LUXEMBOURG INSTITUTE OF HEALTH | INTEGRATED BIOBANK OF LUXEMBOURG IBBL

Test Item Information Sheet (TIIS)

"Cell Viability" Scheme [CELL26]

This sheet contains all the information on **Viable Cells Test Items** that you should be aware of to conduct the above mentioned Scheme. **Please read carefully before performing any operation and/or test on the provided samples**.

Test Items Description

- Source material: Jurkat cell line.
- Method of preparation: Culture in RPMI1640 10% FBS HI (Heat Inactivated + antibiotics) at a concentration of 5 x 10^6 to 1 x 10^7 cells/mL in T175 cm^2 in a humidified incubator at 37°C, 5% CO_2.
- Concentration: Approximately 5 x 10^6 cells/mL (total volume of 1mL) per vial.
- Medium: Jurkat cells are frozen in an animal protein-free, serum-free and defined cryopreservation medium containing 10% dimethyl sulfoxide (DMSO) (CRYOSTOR CS10).
- Date of preparation and any lot number (if applicable): June - August 2026.
- Biological hazard: The source material is BSL 1.
- Biosafety level: All operations have been conducted in a BSL 2 environment.
- Method used for value assignment: Consensus mean from Participants.
- Homogeneity and Stability information: Homogeneity and stability of the Test Items will be controlled in August 2026 to be compliant with the requirements of *The International harmonized protocol for the proficiency testing of analytical chemistry laboratories*, IUPAC technical report.

Instructions to Prepare the Test Items for Testing

- Processing required of Test Item: No processing is required at receipt of Test Item.
- Any thawing/freezing and/or other processes at receipt: Put in liquid nitrogen (or LN vapour).
- Any storage requirement between receipt and testing date: Store in liquid nitrogen (or LN vapour). Testing should be performed within 1 week of receipt.
- Required temperature to perform the testing: Room temperature (18-24°C).
- Any step required/recommended for testing:
  - *Thawing method*: Rapid thaw in 37°C waterbath or equivalent;
  - *Time to start of testing*: As soon as possible (immediately after thawing, i.e. within 10-15min);
  - *Dilution factor*: 1:10 dilution in cell culture media after thaw;
  - *Conditions prior to testing*: Maintain at room temperature (18-24°C) until testing.
- Any factor that may impact the testing negatively: Slow thawing; contamination of Test Item; harsh centrifugation conditions; Test Items kept in ice; too long time between thawing and processing; inefficient removal of cryopreservation medium.

Particular Handling/Safety Requirements

- Potential risks of Test Item: The DMSO contained in the freezing medium is an irritant that readily penetrates the skin. Residual liquid nitrogen in the micro-tubes may present an explosive hazard.
- Individual protection equipment required: Blouse, mask, glasses and gloves.
- In case of puncture or cuts: Wash thoroughly with water and then disinfect during 10 minutes. Contact a doctor. Make a statement of incident in the laboratory's registry, the laboratory's administration and the laboratory's medical service.

- In case of contact with the eye: Wash thoroughly with water or physiologic serum during 5 minutes; contact an ophthalmologist or a doctor; same procedure of declaration than previously.
- In case of contact with mucus membranes and skin: Wash thoroughly with water and contact a doctor.
- Measures to take in case of accidental spillage: Cover with bleach. Clear the zone and let act 30 minutes. Eliminate waste with absorbing paper. Use disinfectant and thoroughly clean the effected surface.
- Waste elimination procedures: Waste generated by healthcare activities, to eliminate in incinerable plastic containers, correctly identified and marked with the "biohazard" pictogramme.

Schemes Specifications

- For each Test Item (Tube A, Tube B and Tube C):
    - Manual counting: Please indicate the **percentage of viable cells.**
    - Image-based cell counting: Please indicate the **percentage of viable cells.**
    - Flow Cytometry: Please indicate the **percentage of viable cells.** If your method allows, please also indicate percentage of **early apoptotic cells**.
- How to test your samples: please test the Test Items following your usual routine testing method(s). We recommend that you exclude debris from your count.
- You will be asked to report your results under the following methods: **Manual Counting**, **Image-based Cell Couting**, **Flow Cytometry**.
- Please be ready to enter the following additional information while reporting your results:
    - Manual Counting: type of equipment, thawing method, dilution used, how many squares were measured, timing of measurement;
    - Image-based Cell Counting: type of equipment, thawing method, dilution used, timing of measurement;
    - Flow cytometry: type of equipment, type of Markers/Fluorochromes, Excitation wavelengths and Emission filters, thawing method, dilution used, timing of experiment;
    - Equipment performance verification: please enter the frequency of verification runs and the last verification date and results.

What and How to Submit

- For each Test Item, you can perform the assay more than once per method (according to your selected routine method), and submit more than one test result.
- Your results must be submitted online to the PT website http://biospecimenpt.ibbl.lu/ by employing the login credentials (User email and Password) used to create your account on the aforementioned PT platform.
- Please complete the questionnaire of the CELL26R1 PT scheme as accurately as possible, adding any relevant detail and comment in the appropriate comment section. Please note that any data that could impact group assignment and alter the final evaluation even slightly, cannot be modified after data entry has been closed as ISO/IEC 17043 considers correct identification of methods and results as part of the participant's competence assessment.

Timelines

Results submission	*Data analysis & Report preparation*	*Reports available*
17 NOV 2026, **latest**	20 NOV 2026 – 31 JAN 2027	March 2027

In case of doubts in the completion phase, please contact LIH/IBBL at IBBLPT@lih.lu