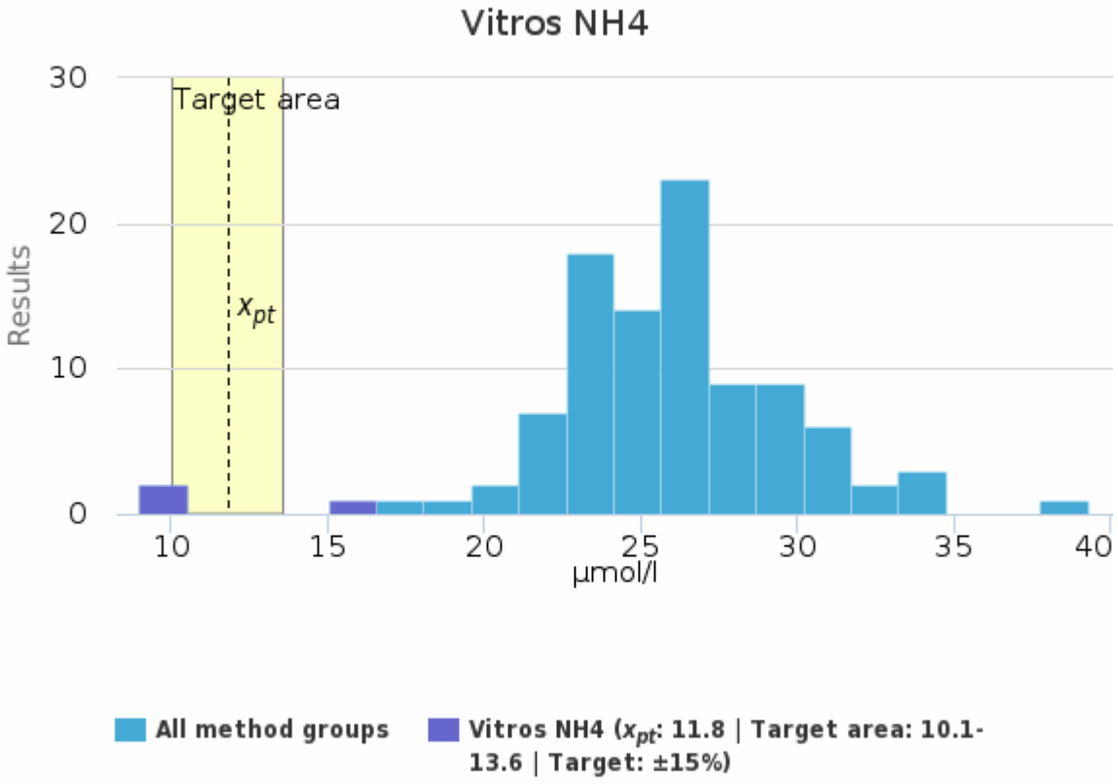
Sample S001 | Ammonium-ion, µmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Fuji DriChem Slide NH3	28.0	28.0	1.4	5.1	1.0	27.0	29.0	-	2
Photometry, enzymatic	26.1	25.9	3.3	12.5	0.3	17.3	34.0	1	94
Vitros NH4	11.8	10.0	4.1	34.4	2.4	9.0	16.5	-	3
All	**26.0**	**25.9**	**3.4**	**13.0**	**0.3**	**16.5**	**34.0**	**3**	**99**

Sample S001 | Ammonium-ion, µmol/l| histogram summaries in LabScala







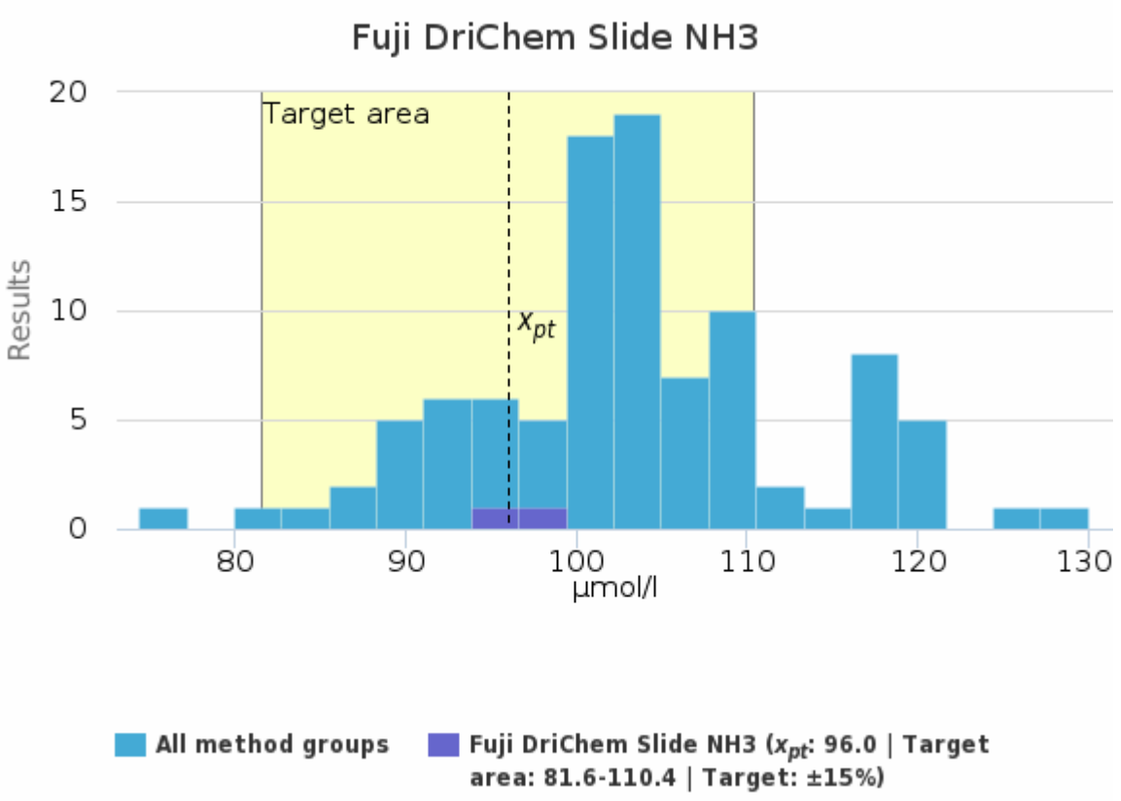
Ammonium ion, April, 1-2023

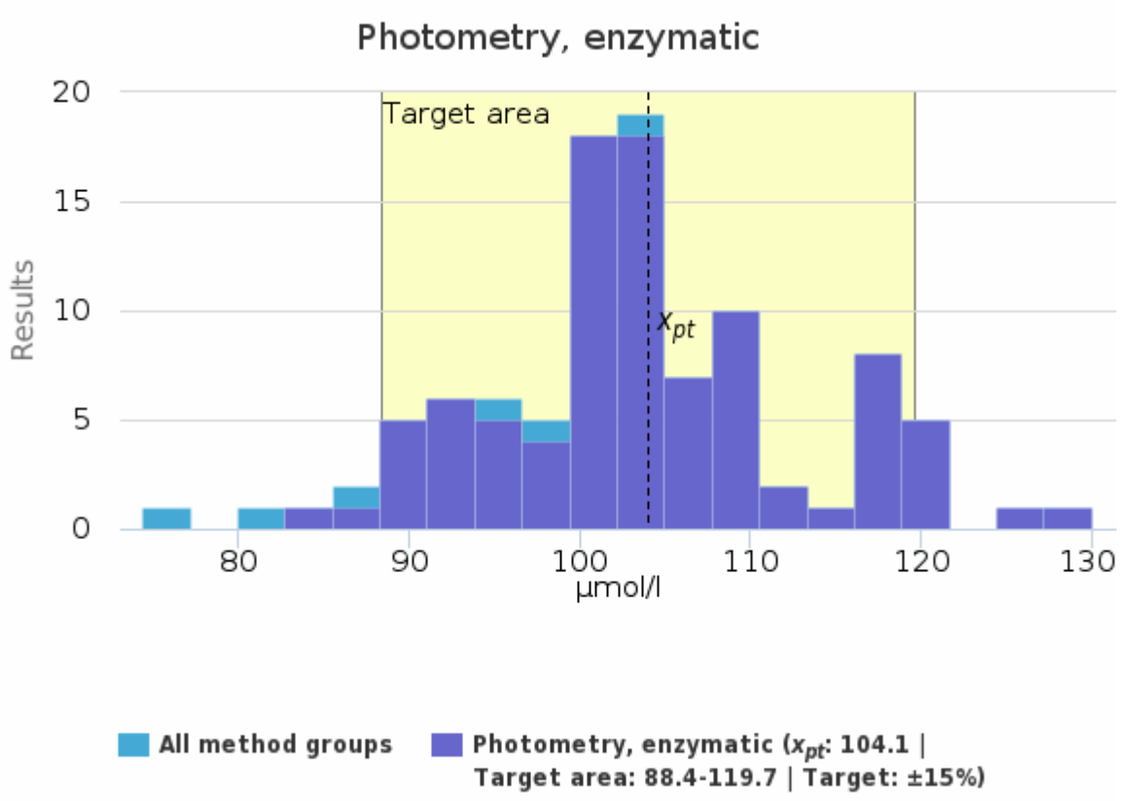
Quantitative report

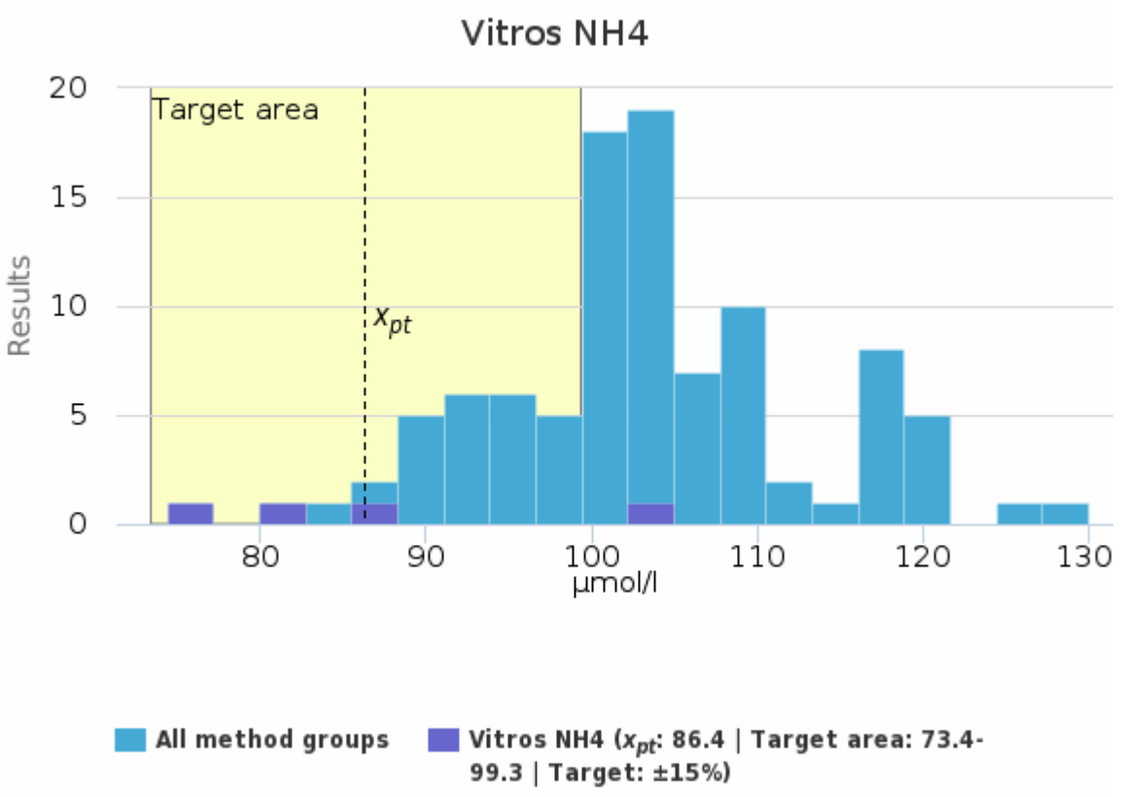
Sample S002 | Ammonium-ion, µmol/l

Methodics	x_{pt}	Median	sd	CV%	SEM	min	max	Outliers	n
Fuji DriChem Slide NH3	96.0	96.0	2.8	2.9	2.0	94.0	98.0	-	2
Photometry, enzymatic	104.1	103.0	9.2	8.8	1.0	84.7	130.0	-	93
Vitros NH4	86.4	84.0	12.1	14.0	6.0	74.4	103.0	-	4
All	**103.2**	**102.8**	**9.8**	**9.5**	**1.0**	**74.4**	**130.0**	**-**	**99**

Sample S002 | Ammonium-ion, µmol/l| histogram summaries in LabScala







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Ammonium ion, April, 1-2023

Quantitative report

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External Quality Assessment Scheme

Ammonium ion
Round 1, 2023

Specimens
Sample S001 (LQ750123011) and Sample S002 (LQ750123012) were liquid ready to use preparations.

Based on the previous tests and the results of this round, the samples are homogeneous, stable and suitable for the external quality assessment scheme.

The materials were sent without temperature control packaging.

Report info
Please see the description of the data analysis on the last page of the laboratory-specific histograms and Numerical Summary reports. It is important to read the Final report first, because it contains important information of the samples and results in each round.

Comments – Expert
With the sample S001 the ammonium ion content reported by the sample manufacturer was 35 µmol/L (29-41 µmol/L), which is in reference range.

With sample S002 the ammonium ion content reported by the sample manufacturer was 122 µmol/L (117-129 µmol/L), which in patient care would require an investigation of the cause.

With the sample S001 the median of the results of the users of the enzymatic methods (26 µmol/L) was 26% lower than the content reported by the manufacturer, the median of the results of the DriChem method users (28 µmol/L) was 20% lower, and the median of the results of the Vitros method users (10 µmol/L) was 71% lower. Three results from the enzymatic group were removed as outliers, and one result from the Vitros method users had result below measuring range and was left out of the analysis. The variation (CV% 13 in the group using enzymatic methods, CV% 5 in the group of DriChem method users, and CV% 34 in the group using Vitros method) and the results indicate that the sample was fit for the purpose.

With sample S002 the median of the results of the users of the enzymatic methods (103 µmol/L) was 16% lower than the content reported by the manufacturer, the median of the results of the DriChem method users (96 µmol/L) was 21% lower, and the median of the results of the Vitros method users (84 µmol/L) was 31% lower. Three results from the enzymatic group were removed as outliers. The variations (CV% 9 in the group using enzymatic methods, CV% 3 in the group using the DriChem method and CV% 14 in the group using the Vitros method) and the results indicate that the sample was fit for the purpose.

End of report

2023-06-13

FINAL REPORT

Product no. 2105

Subcontracting: Sample preparation, Sample pretesting

Samples sent	2023-04-24
Round closed	2023-05-18
Final report	2023-06-13

Request for correction
Typing errors in laboratory's result forms are on laboratory's responsibility. Labquality accepts responsibility only for result processing. Requests must be notified by writing within three weeks from the date of this letter.

Authorized by
EQA Coordinator
Satu Eklund
T. +358 45 773 107 87
satu.eklund@labquality.fi

Expert
MD, Tapio Lahtiharju,
HUSLAB, Helsinki, Finland

Labquality Oy
Kumpulantie 15
FI-00520 HELSINKI
Finland

Tel. + 358 9 8566 8200
Fax + 358 9 8566 8280

info@labquality.fi
www.labquality.com

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