# MicroCT Imaging Core: Special Operation Policies during Phase II
# (Effective July 13th, 2020)

Beginning Phase II (July 13th), the PCMD MicroCT Imaging Core will be opened to trained Penn users subject to special operation policies. As our MicroCT Imaging Core is located within the McKay Lab, <u>all policies for working in McKay Lab during Phase II will be STRICTLY enforced</u>. If you decide to use our core facilities during Phase II, please review the entire instructions and policies carefully!

Any policy violation can be reported to us via email ([pcmd.microct@gmail.com](mailto:pcmd.microct@gmail.com)), or anonymously to the McKay Lab through the ["Report a Problem" form](#).

## Mandatory Action Items:

1. Complete Penn EHRS COVID-19 Training for Lab Researchers "Resumption of Research Training" [https://ehrs.upenn.edu/resumption-research-training-penn-labs](https://ehrs.upenn.edu/resumption-research-training-penn-labs) <mark>(For Non-McKay users)</mark> Please submit a PDF copy of your Certificate of Completion for "Resumption of Research Training at Penn-EHRS" (*available in Knowledge Link*) to [pcmd.microct@gmail.com](mailto:pcmd.microct@gmail.com)
2. Enroll in [PennOpen Pass](#):
   a. [How It Works Guide](#)
   b. [Directions for how to add PennOpen Pass to your home screen](#)

## PPE & Safety Policies:

1. **Facial masks MUST be worn at all times.** Standard PPE and safety rules that must be followed in MicroCT rooms at all times.
2. Per McKay Lab policy: **Lab coat, safety glasses and gloves MUST be worn in MicroCT rooms at all times**. We only provide gloves and 70% ethanol. **You MUST bring your own safety glasses/goggles and lab coat**. Shared use of lab coats are not recommended.
3. Gloves must be used on keyboard and mouse.
4. We have 70% ethanol bottles in the MicroCT room. Please spray 70% ethanol to the keyboard and bench before and after use. (Our keyboards are waterproof.)
5. NEVER spray any liquids into the workstation, tape, tape drive, and scanner. They are not water resistant!

**Common Q&A**:

1. **Q**: If I got reported for a policy violation, are there any consequences?
   **A**: Yes. PPE and calendar reservations will be monitored regularly.
2. **Q**: I wear glasses. Should I still wear safety glasses?
   **A**: Yes. <u>No safety glasses, no entry.</u> We don't provide safety glasses. You must bring your own over-the-glass safety glasses (as well as your own lab coat).

## General Policies:

1. Onsite MicroCT analysis is NOT allowed in MicroCT rooms. Please sign-up to use our remote computers (If you don't have access, send a request via email to us).
2. Checking any MicroCT scanned images is also NOT allowed in MicroCT rooms. Please refer to our remote computers.
3. Once your *ex vivo* scan begins, please leave the McKay Lab space. **NEVER wait for *ex vivo* scans in the MicroCT room**.
4. <u>Only 1 person is allowed per room at any given time.</u>
5. No in-person training will be provided during Phase II. We will be sure to notify you with any policy updates regarding this, hopefully in the next month.
6. Any scan extending 10 min into other user's reservations will be stopped by us.
7. Due to limited sample holders, users are responsible for removing their samples from the sample holder after the scan is finished.
    a. Users may leave notes & contact info (cellphone#/e-mail) to inform the following user on what to do with their sample in the holder.
    b. If users are unable to locate an empty sample holder and did not receive any instructions from the previous user, they may relocate the samples into a centrifuge tube.
    c. We will discard any unattended samples following 48 hours of scanning.

## Common Q&A:

1. **Q**: My *ex vivo* scan is expected to end at 1:00pm. Can I come earlier and wait in the MicroCT room for the scan to be finished?
   **A**: No. This is a policy violation. If you arrive early for sample retrieval, please wait outside the McKay lab space.
2. **Q**: I want to show my labmate how to set up a scan. Can I bring my labmate to the MicroCT room?
   **A**: No. <u>Only 1 person per room is allowed at any given time.</u>
3. **Q:** The previous user left a note indicating "don't touch the sample(s) in the sample holder". But I am unable to find any empty sample holder to load my scan, and the previous user is not responding. What should I do?
   **A:** You may relocate the samples into a centrifuge tube. You have priority to use the sample holder at your reserved time slot. It is always the users' responsibility to retrieve samples after scans conclude.
4. **Q**: I already reserved 1:00pm to start a scan, but the last user's scan hasn't finished. What should I do?
   **A**: We only allow a 10 min grace period. If the scan is not finished by 1:10pm, please contact us and we will stop the scan. Specifically for this case, DO NOT press the Emergency Stop button, as it will take over 1 hour for the scanner to recover.
5. **Q**: I'm a non-Penn trained MicroCT user. Am I allowed access to conduct scans?
   **A**: No. According to the PSOM policy, Penn users have priority on equipment usage. However, if the scanner is available, we offer "full service" (subjected to additional charge rates) upon request. We do not accept time-sensitive samples. The expected turnaround time could be over 7~14 days, dependent on the availability of the scanner as well as our personnel.

## Calendar Reservation Policies:

1. All previous scanner calendars will be suspended during Phase II, except for remote analysis calendars: "MicroCT Analysis (I)" and "MicroCT Analysis (II)".
2. **MicroCT room calendars:** We will be using MicroCT room calendars to enforce only 1 person per room.
   - "335A: MicroCT & 3D Printer": In room 335A, 2 ex vivo scanners (MicroCT35 and MicroCT45) can operate in parallel as long as only 1 person is in this room at a time. Please indicate the scanner model (MicroCT35 or MicroCT45) in calendar events.
   - "368C: VivaCT40": VivaCT40 is located in room 368C.
   - "368B: VivaCT80": VivaCT80 is located in room 368B.
3. *Ex vivo* **scans**: NEVER make a reservation beyond 2 weeks in advance.
   Since MicroCT users are NOT allowed in the room while scans are in progress, we ask that you create **3 calendar events** on calendars.
   a. Calendar event #1: Setting up your scan. (Expected to be less than 1 hour.)
      PI initial: Room#: Scanner model: pennkey: Phone#
      Example → XSL:335A:MicroCT35:yiluz: 123-456-7890
   b. Calendar event #2: Indicate *ex vivo* scans are in progress.
      PI initial: Room#: Scanner model (Not in room): pennkey: Phone#
      Example → XSL:335A:MicroCT35 (**Not in room**):yiluz: 123-456-7890
   c. Calendar event #3 : Retrieving your sample from the scanner.
      PI initial: Room#: Scanner model: pennkey: Phone#
      Example → XSL:335A:MicroCT35:yiluz: 123-456-7890
      (For McKay users) This calendar event#3 can be waived, but you can ONLY
   retrieve your sample within the time slot on your designated lab bay calendar.
4. *In vivo* **scans**: *In vivo* scanning always has a higher priority and there are no reservation restrictions for using VivaCT40 and VivaCT80. Please be realistic with your calendar reservation.Users only need to make 1 calendar event on calendars.
      PI initial: Room#: Scanner model (*in vivo*): pennkey: Phone#
      Example → XSL:368B: VivaCT80 (*in vivo*):yiluz: 123-456-7890
5. (For McKay users) In addition to the MicroCT room calendar, please make an additional reservation on your designated lab bay calendar.
6. (For Non-McKay users) Before proceeding with any reservation requests, please confirm that your desired time slot is available on **BOTH** the MicroCT room calendar and Phase II Overflow calendar (*Note: Phase II Overflow calendar is required to maintain 50% occupancy in the McKay Lab*) to accommodate **BOTH** your scan setup and sample retrieval. To make or modify a reservation, please send an email including the following details: (scan date, time slot, and calendar events title) at least 1 day before your scan. Requests will be processed in the order they are received. **The cut-off processing time is 6pm EST on weekdays.**

**Common Q&A:**

1. **Q:** How do I estimate the scan time?
   **A:** Once you select the regions of interest, you will see the estimated time on scan software. Multiply that time by factor 1.2 is the actual scan time. For example, if it shows 20 min, it will actually take 24 min (on MicroCT35, VivaCT40, and VivaCT80).
   The multiplication factor is 1.4 on MicroCT45.
2. **Q**: If I plan to set up the *ex vivo* scan at 9:00am (setup may take up to 30min), and I plan to retrieve my sample at 12:30pm-1:00pm, how should I make reservations?
   **A**: Please make 3 reservations on the calendar as follows:
   a. Event #1: Reserve 9:00am-9:30am
      Title → XSL:335A:MicroCT35:yiluz: 123-456-7890
   b. Event #2: Reserve 9:30am-12:30pm
      Title → XSL:335A:MicroCT35 (**Not in room**):yiluz: 123-456-7890
   c. Event #3: Reserve 12:30pm-1:00pm
      Title → XSL:335A:MicroCT35:yiluz: 123-456-7890
      (Event#3 waived for McKay users)
   (For Non-McKay users) Please send the above detailed info to us (at least 1 day earlier).
3. (For McKay users) **Q**: I want to retrieve my sample after the scan, but the following user happens to be in the room, can I enter the room?
   **A**: No. Only 1 person per room at any given time. You can ask if the following user is willing to leave the room temporarily. If not, please wait in your own lab space until the room is vacant.
4. (For Non-McKay users) **Q**: Retrieving my sample takes only 1 minute, should I still make reservations on BOTH the MicroCT room calendar and Phase II Overflow calendar?
   **A**: Yes. No calendar reservation, no entry. You MUST make reservations on the Phase II Overflow calendar **ANY TIME** (scan setup, sample retrieval) before entering the McKay Lab.
5. (For Non-McKay users) **Q**: I can't see any calendar you mentioned.
   **A**: You should:
   a. Complete the "*Mandatory action items*", and confirm with us via Email;
   b. Have your own lab coat and safety glasses ready;
   c. Send us an email request (include your Gmail address). We will then share the "View Only" calendar access to you.
6. (For Non-McKay users) **Q**: If the MicroCT room calendar is available at a specific time slot, but Phase II Overflow calendar is full (reached 10 sign-ups), can I make a reservation on MicroCT?
   **A**: No. **Both** your scan setup and sample retrieval time slots are required on the Phase II Overflow calendar. If the Phase II Overflow calendar is not available, you may not reserve the MicroCT room calendar.
7. (For Non-McKay users) **Q**: I want to make/modify a scan reservation tomorrow morning, and send the request at 7pm. If my calendar reservation request was still not processed the next morning, can I just come to scan?
   **A**:  No. **The cut-off processing time is 6pm EST on weekdays.** Please send a request at least 1 day before your scan. If we didn't make/modify a reservation for you on the

MicroCT room calendar or Phase II Overflow calendar, you are NOT permitted access even if no one else is scheduled to use the scanner.

## <u>MicroCT35</u> and <u>VivaCT40</u> Detailed Reservation Policies:

1. **Working hours** on these scanners are defined as: Weekdays 9am - 9pm.
   Limit: 4 hours per lab per day during working hours: <u>9am-1pm</u>, <u>1-5pm</u>, <u>5-9pm</u>.
2. No restrictions for off-hours (<9am or >9pm), weekends, and holidays.
   **Examples of working hours reservation**:
   a. If your scan takes 4 hours, you may book either <u>9am-1pm</u>, or <u>1-5pm</u>, or <u>5-9pm</u>. You booking should NOT cross 2 time slots above, e.g.: 10am-2pm or 2-6pm.
   b. If your scan takes 6 hours, you may book either 7am-1pm or 5-11pm. You may NOT book 1-7pm or 9am-3pm.
3. (For McKay users): No restrictions on the scan day. You may extend your reservation as long as the scanner is available.
4. As most scans take less than 6 hours, please be realistic with your reservations as there might be midnight and early morning users.
5. On the <u>VivaCT40</u>: *In vivo* **scanning** has priority and no reservation restrictions. Please be realistic and considerate of other users when making reservations.

## <u>MicroCT45</u> Detailed Reservation Policies:

(This new scanner is equipped with a carousel system to support 20 sample holders.)

1. We have the following sample holders (diameter): 9mm, 14mm, 24mm, 34mm, 48mm. Calendar events should include the size and number of sample holders.
   Example → XSL:335A:MicroCT45 (2X 14mm + 2X 24 mm):yiluz: 123-456-7890
2. Limit: 12 hours continuous scan per lab on weekdays.
3. No restrictions on the scan day. You may extend your reservation as long as the scanner is available until 9am the following day.
4. Limit: 24 hours continuous scan during weekends and holidays.
5. For instant sample setup and removal:
   a. If you use the 24mm holder, please fix your sample in a 15 mL centrifuge tube before entering the MicroCT room.
   b. If you use either the 34mm or 48 mm holder, please fix your sample in 15 mL or 50 mL centrifuge tube before entering the MicroCT room.

## <u>VivaCT80</u> Detailed Reservation Policies:

*In vivo* **scan** has priority. Currently, no reservation restrictions. We will adjust the policy per scanner usage frequency.

Please don't hesitate to reach out if you have any questions or concerns! Thank you!

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