NHS Greater Glasgow & Clyde Immunology and Neuroimmunology		
QF_ 74	**Measurement Uncertainty Summary Table for Immunblot assays**	**Version: 3**
Author: Lauren Hennessy	**Authoriser: Sylvia Arthur / Fran Henriquez**	**Date of Issue: 27/06/25**

Measurement Uncertainty: Summary Table for Immunoblot Assays

Measurement Uncertainty (MU) is calculated using internal quality control (IQC)

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

Analyte	**Neuronal antibodies using BlotMaster and EUROline scanner (assays reported qualitatively)**	
	Yo IQC	Titin IQC
Mean (x)	69.3	71.0
Number of measurements (n)	61	61
Estimated Standard Deviation (s)	12.75	8.24
Coefficient of Variance (%CV)	18.40%	11.61%
Coverage factor (k) to define a confidence level of 95%	2	2
Relative standard expanded uncertainty (U)	**± 36.8%**	**± 23.2%**
Uncertainty of measurement **example** (using IQC**)**	69.3 ± 25.5 signal intensity (43.8– 94.8 signal intensity) **Signal intensity range remains within positive qualitative group**	71.0 ± 16.5 signal intensity (54.5 – 87.5 signal intensity) **Signal intensity range remains within positive qualitative group**

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Analyte	**Neuronal antibodies using BlotMaster and EUROline scanner (assays reported qualitatively)**	
	Hu IQC	CV2 IQC
Mean (x)	138.3	45.2
Number of measurements (n)	61	61
Estimated Standard Deviation (s)	3.31	6.95
Coefficient of Variance (%CV)	2.39%	15.38%
Coverage factor (k) to define a confidence level of 95%	2	2
Relative standard expanded uncertainty (U)	**± 4.8%**	**± 30.8%**
Uncertainty of measurement **example** (using IQC**)**	138.3 ± 6.6 signal intensity (131.7 – 145.0 signal intensity) **Signal intensity range remains within positive qualitative group**	45.2 ± 13.9 signal intensity (31.3 – 59.1 signal intensity) **Signal intensity range remains within positive qualitative group**

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Analyte	**Neuronal antibodies using BlotMaster and EUROline scanner (assays reported qualitatively)**
	Amphiphysin IQC
Mean (x)	106.2
Number of measurements (n)	15
Estimated Standard Deviation (s)	18.18
Coefficient of Variance (%CV)	17.12%
Coverage factor (k) to define a confidence level of 95%	2
Relative standard expanded uncertainty (U)	**± 34.23%**
Uncertainty of measurement **example** (using IQC**)**	106.2 ± 36.4 signal intensity (69.8– 142.6 signal intensity) **Signal intensity range remains within positive qualitative group**

Analyte	**Liver antibodies using BlotMaster and EUROline scanner (assays reported qualitatively)**		
	M2 IQC	3E(BPO) IQC	Sp100 IQC
Mean (x)	94.5	128.9	60.8
Number of measurements (n)	18	18	18
Estimated Standard Deviation (s)	6.20	6.56	9.49
Coefficient of Variance (%CV)	6.56%	5.09%	15.61%
Coverage factor (k) to define a confidence level of 95%	2	2	2
Relative standard expanded uncertainty (U)	**± 13.1%**	**± 10.2%**	**± 31.2%**
Uncertainty of measurement **example** (using IQC**)**	94.5 ± 12.4 signal intensity (82.1 – 106.9 signal intensity)	128.9 ± 13.1 signal intensity (115.8 – 142.0 signal intensity)	60.8 ± 19.0 signal intensity (41.8 – 79.8 signal intensity)

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Analyte	**Liver antibodies using BlotMaster and EUROline scanner (assays reported qualitatively)**		
	PML IQC	gp210 IQC	LKM IQC
Mean (x)	17.4	51.9	50.6
Number of measurements (n)	10	18	18
Estimated Standard Deviation (s)	3.31	13.16	8.09
Coefficient of Variance (%CV)	19.0%	25.36%	16.0%
Coverage factor (k) to define a confidence level of 95%	2	2	2
Relative standard expanded uncertainty (U)	**± 38.0%**	**± 50.7%**	**± 32.0%**
Uncertainty of measurement **example** (using IQC**)**	17.4 ± 6.6 signal intensity (10.8 – 24.0 signal intensity)	51.9 ± 26.3 signal intensity (25.6 – 78.2 signal intensity)	50.6 ± 16.2 signal intensity (34.4 – 66.7 signal intensity)

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Analyte	**Liver antibodies using BlotMaster and EUROline scanner (assays reported qualitatively)**		
	LC-1 IQC	SLA IQC	Ro52 IQC
Mean (x)	142.1	8.2	86.6
Number of measurements (n)	18	10	10
Estimated Standard Deviation (s)	3.48	2.20	4.48
Coefficient of Variance (%CV)	2.45%	26.84%	5.17%
Coverage factor (k) to define a confidence level of 95%	2	2	2
Relative standard expanded uncertainty (U)	**± 4.9%**	**± 53.7%**	**± 10.3%**
Uncertainty of measurement **example** (using IQC**)**	142 ± 7.0 signal intensity (135 – 149 signal intensity)	8.2 ± 4.4 signal intensity (3.8 – 12.6 signal intensity)	86.6 ± 9.0 signal intensity (77.6 – 95.6 signal intensity)

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