NHS Greater Glasgow & Clyde Immunology and Neuroimmunology		
QF_37	Uncertainty of Measurement Summary Table for Specialist Techniques	Version: 5
Author: Lauren Hennessy	Authoriser: Sylvia Arthur	Date of Issue: 29/02/24

Uncertainty of Measurement: Summary table for Specialist Techniques

Uncertainty of measurement (UoM) is calculated using internal quality control (IQC)

The raw data and calculations can be found at the following location:
 \\xggc-fsrv-04\GGC Biochemistry\Immunology\1IMM&NI\Quality\Uncertainty of Measurement

Analyte	Acetylcholine receptor antibodies
	Positive IQC
Mean (x)	8.3
Number of measurements (n)	14
Estimated Standard Deviation (s)	0.51
Coefficient of Variance (%CV)	5.46%
Coverage factor (k) to define a confidence level of 95%	2
Relative standard expanded uncertainty (U)	**± 10.9%**
Uncertainty of measurement **example** (using IQC)	9.3 ± 1.02 nmol/L (8.3– 10.3 nmol/L)

NHS Greater Glasgow & Clyde Immunology and Neuroimmunology		
QF_37	**Uncertainty of Measurement Summary Table for Specialist Techniques**	**Version: 5**
Author: Lauren Hennessy	**Authoriser: Sylvia Arthur**	**Date of Issue: 29/02/24**

Analyte	**GAD antibodies on the DS2**
	Positive IQC
Mean (x)	118
Number of measurements (n)	14
Estimated Standard Deviation (s)	10.5
Coefficient of Variance (%CV)	8.88%
Coverage factor (k) to define a confidence level of 95%	2
Relative standard expanded uncertainty (U)	**± 17.8%**
Uncertainty of measurement **example** (using IQC**)**	118.2 ± 21 U/mL (97.2 – 139.2 U/mL)

CONTROLLED DOCUMENT

NHS Greater Glasgow & Clyde Immunology and Neuroimmunology		
QF_37	**Uncertainty of Measurement Summary Table for Specialist Techniques**	**Version: 5**
Author: Lauren Hennessy	**Authoriser: Sylvia Arthur**	**Date of Issue: 29/02/24**

Analyte	*Hib* antibodies on DS2	
	Low IQC	High IQC
Mean (x)	0.335	3.8
Number of measurements (n)	51	33
Estimated Standard Deviation (s)	0.05	0.36
Coefficient of Variance (%CV)	14.0%	9.43%
Coverage factor (k) to define a confidence level of 95%	2	2
Relative standard expanded uncertainty (U)	**± 28.0%**	**± 18.9%**
Uncertainty of measurement **example** (using IQC**)**	0.335 ± 0.094 mg/L (0.241 – 0.429 mg/L)	3.8 ± 0.71 mg/L (3.1 – 4.5 mg/L)

CONTROLLED DOCUMENT

Analyte	Intrinsic factor antibodies on DS2	
	Negative IQC	Positive IQC
Mean (x)	7.2	79.6
Number of measurements (n)	32	38
Estimated Standard Deviation (s)	0.71	3.51
Coefficient of Variance (%CV)	9.82%	4.42%
Coverage factor (k) to define a confidence level of 95%	2	2
Relative standard expanded uncertainty (U)	**± 19.6%**	**± 8.8%**
Uncertainty of measurement **example** (using IQC)	7.2 ± 1.41 units (5.8 – 8.6 units)	79.6 ± 7.03 units (72.5 – 86.6 units)

CONTROLLED DOCUMENT

NHS Greater Glasgow & Clyde Immunology and Neuroimmunology		
QF_37	**Uncertainty of Measurement Summary Table for Specialist Techniques**	**Version: 5**
Author: Lauren Hennessy	**Authoriser: Sylvia Arthur**	**Date of Issue: 29/02/24**

Analyte	PCP antibodies on DS2	
	Low IQC	High IQC
Mean (x)	28	209
Number of measurements (n)	89	28
Estimated Standard Deviation (s)	2.45	32.8
Coefficient of Variance (%CV)	8.75%	15.7%
Coverage factor (k) to define a confidence level of 95%	2	2
Relative standard expanded uncertainty (U)	**± 17.5%**	**± 31.4%**
Uncertainty of measurement **example** (using IQC**)**	28.0 ± 4.9 mg/L (23.1 – 32.9 mg/L)	209 ± 65.5 mg/L (144 – 275 mg/L)

CONTROLLED DOCUMENT

Analyte	Tetanus toxoid antibodies on DS2	
	Low IQC	High IQC
Mean (x)	0.27	4.4
Number of measurements (n)	67	45
Estimated Standard Deviation (s)	0.02	0.47
Coefficient of Variance (%CV)	5.76%	10.73%
Coverage factor (k) to define a confidence level of 95%	2	2
Relative standard expanded uncertainty (U)	**± 11.5%**	**± 21.5%**
Uncertainty of measurement **example** (using IQC**)**	0.27 ± 0.03 IU/mL (0.24 – 0.30 IU/mL)	4.4 ± 0.95 IU/mL (3.5 – 5.4 IU/mL)

For the details of the calculation and UoM protocol please refer to document QP_5: Uncertainty of Measurement Protocol.