SOP Title: Agilent DNA 7500 Quality Control	Version 1.1, Page 1
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Staff Able to Perform Procedure: Research Technician and higher

Principle of the Method:
This protocol describes the initial quality and quantification control steps when total DNA is received by the UB Next-Generation Sequencing and expression Analysis Core.

Sample Type: total DNA sample

Equipment Requirements:
- Agilent 2100 Bioanalyzer (Agilent)
- Bioanalyzer Chip Vortex (IKA)
- Vortex (VWR)
- Microcentrifuge (VWR)
- Timer (1 hour)

Reagents & Material Requirements:
- Quant-IT Picogreen Assay (Invitrogen)
- PMMA Cuvettes (Fischer)
- RNAse- free centrifuge tubes 1.5ml, 200 ul (USA Scientific)
- Pipette Man 2ul, 20ul, 200ul, 1000ul (Rainin)
- Filter Pipette Tips (Rainin)

Sample
- Wearing gloves, place total DNA samples at -80°C in labeled 5x5 Cryo freezer box.

Preparing the Gel-Dye Mix
- Allow DNA dye concentrate (blue) and DNA gel matrix (red) to equilibrate to room temperature for 30 minutes.
- Vortex DNA dye concentrate (blue) and add 25 µl of the dye to a DNA gel matrix vial (red).
- Vortex solution well and spin down. Transfer to spin filter.
- Centrifuge at 1500 g for 10 minutes. Protect solution from light. Store at 4°C.

Loading the Gel-Dye Mix
- Adjust the syringe clip so it is at the top position.
- Allow the gel-dye mix equilibrate to room temperature for 30 minutes before use.
- Put a new DNA chip on the chip priming station.
- Pipette 9.0 µl of gel-dye mix in the well marked Ⓖ.
- Make sure that the plunger is positioned at 1 ml and then close the chip priming station.
- Press plunger until it is held by the clip.
- Wait exactly 30 seconds then release clip.
- Wait for 5 seconds. Slowly pull back plunger to 1 ml position.
- Open the chip priming station and pipette 9.0 µl of gel-dye mix in the wells marked [G].

Loading the Markers
- Pipette 5 µl of marker (green) in all 12 sample and ladder wells. Do not leave any wells empty.

Loading the Ladder and the Samples
- Pipette 1 µl of DNA ladder (yellow) in the well marked ladder.
- In each of the 12 sample wells pipette 1 µl of sample (used wells) or 1 µl of de-ionized water (unused wells).
- Put the chip horizontally in the adapter and vortex for 1 minute at the indicated setting (2400 rpm).
- Run the chip in the Agilent 2100 bioanalyzer within 5 minutes.