

Test Item Information Sheet (TIIS)

“DNA Quantification and Purity” Scheme [DNAQ24]

This sheet contains all the information on **DNA 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: Whole blood.
- Method of preparation: DNA extracted by a magnetic bead-based method (kit used: Perkin Elmer CMG-1074, Chemagic DNA Blood Kit).
- Medium: Elution buffer EB7: 10mM TrisHCl, pH 7.8 – 8.2, volume of 50 µL.
- Date of preparation and any lot number (if applicable): June-August 2024.
- Biological hazard: The source material has been tested negative for negative for HIV (ELISA and PCR), HCV (ELISA and PCR); Syphilis (ELISA), HBsAg (ELISA), HBV (PCR), HAV (PCR), Parvovirus B19 (PCR).
- 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 from July to August 2024 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 storage requirement between receipt and testing date: Store at **-80°C**. 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: Dilution may be required for certain Test Items (this will have to be determined by the participant laboratory).
If you plan to report results under the **Unchained Labs Lunatic** (previously Trinean spectrophotometer with cDROP Software), please ensure you have correct software protocol on your computer. Please contact to request the protocol at support@unchainedlabs.com.
- Any factor that may impact the testing negatively: Imprecision in pipetting, evaporation.

Particular Handling/Safety Requirements

- Potential risks of Test Item: Exempt of infectious risk.
- Individual protection equipment required: Standard laboratory (laboratory coat, gloves).
- In case of puncture or cuts: Wash thoroughly with water and then disinfect during 10 minutes.
- In case of contact with the eye: Wash thoroughly with water or physiologic serum during 5 minutes.
- In case of contact with the mucus membranes and skin: Wash thoroughly with water.
- Measures to take in case of accidental spillage: Use disinfectant and thoroughly clean the effected surface.

- Waste elimination procedures: Waste generated by healthcare activities, to eliminate in incinerable plastic containers.

Schemes Specifications

- For each Test Item (Tube A, Tube B and Tube C): Please measure **DNA concentration (ng/μl)** and **DNA 260/280 ratio** (if your method allows).
- How to test your samples: Please test the Test Items following your **usual routine testing method(s)**.
- You will be asked to report your results under the following methods: **Spectrophotometry, Spectrofluorometry, Microfluidic Electrophoresis, Lunatic** (previously Trinean spectrophotometer) and **Other**.
- Please be ready to enter the following additional information while reporting your results:
 - Spectrophotometry: Type of instrument, measurement container/format (plastic cuvette, quartz cuvette, microspot, microplate or other).
 - Spectrofluorometry: Type of instrument, measurement container/format (cuvette, microplate, tube, other), fluorochrome (ADyNA 515, YOYO-1, Hoechst 33258, Hoechst 33342, Hoechst 34580, SYBR Green, EvaGreen, PicoGreen, Other), wavelength excitation (485, 352, 350, 392, 484, 500, 491, other), wavelength emission (515, 461, 440, 521, 530, 509, 528, other).
 - Microfluidic Electrophoresis: Type of instrument (Agilent Bioanalyzer, Biorad Experion, PerkinElmer Labchip GX, QIAGEN QIAxcel, other), type of chip.
 - Lunatic: Type of container (DropPlate S, DropPlate D+, other).
 - Other: Type of instrument, Method.
 - Please enter information on the dilution used (for each Test Item).
 - Equipment performance verification: Please enter information on 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/> using the login information (Laboratory Number and Password) provided to you via email after the registration to the “DNA Quantification and Purity” Scheme.
- Please complete the questionnaire as accurately as possible, adding any relevant detail and comment in the appropriate comment section.

Timelines

<i>Results submission</i>	<i>Data analysis & Report preparation</i>	<i>Reports available</i>
17 NOV 2024, <u>latest</u>	20 NOV 2024– 31 JAN 2025	March 2025

In case of doubts in the completion phase, please contact IBBL at ISBERPT@ibbl.lu