



Proficiency Testing Provider:

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CELL VIABILITY SCHEME

PT Report

Round: CELL2012_R1

Preliminary ; Final ; Amended

Date of Round Issue: 12 November 2012

Report Number: CELL2012_R1_Report01

Comments (reason for amendment or re-issue):

Participant's name: Faculty of Science

Participant Code: 104898

Result ID: 410

SECTION 1 - General Information

Design of the Cell Viability Scheme: The cells used for this Scheme are a Jurkat cell line, which were grown in culture in RPMI1640 10% FBS at a concentration of 0.1 to 1.5×10^6 ml in T175 cm² in a humidified incubator at 37°C, 5% CO₂. Cells were then frozen in an animal-protein-free, serum-free and defined-cryopreservation medium containing 10% dimethyl sulfoxide (DMSO). Two different Test Items containing cells at a different level of viability (i.e. Tube A and Tube B) were provided to each Participant. For each Test Item (tube A and tube B) the percentage of viable cells was measured following the Participant's usual routine testing method(s). The results were reported by all Participants through the website <http://www.kpmd.co.uk/isber/default.asp> and collected under the following methods: Trypan Blue Staining or Flow Cytometry.

Confidentiality: The identities of Participants and their results and performance are kept confidential and are known only to persons involved in the operation of the PT Scheme.

Subcontractors: ISBER is implementing this Program internationally in collaboration with IBBL, the Integrated BioBank of Luxemburg, based at 6 rue Nicolas-Ernest Barblé, L-1210 Luxemburg, Luxemburg. IBBL works as a subcontractor to ISBER, and has prepared and shipped the Test Items to all Proficiency Testing Participants.

Technical data: For your reference, all information related to the description of the Test Item is included in the "Test Item Information Sheet" (TIIS) which was provided to you along with the samples. Extra copies can be obtained via email upon request or downloaded from the ISBER website.

Personalized Advice Service: Advice and educational feedback to Participants is available on demand (please contact ISBER using details on page 1 of this report).

Customer Satisfaction Survey: ISBER seeks your feedback, both positive and negative, to be used and analysed to improve its management system, future Schemes, and customer service. Please complete our survey, available online on this page http://www.isber.org/proficiency_testing/PT_Survey.cfm.

SECTION 2 - General Statistics

12 Participants registered to the "Cell Viability" Round performed in 2012.

Geographic Origin of Participants

Country	Count	%
CANADA	1	8
CHINA	1	8
LUXEMBOURG	1	8
SERBIA	1	8
SPAIN	1	8
UNITED STATES	7	58

Type of Facilities

Facility	Count	%
Private Laboratory	2	17
University/Academic Laboratory	10	83

**Equipment Performance Verification
(EPV) Frequencies
Trypan Blue Staining**

EPV Frequency	Count	%
None Selected	1	8.00
once per day	2	17.00
once per month	1	8.00
once per week	1	8.00
once per year	3	25.00
Other	4	33.00

**Equipment Performance Verification
(EPV) Frequencies
Flow Cytometry**

EPV Frequency	Count	%
once per day	1	25.00
once per year	1	25.00
Other	2	50.00

Methodologies Used

Trypan Blue Staining	Flow Cytometry
12	4

Type of Trypan Blue Equipment

Equipment	Count	%
Automated Countess	0	0
Automated Vicell	2	17
Conventional microscope	9	75
Other, please specify	1	8

Type of Trypan Blue Hemocytometer

Hemocytometer	Count	%
Agasse Lafont R	0	0
Burker	0	0
Improved Neubauer	2	50
Malassez	0	0
Neubauer	1	25
Thoma	0	0
Turk	0	0
Other, please specify	1	25

Type of Flow Cytometry Equipment

Equipment	Count	%
Agilent Bioanalyser	0	0
BD Accuri C6	0	0
BD FACS Canto	0	0
BD FACS Canto II	1	25
BD FACS Verse	1	25
BD FACSCalibur	0	0
BD LSR Fortessa	0	0
Beckman FC 500	0	0
Beckman Gallios	0	0
Beckman Navios	0	0
Life Technologies Attune	0	0
Millipore Guava	2	50
Partec Cyflow	0	0
Other count system, please spec	0	0

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SECTION 3 - Data Analysis Results and Evaluation of Performance**Statistical Procedure Used:**

Statistical procedures used were those proposed by the International Harmonized Protocol for the Proficiency Testing of Analytical Chemistry Laboratories (IUPAC Technical Report 2006). The standard deviation for Proficiency Testing was determined by the ISBER Proficiency Testing Advisory Group.

The outliers were calculated with the Grubb's test, and were excluded from the statistical summaries.

The scoring system is based on deviation from the assigned value.

Deviation from assigned value (z-score)	Consensus Score
< 1 standard deviation	0
< 2 standard deviation	1
> 2 standard deviation	2
> 3 standard deviation	3

Cell Viability assigned values were obtained separately with the Trypan Blue Staining method and Flow Cytometry method.

METHOD: Trypan Blue Staining**YOU SUBMITTED RESULTS WITH THIS METHOD****Expected Results**

Panel Composition and expected Results (assigned values with their uncertainties)

Sample	Sample Content	Assigned value (%)	Total uncertainty of the assigned value (%)	Proficiency Testing standard deviation (%)
Tube A	JURKAT CELLS	90.60	4.90	13.59
Tube B	JURKAT CELLS	72.50	3.20	10.87

Your Results:Cell Viability ASSESSMENT

Sample	Sample Content	Your result (%)	Your consensus score
Tube A	JURKAT CELLS	90.77	0
Tube B	JURKAT CELLS	62.50	0
Sum quantitative panel score			0

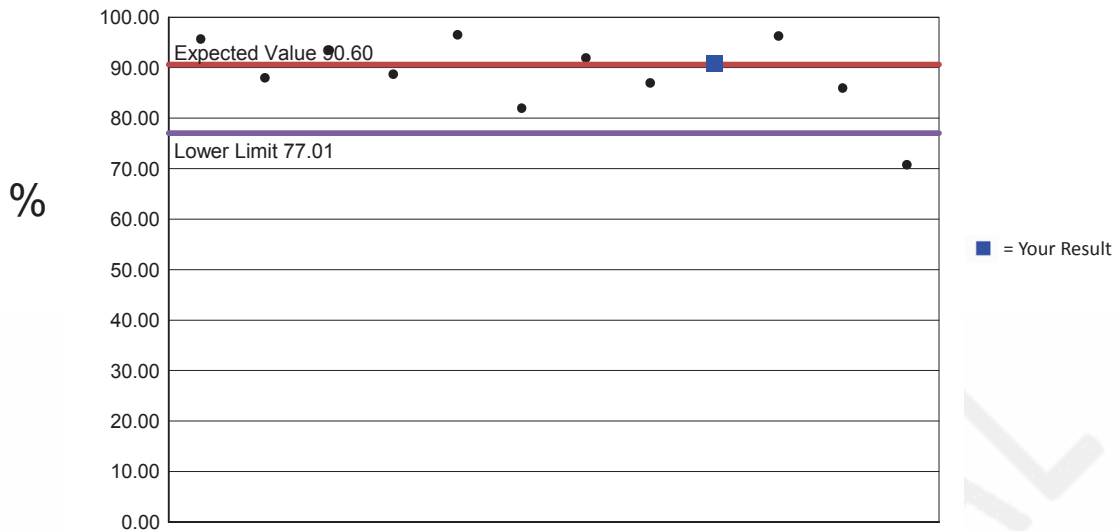
Your z-score for the two CELL VIABILITY measures is 0.01 (Tube A) and -0.92 (Tube B) .

Your z-score for Tube A has been designated as 'accurate' or 'very satisfactory'.

Your z-score for Tube B has been designated as 'accurate' or 'very satisfactory'.

If your z-score has been designated as "questionable" or "requiring action", ISBER will send you a separate letter with additional feedback.

Tube A Results



Tube A - Statistical Data and Summaries:

Size: 12 participants.

1 outlier identified.

The following results were obtained from 11 participants.

Mean value (%): 90.59

Std Dev (%): 4.71

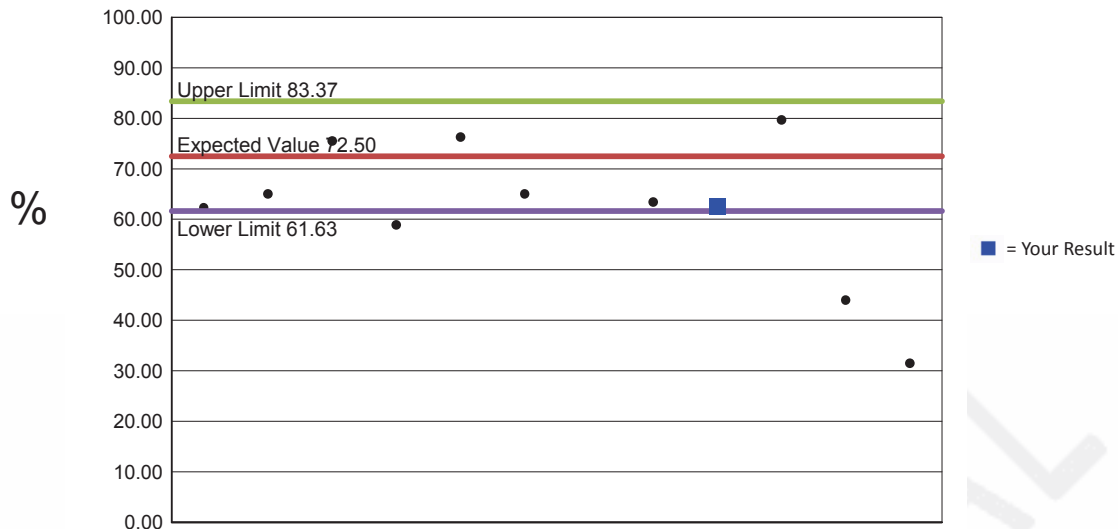
Median (%): 90.77

Min value obtained (%): 82.00

Max value obtained (%): 96.50

Range (%): 14.50

Tube B Results



Tube B - Statistical Data and Summaries:

Size: 11 participants.

No outliers identified.

The following results were obtained from 11 participants.

Mean value (%): 62.19

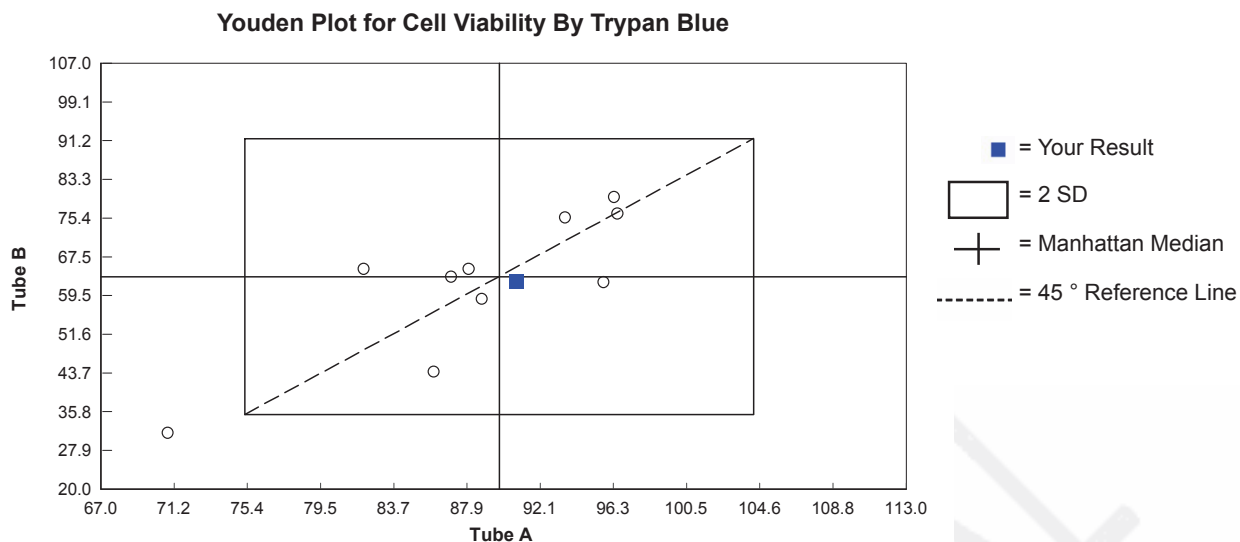
Std Dev (%): 14.08

Median (%): 63.40

Min value obtained (%): 31.50

Max value obtained (%): 79.70

Range (%): 48.20



Comment on Youden Plot Interpretation:

In the Youden plot, points that lie near the 45-degree reference line but far from the Manhattan median indicate large systematic error. Points that lie far from the 45-degree line indicate large random error. Points outside the rectangle indicate large total error.

If your result is not visible in the graph, it means it falls outside the graph limits and corresponds to a high total error.

Your history of z-scores:

This is your first participation in the scheme; therefore, no history of your z-scores is available yet.

A history of your z-scores will be available in your future participations.

METHOD: Flow Cytometry

YOU DID NOT SUBMIT RESULTS WITH THIS METHOD

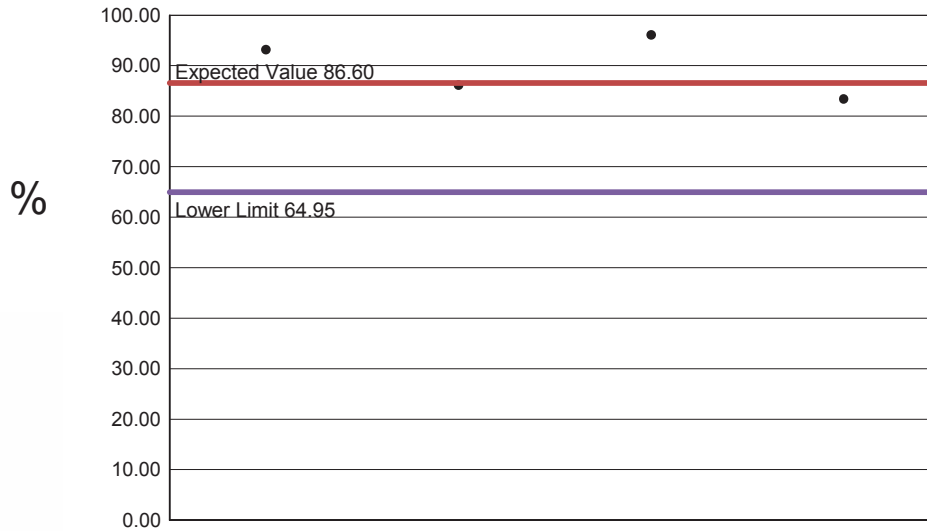
Expected Results

Panel Composition and expected Results (assigned values with their uncertainties)

Sample	Sample Content	Assigned value (%)	Total uncertainty of the assigned value (%)	Proficiency Testing standard deviation (%)
Tube A	JURKAT CELLS	86.60	6.50	21.65
Tube B	JURKAT CELLS	65.30	2.90	16.32

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Tube A Results



Tube A - Statistical Data and Summaries:

Size: 4 participants.

No outliers identified.

The following results were obtained from 4 participants.

Mean value (%): 89.71

Std Dev (%): 5.93

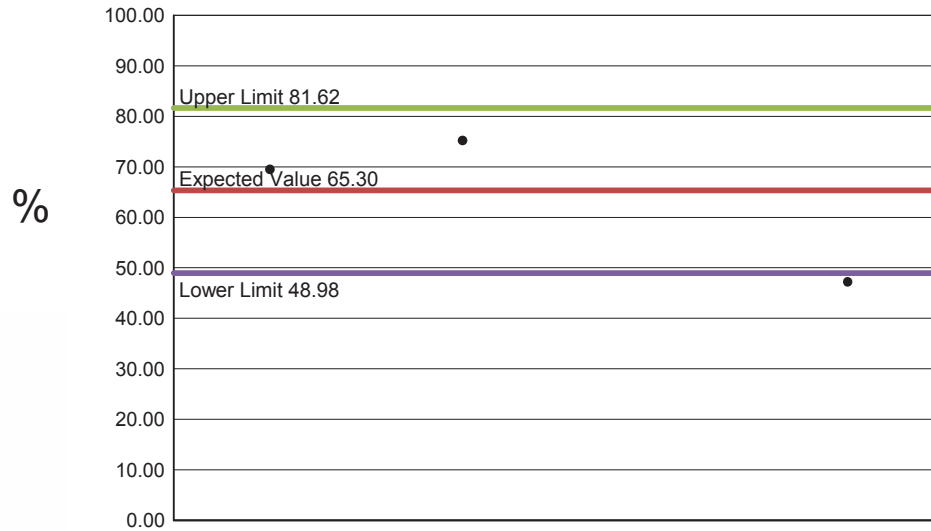
Median (%): 89.68

Min value obtained (%): 83.39

Max value obtained (%): 96.10

Range (%): 12.71

Tube B Results



Tube B - Statistical Data and Summaries:

Size: 3 participants.

No outliers identified.

The following results were obtained from 3 participants.

Mean value (%): 63.99

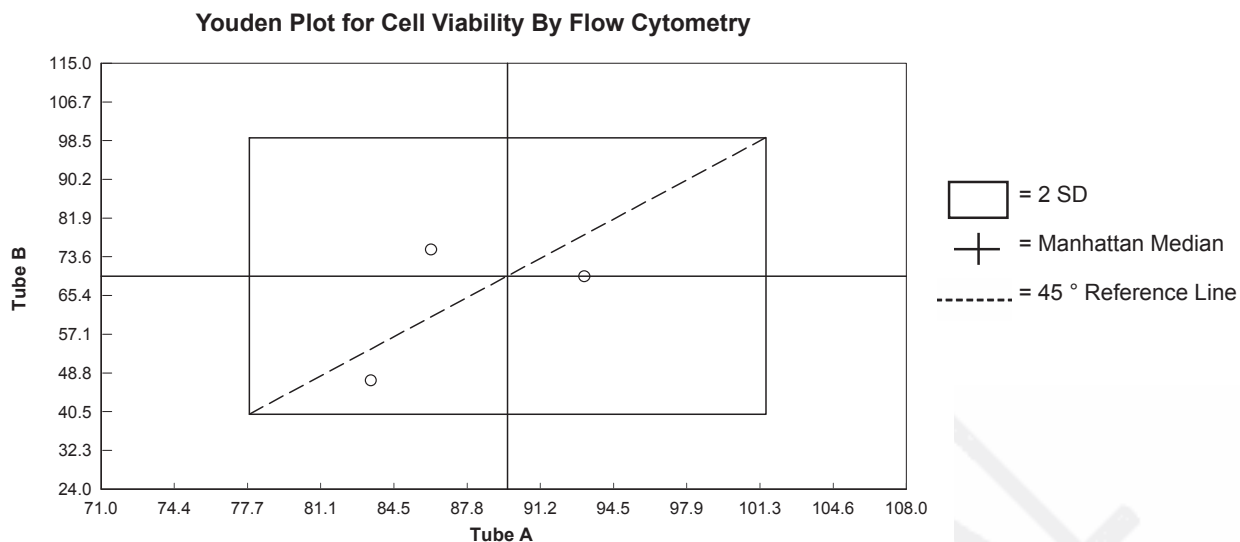
Std Dev (%): 14.77

Median (%): 69.50

Min value obtained (%): 47.25

Max value obtained (%): 75.21

Range (%): 27.96



Comment on Youden Plot Interpretation:

In the Youden plot, points that lie near the 45-degree reference line but far from the Manhattan median indicate large systematic error. Points that lie far from the 45-degree line indicate large random error. Points outside the rectangle indicate large total error.

If your result is not visible in the graph, it means it falls outside the graph limits and corresponds to a high total error.

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This report has been validated by the ISBER PT Coordinator.



Mark E Sobel, MD, PhD, Coordinator

*** End of Report***

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