Operation and Maintenance of the Agilent 2100 Bioanalyzer for RNA Samples

I. Purpose

To provide specific guidelines for operating and maintaining the Agilent 2100 Bioanalyzer This is achieved using reagents and instructions provided by Agilent to determine the quality and quantity of RNA samples.

II. Scope

All procedures are applicable to the BCGSC Library Construction and Library TechD groups.

III. Policy

This procedure will be controlled under the policies of the Genome Sciences Centre, as outlined in the Genome Sciences Centre High Throughput Production Quality Manual (QM.0001). Do not copy or alter this document. To obtain a copy see a Quality Systems associate.

IV. Responsibility

It is the responsibility of all personnel performing this procedure to follow the current protocol. It is the responsibility of the Group Leader to ensure personnel are trained in all aspects of this protocol. It is the responsibility of Quality Systems to audit this procedure for compliance and maintain control of this procedure.

V. References

Reference Title	Reference Number
Agilent RNA 6000 Nano Assay Quick Start Guide Agilent RNA 6000 Pico Assay Quick Start Guide	G2938-90030 G2941-90161

VI. Related Documents

Document Title	Document Number
N/A	N/A

VII. Safety

All Laboratory Safety procedures will be complied with during this procedure. The required personal protective equipment includes a laboratory coat and gloves. See the safety data sheet (SDS) for additional information.

VIII. Materials and Equipment

Name	Supplier	Number: #	Model or Catalogue #	
Small Autoclave waste bags 10"X15"	Fisher Scientific	01-826-4		✓
RNase Zap	Ambion	9780		✓
Ice bucket – Blue	Fisher	11-676-36		✓
wet ice	In house	N/A		N/A
Gilson P2 pipetman	Mandel	GF-44801		✓
Gilson P10 pipetman	Mandel	GF-44802		✓
Gilson P1000 pipetman	Mandel	GF-23602		✓
Diamond Filter Tips 10µL	Mandel	GF-F171203		✓
Diamond Filter Tips 1000µL	Mandel	GF-F171703		✓
Galaxy mini-centrifuge	VWR	37000-700		✓
VX-100 Vortex Mixer	Rose Scientific	S-0100		✓
Large Kimwipes	Fisher	06-666-117		✓
Black ink permanent marker pen	VWR	52877-310		✓
Eppendorf BenchTop Refrigerated Centrifuge 5810R	Eppendorf	5810 R		✓
Agilent RNA 6000 Pico Kit Series II	Agilent	5067-1513		✓
Agilent RNA 6000 Pico Kit Reagents Series II	Agilent	5067-1514		✓
Agilent RNA 6000 Nano Kit Series II	Agilent	5067-1511		✓
Agilent RNA 6000 Nano Reagents Series II	Agilent	5067-1512		✓
Chip Priming Station	Agilent	5065-4401		✓
IKA Vortex Mixer	Agilent	MS2-S8	✓	
Agilent 2100 Bioanalyzer	Agilent	2100		✓
Computer			✓	
Heat Block ISOTEMP 125D	Fisher	125D	✓	
RNase Zap	Ambion	AM9780		✓
DEPC water	Ambion	AM9920		✓
1.5ml Eppendorf Tubes	Ambion	AM12400		

IX. Procedure

Note: **All Chip priming, running of the Agilent 2100 Bioanalyzer is to be completed on the 6th Floor. (Figure 1)**

Figure 1: Agilent 2100 Bioanalyzer System

1. Determine Which Assay Is Needed Based On Sample Type And Expected Amount Of Material

1.1. RNA samples can either be analyzed on RNA 6000 Nano or RNA 6000 Pico chip.

1.2. With the expected amount of RNA, select the appropriate assay based on the following table:

Specification	Total RNA Nano Assay	Total RNA Pico Assay
Quantitative Range	25-500ng/µL	n/a
Qualitative Range	5-500ng/µL	50-5000pg/µL

***Note**: mRNA assay is only for qualitative QC, not quantitative. Use 1/5th dilution of the RNA Nano marker for the mRNA Agilent assay in step 7.2 if less than 10µg of total RNA was used for mRNA purification. If using the diluted RNA Nano marker, a threshold of 6% of rRNA contamination is acceptable, discuss with supervisor if rRNA contamination % is above 6%. mRNA samples may also be run using the "Total Eukaryotic RNA assay" setting and regular RNA Nano Marker without dilution; however, the % of rRNA contamination calculation is not a feature of this assay.

2. Replacing the Chip Priming Station Syringe

Note: This step is done as a weekly maintenance procedure by Library Core. It does not need to be performed each time a chip is being primed.

2.1. Put on a clean pair of gloves

2.2. Unscrew the old syringes from the lid of the Chip Priming Station (see Figure 2).

2.3. Remove the plastic cap of the new syringe and insert it into the clip.

2.4. Slide it into the hole of the luer lock adapter and screw it tightly to the Chip Priming Station.

Figure 2: Chip Priming Station

3. Filtered Gel Matrix Preparation

3.1. Remove the reagents for the desired kit from the 4°C fridge (EQU2014) and allow them to equilibrate to room temperature for 30 minutes before use. Put reagents in pre-made box that shelters dye and gel-dye mix from light. RNA ladders for both Pico and Nano kits are kept in a box in the -80ºC freezer (EQU275). If unsure of where reagents are kept, please check with supervisor.

3.2. Pipette 550µL of RNA Nano or Pico gel matrix into a spin filter.

3.3. Centrifuge at 4000rpm for 10 minutes at room temperature.

3.4. Remove the filter and label the tube as "Filtered Gel Matrix" for either Nano or Pico Assay, with the date and your initials.

3.5. Use the filtered gel within 4 weeks. Discard afterwards.

4. Gel Dye Mix Preparation for Nano and Pico chips

4.1. Spin the Gel Matrix briefly to collect at the bottom of the tube.

4.2. Transfer 65µL of the filtered gel matrix into a fresh RNase-free 1.5 mL tube. Label the tube as either "Nano Gel Dye" or "Pico Gel Dye" with the date and initials.

4.3. Vortex the dye concentrate for 10 seconds at high speed. Briefly spin down to collect solution at the bottom of the tube.

4.4. Add 1µL of the dye concentrate to the 65µL of filtered gel matrix. Return to dye concentrate to the box, shielded from light.

4.5. Vortex the solution at high speed for 10 seconds. Spin at 13,000rpm for 10 minutes at room temperature. Keep tube upright and in the dark.

5. Setting Up and Running the Chip

5.1. Put on a clean pair of gloves.

5.2. Aliquot and dilute samples to the appropriate range while reagents are equilibrating. If an aliquot is to be made, 1.5µL of sample is required. Keep all samples on ice. Arrange samples by approximate lowest to highest concentration. Arrange in the order as they will be loaded onto the chip to prevent mix-up. **To remove any secondary structure, place samples and the RNA Nano ladder onto 70°C heat block for 2 minutes and then snap cool samples by returning tubes to ice for another 2 minutes followed by a pulse spin**.

***Note**: It is NOT necessary to heat the Pico Ladder as it has already been denatured.

5.3. Ensure that the Chip Priming Station is set up correctly for type of chip being run. The base plate should be in position "C".

5.4. If running a **Nano** chip assay, clean the electrode before and after as follows:

5.4.1. Slowly fill one of the wells of the electrode cleaner chip with 350µL of fresh RNase Zap.

5.4.2. Never fill too much fluid in the electrode cleaner. This could cause liquid spill which may cause current leaks between electrodes.

5.4.3. Open the lid and place electrode cleaner chip in the Agilent 2100 Bioanalyzer.

5.4.4. Close the lid and leave it closed for 1 minute.

5.4.5. Open the lid and remove the electrode cleaner chip.

5.4.6. Slowly fill one of the wells of another electrode cleaner chip with 350µL RNase Free water.

5.4.7. Insert the RNase free water cleaner chip into the Agilent 2100 Bioanalyzer and close the lid. Leave it closed for 30 seconds.

5.4.8. Open the lid and remove the electrode cleaner chip. Leave the lid open for 30 seconds to allow the water on the electrodes to evaporate.

5.4.9. Make sure there is a date on the cleaner chips and keep for the end of protocol cleaning. Following the end of protocol cleaning, tap out the liquid of each cleaner chip and leave upside down on a paper towel adjacent to the Bioanalyzer.

5.5. If running a **Pico** chip assay, clean the electrode before and after as follows:

5.5.1. Slowly fill one of the wells of the electrode cleaner chip with 350µL of fresh RNase free water.

5.5.2. Never fill too much fluid in the electrode cleaner. This could cause liquid spill which might cause current leaks between the electrodes.

5.5.3. Open the lid and place the electrode cleaner chip in the Agilent 2100 Bioanalyzer.

5.5.4. Close the lid and leave it closed for 5 minutes.

5.5.5. Open the lid and remove the electrode cleaner chip. Leave the lid open and wait for 30 seconds for the water on the electrodes to evaporate.

5.5.6. Make sure there is a date on the cleaner chip and keep for future use.

5.6. Ensure that the Chip Priming Station is set up correctly for type of chip being run. The base plate should be in position “C” and the clip should be in the topmost position.

5.7. Turn on the Agilent 2100 Bioanalyzer by flipping the switch at the rear of the instrument. A green light will come on.

5.7.1. Login to the computer supporting the Agilent 2100 Bioanalyzer and double click on the "2100 Expert" icon.

5.7.2. The screen of the software appears in the *Instrument* context.

5.7.3. Click on the *Assay Selection* icon and choose the correct assay to be run. Enter the number of samples to be run in the appropriate box.

5.7.4. Under "Destination", click on the circle adjacent to "Custom" and save the file as below:

5.7.4.1. For Nano under *R:\ Library Core\QC\Agilent\RNA Nano*

5.7.4.2. For Pico under *R:\ Library Core\QC\Agilent\RNA*

5.7.4.3. For mRNA under *R:\ Library Core\QC\Agilent\mRNA*

5.7.5. Identify the chip with the next assay# by entering this new *assay#* in the file prefix section (refer to whiteboard to naming scheme: **RNA#** (Assay) for Nano; **Pico#** (Assay) for Pico; mRNA# (Assay) for mRNA.

5.7.6. Change the Assay number on the whiteboard to the Assay number currently being run.

6. Chip Priming

6.1. Set a timer for 30 seconds.

6.2. Remove a new RNA Nano or Pico Chip from its sealed bag.

6.3. When pipetting the gel dye mix, be careful not to draw up any particles that may sit at the bottom of the tube. Pipette 9.0µL of the gel dye mix into the bottom of the well marked G (with black circle). Take care not to introduce bubbles when dispensing the gel dye mix. If bubbles are present, very gently tap the chip on the bench top or remove the gel dye mix from the well and repipette 9.0µL. The chip will not run properly if air gaps are pushed into the capillaries.

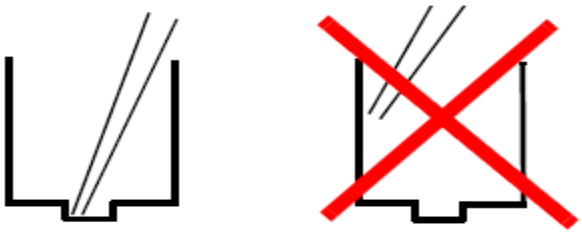


Figure 3: Proper placement of pipette tip in chip well

6.4. Place the chip onto the Chip Priming station.

6.5. Raise the syringe plunger to the 1mL mark. Ensure the lever clip is in the top position.

6.6. Press the plunger until it is held by the clip.

6.7. Start the timer, wait exactly 30 seconds then release the clip. Allow the plunger to rise by itself.

6.8. Wait for 5 seconds before slowly pulling the plunger back to the 1mL mark.

6.9. Remove the chip from the Chip Priming Station.

7. Loading the Remaining Gel Dye Mix and Nano/Pico Marker

7.1. Pipette 9.0µL of gel dye mix into the 2 wells marked G.

7.2. Vortex the RNA Nano or Pico Marker for 3 seconds at high speed then quick spin. If running mRNA assay to check mRNA purified from less than 10µg of total RNA, dilute the RNA Nano marker by 1/5th. Pipette 5.0µL of the RNA Nano or diluted RNA Nano or Pico Marker, depending on which assay it is, into the ladder well and then into all sample wells. Do not leave any empty wells or the chip will not run.

7.3. For Pico chip assay, pipette 9µL of the RNA 6000 Pico conditioning solution into the well marked CS.

8. Loading the Ladder and samples

Note: Ensure the samples and RNA Nano ladder have been denatured for 2 minutes at 70 degrees and then snap chilled for 2 minutes before addition onto the chip (See 3.3)

8.1. Pipette 1.0µL of denatured RNA Nano or Pico Ladder into the ladder well.

8.2. Pipette 1.0µL of denatured sample into each of the sample wells.

8.3. Pipette 1.0µL of DEPC-water or RNA Marker into each unused sample well.

8.4. Put the chip in the Agilent Vortex Mixer adapter and secure with labeling tape if necessary. Set speed at **2200 rpm** and vortex chip for one minute. ***A prepared chip must be loaded within 5 minutes.***

8.5. Open the lid of the Bioanalyzer and carefully place the chip into the receptacle. The chip fits only one way.

8.6. Carefully close the lid. The electrodes fit into the well of the chip. The 2100 Expert software should display the appropriate assay chip on the screen.

8.7. Ensure that the appropriate assay has been selected.

8.8. Enter the sample information, including the Library ID or Sample ID, dilution information, volume of RNA sample and Initials in the chip summary table.

8.9. Click the *Start* button in the upper right window. The incoming raw signals are displayed in the *Instrument* context.

9. Shutdown and cleaning

9.1. Immediately after the chip is finished, remove the chip from the receptacle of the Bioanalyzer and dispose of it in the waste container adjacent the instrument.

9.2. Refer to Steps 5.4 and 5.5 for the appropriate cleaning procedure.

9.3. Close the software and log off of the computer. Turn off the monitor as well. Switch off the Agilent 2100 BioAnalyzer.

10. Approval of Agilent Runs

For runs approval, ensure the ladder has been run properly. Below is the ladder profile for the RNA 6000 Nano and Pico assays:

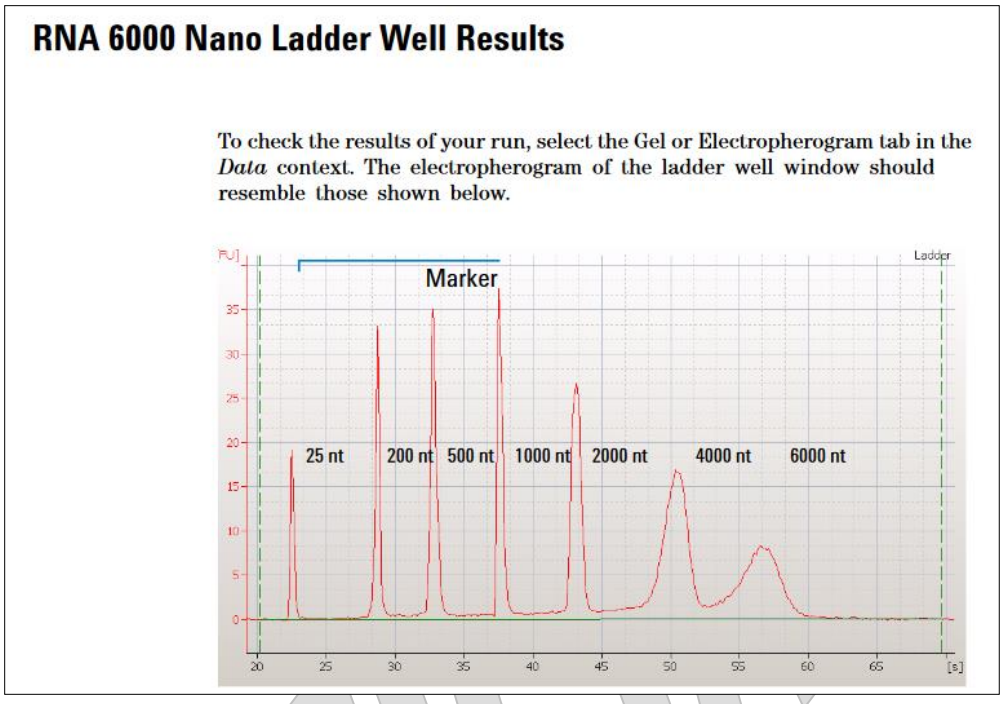


Figure 4: RNA 6000 Nano ladder

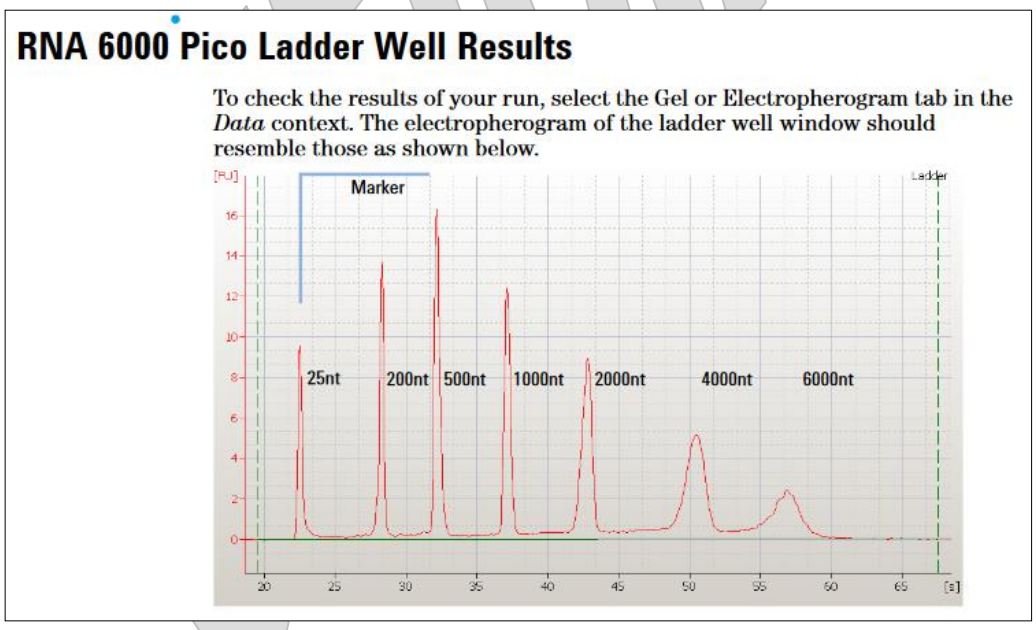
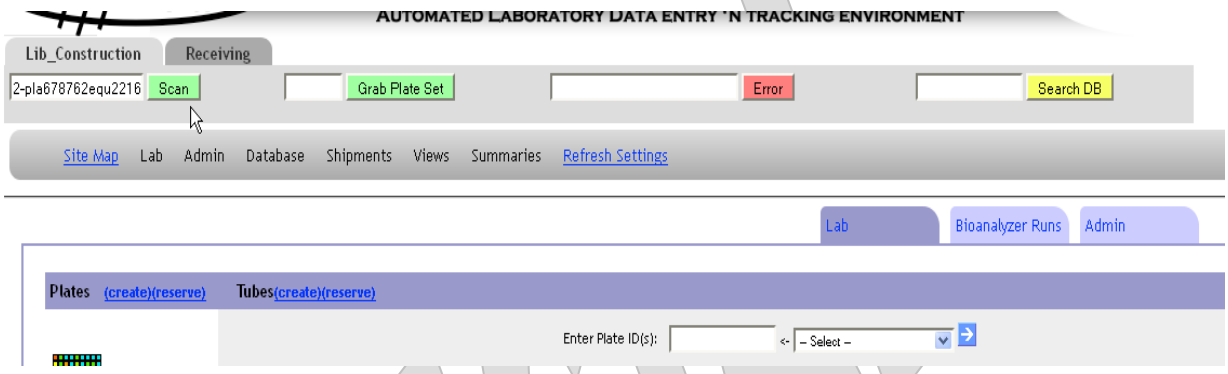


Figure 5: RNA 6000 Pico ladder

Appendix A

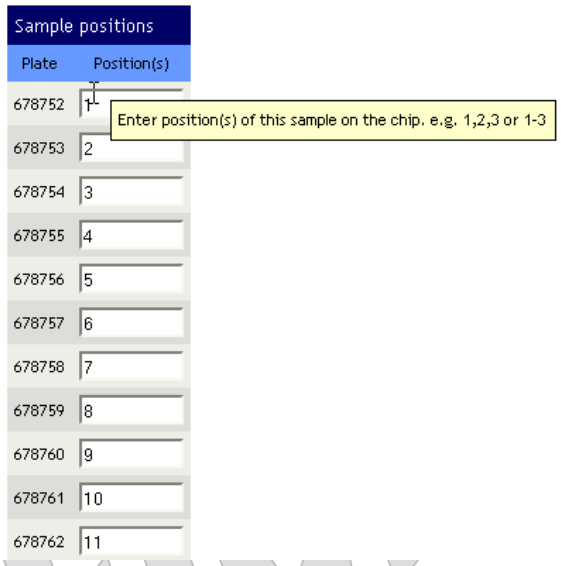
1. Creating Bioanalyzer Runs for you Samples

1.1. Under the Lib_Construction tab, scan in your samples and the Agilent equ# that you used (equ283 or equ2216).

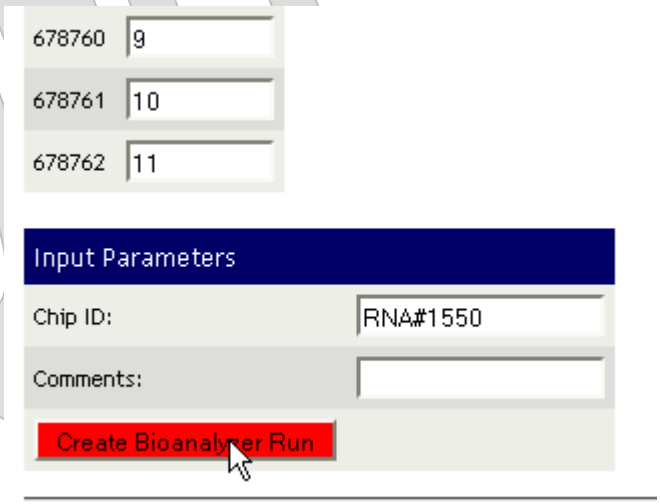


1.2. A list will be generated of all the samples that you have scanned in.

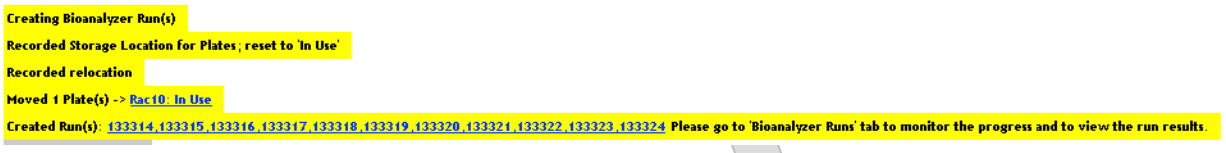
1.3. In the "Sample Positions" table, fill in the position each sample loaded on the Agilent chip. Even though it is a 4x4 well chip, only the sample wells will be 'numbered'. For example, in row 1 of the chip, you have positions 1-3. Row 2 has positons 4-6 and so on. For the mRNA and RNAnano assays, there is a maximum of 12 postions. For the RNApico assay, there is a maximum of 11 postions.



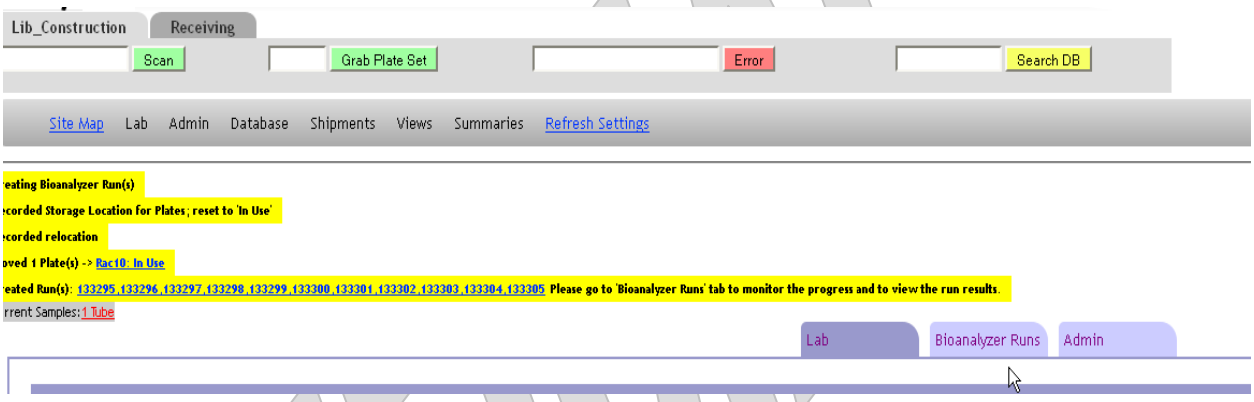
1.4. Enter in the Chip ID. If you accidentally enter in a Chip ID that was previously used for this assay, the next available Chip ID number will be assigned to your samples. Click "Create Bioanalyzer Run".



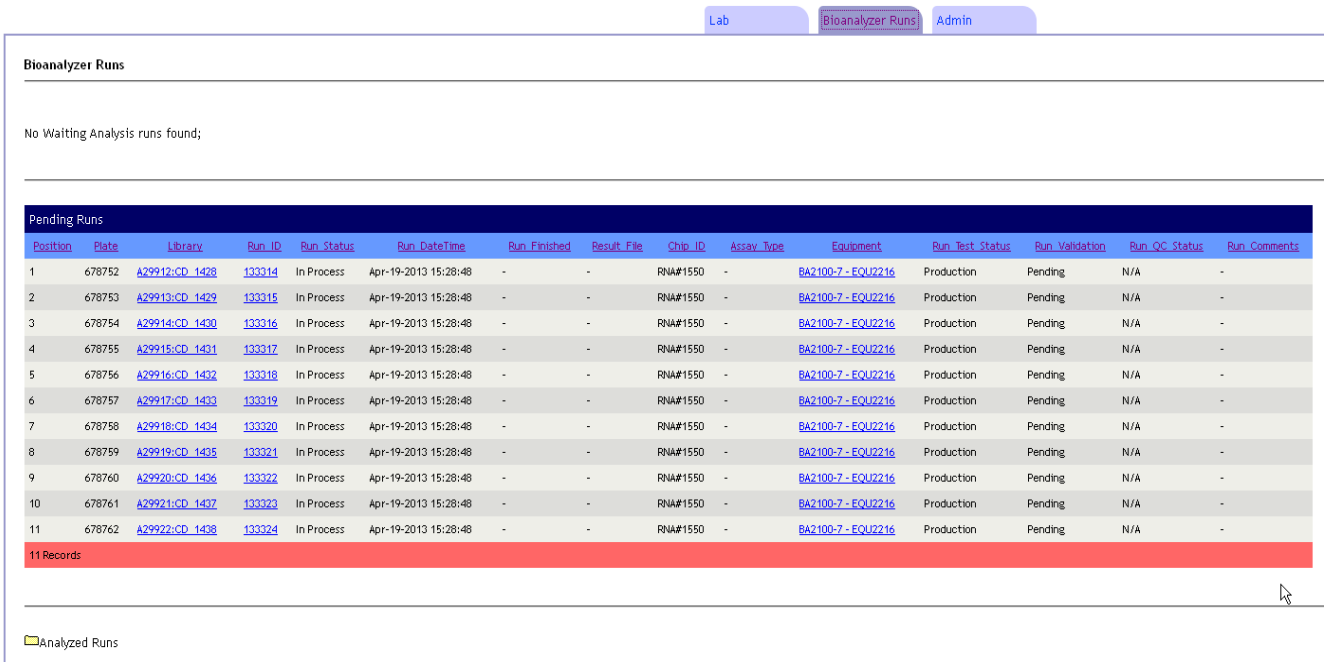
1.5. One run is created for each sample you scanned in.



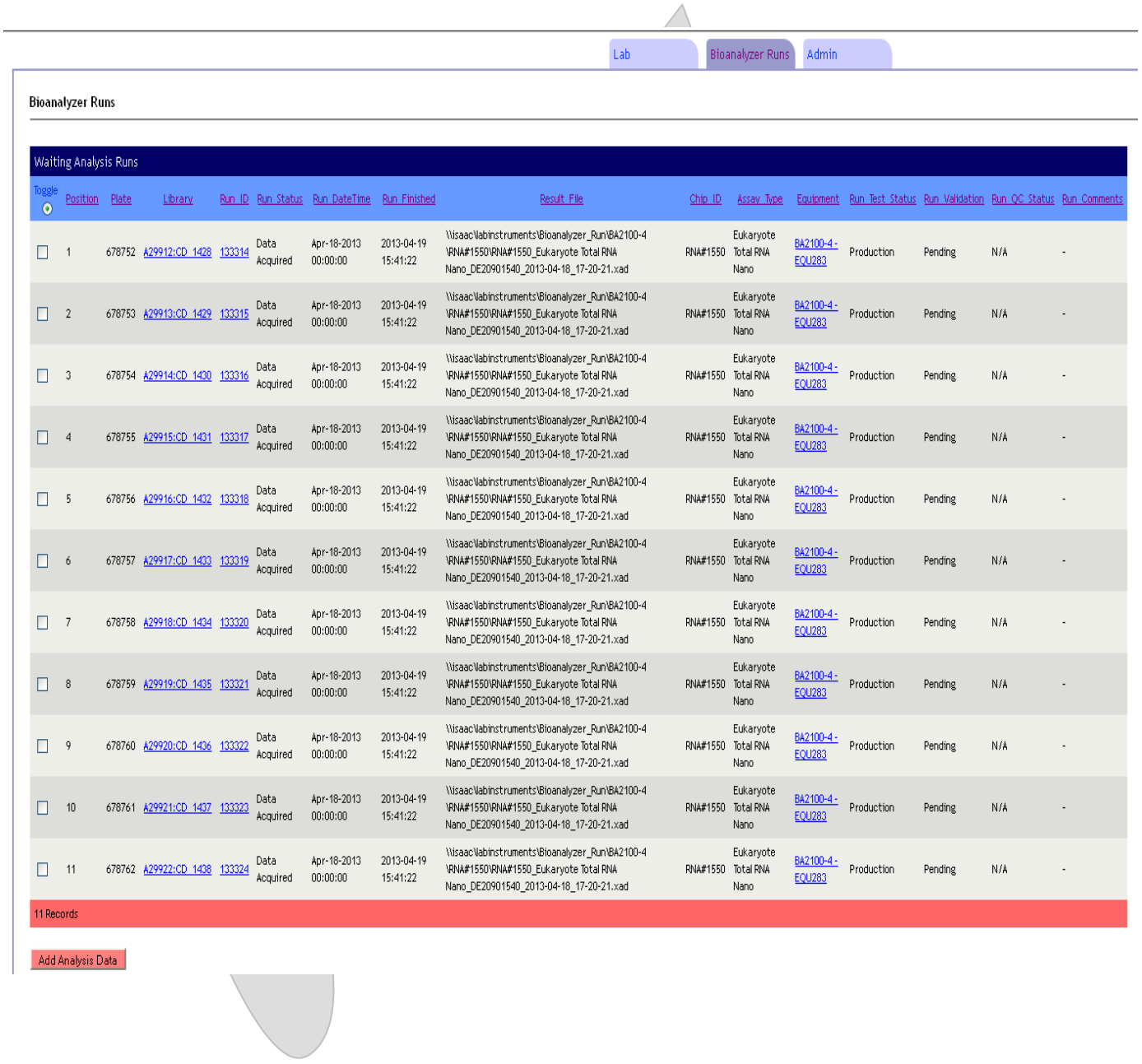
1.6. To monitor the run progress and to view the run results, select the "Bioanalyzer Runs" tab.



1.7. Your samples will show up under "Pending Runs".



1.8. Once the Runs have been validated by LIMS, your samples will show up in the "Waiting Analysis Runs" section. LIMS will edit the Chip ID number if incorrect. It will also fill in when the run was completed, where the results are stored, and the assay type. This takes about 10 minutes.



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Bioanalyzer Runs

Waiting Analysis Runs

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11 Records

Add Analysis Data

1.9. Select the samples you want to analyze and select "Add Analysis Data".

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Bioanalyzer Runs

Waiting Analysis Runs

Toggle	Position	Plate	Library	Run ID	Run Status	Run DateTime	Run Finished	Result File	Chip ID	Assay Type	Equipment	Run Test Status	Run Validation	Run QC Status	Run Comments
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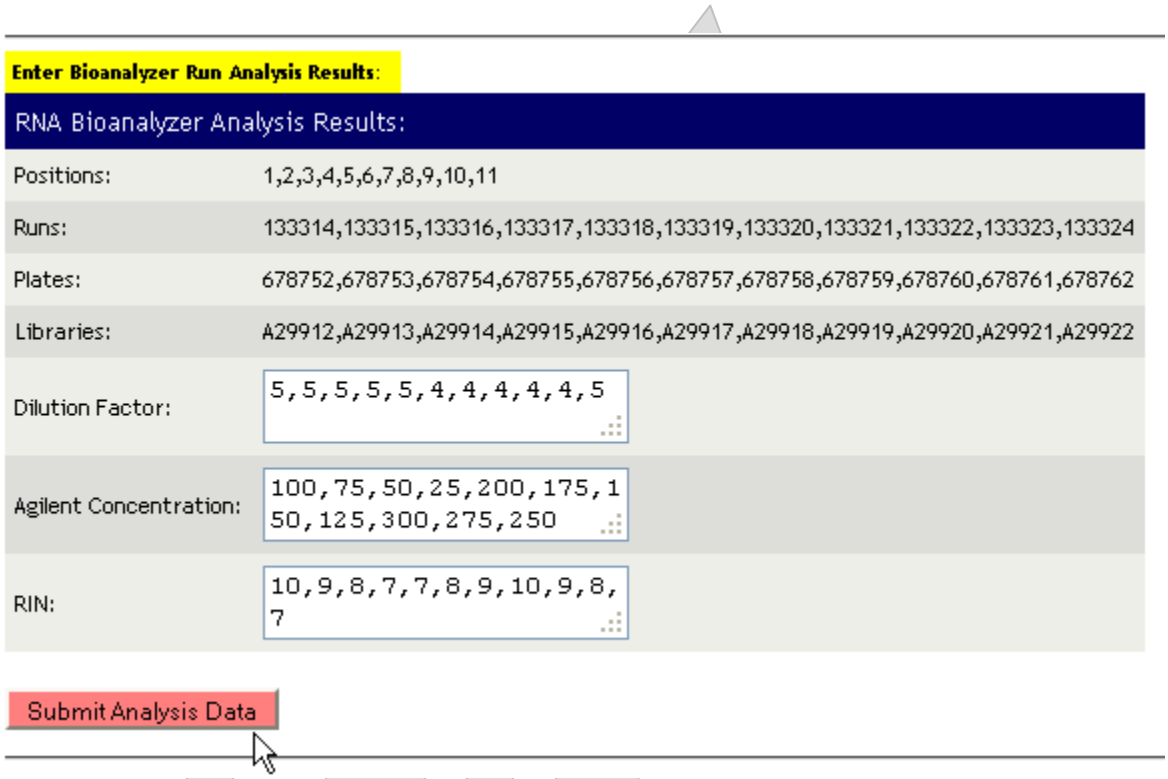
☑	6	678757	A29917:CD_1433	133319	Data Acquired	Apr-18-2013 00:00:00	2013-04-19 15:41:22	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	BA2100-4 - EQU283	Production	Pending	N/A	-
☑	7	678758	A29918:CD_1434	133320	Data Acquired	Apr-18-2013 00:00:00	2013-04-19 15:41:22	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	BA2100-4 - EQU283	Production	Pending	N/A	-
☑	8	678759	A29919:CD_1435	133321	Data Acquired	Apr-18-2013 00:00:00	2013-04-19 15:41:22	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	BA2100-4 - EQU283	Production	Pending	N/A	-
☑	9	678760	A29920:CD_1436	133322	Data Acquired	Apr-18-2013 00:00:00	2013-04-19 15:41:22	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	BA2100-4 - EQU283	Production	Pending	N/A	-
☑	10	678761	A29921:CD_1437	133323	Data Acquired	Apr-18-2013 00:00:00	2013-04-19 15:41:22	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	BA2100-4 - EQU283	Production	Pending	N/A	-
☑	11	678762	A29922:CD_1438	133324	Data Acquired	Apr-18-2013 00:00:00	2013-04-19 15:41:22	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	BA2100-4 - EQU283	Production	Pending	N/A	-

11 Records

Add Analysis Data

1.10. Depending on whether your run is an mRNA assay or a RNA nano assay, different attributes will show up for you to fill out. Once you have finished filling out the information, select "Submit Analysis Data".



1.11. The results table will look like this. If the volumes are entered for your samples than lims will calculate the amount for you.

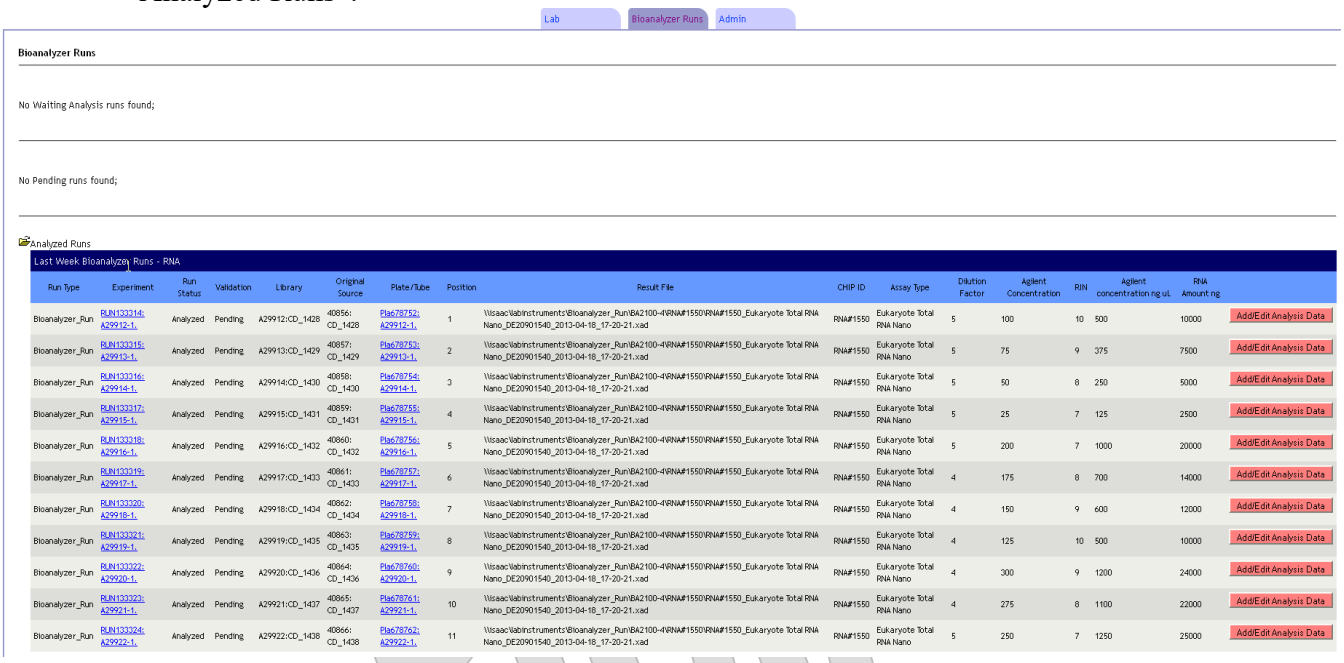
Successfully updated Bioanalyzer run analysis data for Run(s) 133314,133315,133316,133317,133318,133319,133320,133321,133322,133323,133324

Plate Attributes have been added/updated

Experimental Data: Bioanalyzer_Run - RNA

Run Type	Experiment	Run Status	Validation	Library	Original Source	Plate/Tube	Position	Result File	CHIP ID	Assay Type	Dilution Factor	Agilent Concentration	RIN	Agilent concentration ng uL	RNA Amount ng	
Bioanalyzer_Run	RUN133314: A29912-1.	Analyzed	Pending	A29912:CD_1428	40856: CD_1428	Plate78752: A29912-1.	1	\\isaac\Abinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	100	10	500	10000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133315: A29913-1.	Analyzed	Pending	A29913:CD_1429	40857: CD_1429	Plate78753: A29913-1.	2	\\isaac\Abinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	75	9	375	7500	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133316: A29914-1.	Analyzed	Pending	A29914:CD_1430	40858: CD_1430	Plate78754: A29914-1.	3	\\isaac\Abinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	50	8	250	5000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133317: A29915-1.	Analyzed	Pending	A29915:CD_1431	40859: CD_1431	Plate78755: A29915-1.	4	\\isaac\Abinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	25	7	125	2500	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133318: A29916-1.	Analyzed	Pending	A29916:CD_1432	40860: CD_1432	Plate78756: A29916-1.	5	\\isaac\Abinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	200	7	1000	20000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133319: A29917-1.	Analyzed	Pending	A29917:CD_1433	40861: CD_1433	Plate78757: A29917-1.	6	\\isaac\Abinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	4	175	8	700	14000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133320: A29918-1.	Analyzed	Pending	A29918:CD_1434	40862: CD_1434	Plate78758: A29918-1.	7	\\isaac\Abinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	4	150	9	600	12000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133321: A29919-1.	Analyzed	Pending	A29919:CD_1435	40863: CD_1435	Plate78759: A29919-1.	8	\\isaac\Abinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	4	125	10	500	10000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133322: A29920-1.	Analyzed	Pending	A29920:CD_1436	40864: CD_1436	Plate78760: A29920-1.	9	\\isaac\Abinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	4	300	9	1200	24000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133323: A29921-1.	Analyzed	Pending	A29921:CD_1437	40865: CD_1437	Plate78761: A29921-1.	10	\\isaac\Abinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	4	275	8	1100	22000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133324: A29922-1.	Analyzed	Pending	A29922:CD_1438	40866: CD_1438	Plate78762: A29922-1.	11	\\isaac\Abinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	250	7	1250	25000	Add/Edit Analysis Data

1.12. If you go back to the Bioanalyzer Runs tab, your samples will show up under "Analyzed Runs".



Lab | Bioanalyzer Runs | Admin

Bioanalyzer Runs

No Waiting Analysis runs found;

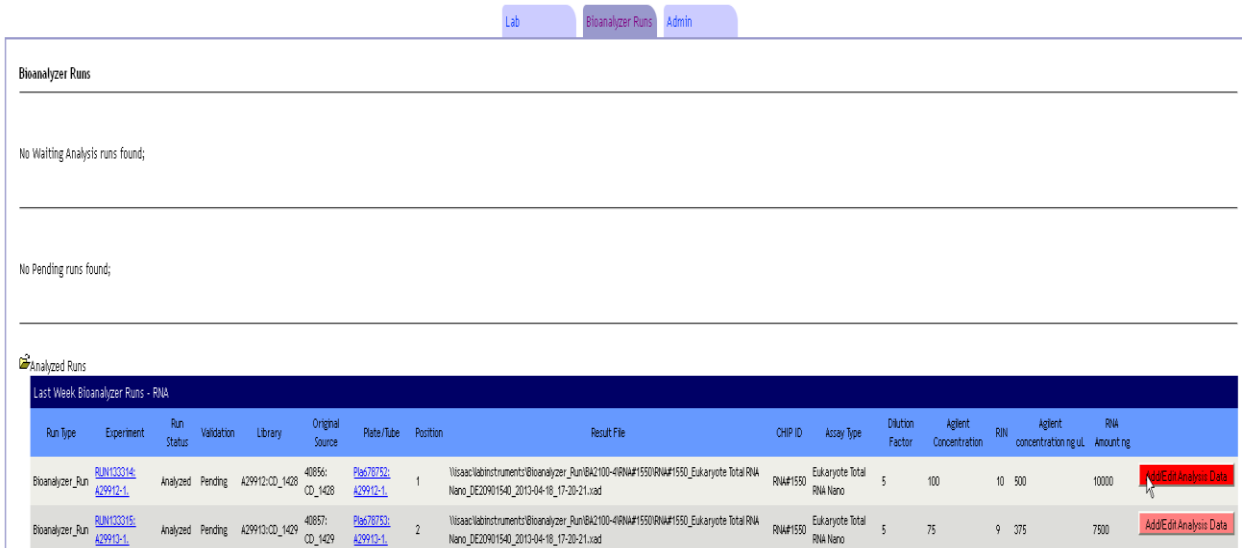
No Pending runs found;

Analyzed Runs

Last Week Bioanalyzer Runs - RNA

Run Type	Experiment	Run Status	Validation	Library	Original Source	Plate/Tube	Position	Result File	CHIP ID	Assay Type	Dilution Factor	Agilent Concentration	RIN	Agilent concentration ng uL	RNA Amount ng	
Bioanalyzer_Run	RUN133314: A29912-1.	Analyzed	Pending	A29912:CD_1428	40856: CD_1428	Plate78752: A29912-1.	1	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	100	10	500	10000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133315: A29913-1.	Analyzed	Pending	A29913:CD_1429	40857: CD_1429	Plate78753: A29913-1.	2	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	75	9	375	7500	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133316: A29914-1.	Analyzed	Pending	A29914:CD_1430	40858: CD_1430	Plate78754: A29914-1.	3	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	50	8	250	5000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133317: A29915-1.	Analyzed	Pending	A29915:CD_1431	40859: CD_1431	Plate78755: A29915-1.	4	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	25	7	125	2500	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133318: A29916-1.	Analyzed	Pending	A29916:CD_1432	40860: CD_1432	Plate78756: A29916-1.	5	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	200	7	1000	20000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133319: A29917-1.	Analyzed	Pending	A29917:CD_1433	40861: CD_1433	Plate78757: A29917-1.	6	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	4	175	8	700	14000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133320: A29918-1.	Analyzed	Pending	A29918:CD_1434	40862: CD_1434	Plate78758: A29918-1.	7	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	4	150	9	600	12000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133321: A29919-1.	Analyzed	Pending	A29919:CD_1435	40863: CD_1435	Plate78759: A29919-1.	8	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	4	125	10	500	10000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133322: A29920-1.	Analyzed	Pending	A29920:CD_1436	40864: CD_1436	Plate78760: A29920-1.	9	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	4	300	9	1200	24000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133323: A29921-1.	Analyzed	Pending	A29921:CD_1437	40865: CD_1437	Plate78761: A29921-1.	10	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	4	275	8	1100	22000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133324: A29922-1.	Analyzed	Pending	A29922:CD_1438	40866: CD_1438	Plate78762: A29922-1.	11	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	250	7	1250	25000	Add/Edit Analysis Data

1.13. If you want to edit any of the attributes, you can click on the "Add/Edit Analysis Data" button. For example, if the amount was not calculated for you because the volumes of your samples were not updated, you can edit the volume in LIMS, then go to the Bioanalyzer homepage and select the Run you want to edit under "Analyzed Runs".



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Bioanalyzer Runs

No Waiting Analysis runs found;

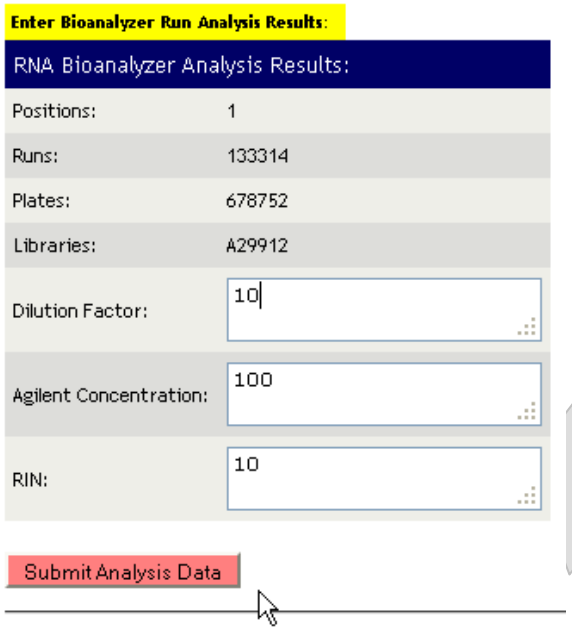
No Pending runs found;

Analyzed Runs

Last Week Bioanalyzer Runs - RNA

Run Type	Experiment	Run Status	Validation	Library	Original Source	Plate/Tube	Position	Result File	CHIP ID	Assay Type	Dilution Factor	Agilent Concentration	RIN	Agilent concentration ng uL	RNA Amount ng	
Bioanalyzer_Run	RUN133314: A29912-1.	Analyzed	Pending	A29912:CD_1428	40856: CD_1428	Plate78752: A29912-1.	1	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	100	10	500	10000	Add/Edit Analysis Data
Bioanalyzer_Run	RUN133315: A29913-1.	Analyzed	Pending	A29913:CD_1429	40857: CD_1429	Plate78753: A29913-1.	2	\\isaac\labinstruments\Bioanalyzer_Run\BA2100-4\RNA#1550\RNA#1550_Eukaryote Total RNA Nano_DE20901540_2013-04-18_17-20-21.xad	RNA#1550	Eukaryote Total RNA Nano	5	75	9	375	7500	Add/Edit Analysis Data

1.14. You would need to enter the attribute values again and "Submit Analysis Data".



1.15. The run will be updated with the new values that you have entered and any calculations required will be updated as well.