

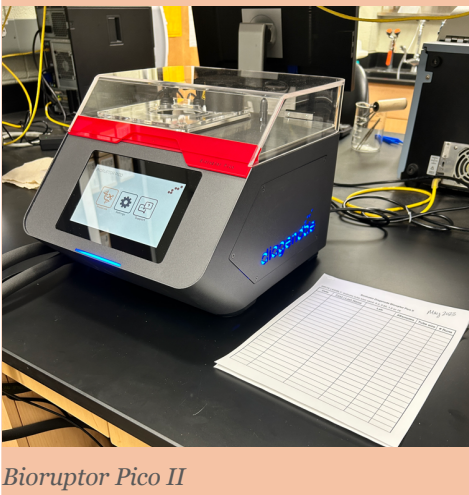
## RECENT NEWS:

The CCG has been awarded funds from the Roy J. Carver Charitable Trust to acquire new equipment to support the Department's research efforts. We will be adding the following new equipment to the CCG in the next few months:

Diagenode Bioruptor Pico II  
(Now Available!!!)

BD FACS Melody Cell Sorter

Bio Tek Synergy LX  
Multimode Plate Reader



*Bioruptor Pico II*

## CHANGES TO THE CCG

We are excited to be upgrading some of our research equipment and adding some new equipment to extend the research mission of the Department of Biology. A few changes will be coming to the CCG over the next several months including billing and usage adjustments as well as updating our website. Also, the launch of this new newsletter format to inform you of the updates to the CCG and to highlight different equipment available for use. Email CCG ([ccg@uiowa.edu](mailto:ccg@uiowa.edu)) to be added to listserv for future newsletters.

### Usage adjustments:

**Qubit** is changing to a tiered billing based on usage per month (same cost as nanodrop) starting in May. You are **required** to log the number of samples you measure including any standards run on the sign-up sheet. You do not need to schedule time for the machine online unless you are doing a lot of samples at once or require use of it at a set time.

**Tissue Lyser LT** is also changing to a tiered billing based on usage per month (same cost as Bioruptor) starting in May. You are **required** to log the number of RUNS you do, NOT samples. The machine holds 12 samples, so if you fill all slots and run it 3 cycles: you would log 3 runs.

### Updating equipment:

**QuantStudio (QS3)** machine received a computer hardware update to make the launching of the software faster. If you notice any problems, please email me (Christine) at [ccg@uiowa.edu](mailto:ccg@uiowa.edu)

**Nanodrop One** machine also received a computer hardware update. As with the QS3, let me know if any problems occur. ([ccg@uiowa.edu](mailto:ccg@uiowa.edu))

**Plate Reader:** The old Spectramax M2 plate reader will be replaced with a **NEW** Bio Tek Synergy LX Multimode Plate Reader. It runs on the same software as the Cytation5 and will be highlighted in the next newsletter. We expect this instrument to be available for use starting in early June.

### New Equipment Highlighted:

**Diagenode Bioruptor Pico II** is a sonicator with a built-in cooling system to shear samples. This instrument can be used for: 1) DNA shearing for NGS, 2) Chromatin shearing, 3) RNA shearing, 4) Protein extraction from tissues &

cells, 5) FFPE DNA extraction, 6) Protein aggregation studies, and 7) shearing of input DNA for NGS. We have purchased all the tube adaptors for the instrument to do a range of sample volumes from 20ul – 2ml (0.2ul, 0.65ul, 1.5ml, and 15ml

**WHICH TUBES FOR BIORUPTOR® PICO?**

	0.2 ML BIORUPTOR MICROTUBES	0.65 ML BIORUPTOR MICROTUBES	1.5 ML BIORUPTOR MICROTUBES WITH CAPS	15 ML BIORUPTOR TUBES	15 ML BIORUPTOR TUBES AND SONICATION BEADS
Catalog number	C30010020	C30010011	C30010014	C30010017	C01020031
Recommended sample volume	20 µl - 100 µl	100 µl	100 µl - 300 µl	500 µl - 2 ml	500 µl - 2 ml
<b>APPLICATIONS</b>					
DNA shearing	✓	✓	✓		
Chromatin shearing	✓	✓	✓		✓
RNA shearing	✓	✓			
FFPE Extraction			✓		
Cell lysis	✓	✓	✓	✓	
Tissue disruption for protein extraction			✓	✓	

✓ = validated tubes      \* Protein extraction beads (C00000211) must be used

**Additional info:**

<https://www.diagenode.com/en/p/bioruptor-pico2#>

**Contact Us**

**Carver Center for Genomics**

232 Biology Building

129 E. Jefferson St.

Univ of Iowa

319-467-4430

ccg@uiowa.edu

<https://biology.uiowa.edu/ccg>

Christine Kondratick, PhD

CCG Director

tubes). You are welcome to start using after you have been trained. If you would like to receive training, please contact me at ccg@uiowa.edu.

**Important Use Information:**

- Schedule time online for 30 min blocks, the machine will run for 15-30 minutes per run. Do not schedule immediately after another user, please allow 30 minutes between users!
- You **MUST** allow the machine to sit for the length of time equal to the length of your run before the next run can commence! For example: if your run is 15 min long, there needs to be a wait period of 15 min before the next run starts.
- Before you run the machine, turn on the unit and the cooling system. Cooling system needs 30 minutes to reach temperature before a run is started.
- You **MUST** fill all slots of the holder with tubes filled with the same volume of sample or water in blank tubes for the machine to run properly! For example: 4 x 1.5ml tubes with sample volume of 200ul in each tube will require 2 x blank tubes with 200ul of water in each to run the machine.
- Tubes (specific to machine) are available in labeled drawers in the CCG. Use **only** what you need, **do not** take out of CCG and stash in your own lab!
- Sample holders are in labeled drawer next to machine and **MUST** be wiped off before returned to the corresponding bin in drawer after use!
- Turn both machine and cooling system off after you are finished using it.
  - Machine indicators (see picture): blue light = machine ready, green light = machine is running, and orange light = machine is paused

**Billing Information:**

- You are **required** to log your number of runs, number of samples, and size of tube used for each use of the machine on the sign-in sheet. For example: if you have 10 samples of 200ul each, you would log the following: 10 samples, 2 runs, 1.5ml tubes (note: holder for 1.5ml tubes holds 6 tubes, hence 2 runs)
- Use of Bioruptor will be billed monthly based on a tiered number of runs per month. Also, you will be billed for the total number of tubes you use per month including any blank tubes needed for your runs (See chart below). In example above: you would be billed for 2 runs, and 12 1.5ml tubes because holder needs 6 tubes to run.
- Pricing for Monthly use is currently on an introductory phase and will be re-evaluated by CCG committee in September. Prices for the tubes is determined by the manufacturer and will be adjusted when the CCG incurs changes in cost. We will notify you of price changes in future newsletters when they occur.

**Tiered Monthly Use Costs:**

Total # Runs	Cost/Month
< 20	\$10
20-40	\$15
>40	\$20

**Tube Cost per Tube:**

Tube sizes	Cost each
0.2, 0.65 & 1.5ml	\$0.50
15ml	\$2.20

**Number Tubes in Holders:**

Tube size	Amount
0.2ml	16
0.65ml	12
1.5 & 15ml	6