

# Acquiring images using PSP plates

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 [dpes.dentistry.utoronto.ca/dpes-old/node/671.html](https://dpes.dentistry.utoronto.ca/dpes-old/node/671.html)

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## Protocol for acquiring images outside of the Radiology Clinic, using PSP (photostimulable phosphor) plates, including infection control procedures

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### At Clinic Chair

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Enter “Image Request” in axiUm for prescribed radiographs. This step is only required if students are in 3<sup>rd</sup> year and have not completed their first patient session in Radiology, and therefore need a dental assistant to acquire the images. Clinical instructor will swipe their approval. Whether an Image Request is filled out or not, the procedure code for the planned images should be “Chart Added” in axiUm. This may be a code that triggers billing of the patient (i.e. 02111 Periapical 1 Film), or a code for an image that is part of treatment (i.e. 02111E). **If MiPacs is open, close it.**

### At Dispensary

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Exchange tag(s) for the necessary equipment; bagged and barrier-wrapped PSP plates in the required size(s), positioning devices, bitewing tabs.

### At Imaging Chair

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#### Steps for acquiring images (prior to gloving)

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- Prepare room with barriers according to clinic requirements.
- Seat the patient for radiographs.
- Place two clean white tray covers on the counter inside the operatory.
- Place a clean denture cup next to the Scan and Go.

- Spread two white clothes on the counter outside the operatory. One will receive the exposed dirty imaging plates, and the other is to be kept clean.
- Open the bag containing the barrier-wrapped PSP plates, and spill them onto one of the tray covers. (Do not touch any of the wrapped PSP plates with your ungloved hands).
- Open the bag containing the positioning devices and spill its contents onto the second white tray cover. (Do not touch any of the positioning devices with your ungloved hands).
- Turn on the X-ray machine, confirming that the kVp and mA are correct.
- Remove the patient's paper bib, if wearing and place the lead apron and thyroid collar on.
- Wash hands and put on gloves and mask.

### With gloves on:

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- Log into axiUm, select patient from the Rolodex.
- Select the MiPacs icon in the patient's electronic health record. **Double check at the top of the screen that the correct patient is selected.**
- Select a template to acquire the images into. This is done by clicking the arrow down on the right of the template description, and selecting the desired template. It is often easiest and clearer to select the FMS 20 template, even if many spaces will be left blank.
- Select the "Show template" icon, found to the left of the template description in the menu bar.
- Select the Stella AG Plug In, found to the right of the template description looking like a black square with a wire projecting from the bottom.
 

**It is extremely important that the plugin is only launched using the icon. If it is launched using the Tools pull down menu, the images will be black (undiagnostic). If the icon is missing from the tool bar contact IITS immediately.**
- Tap each plate on the Scan and Go and place into the denture cup.
- Once all plates have been tagged by Scan and Go, transfer the denture cup to the counter outside of the operatory, and spill the plates onto a cloth. Organize them into two piles, based on size.
- Assemble the positioning devices.
- Position the PSP plate into the appropriate device, with the dot in the slot. Ensure that the active side of the plate is facing towards the x-ray tube.
- Make sure that the correct image position in the template is highlighted red, indicating where the image will be inserted upon exposure. If it is not, reselect by clicking with the mouse.
- Position PSP plate/positioning device assembly into the patient's mouth.

- Exit the operatory, adjust exposure time appropriately according to mounted chart and press and hold the button to expose the image.
- Place the exposed PSP with the **active side down** onto the second white cloth **outside of the operatory** (to prevent excessive exposure to light).
- Complete all image exposures following the same procedures.

### **Dropped PSP plates:**

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If you drop an imaging sensor, pick it up with gloved hands, disinfect the barrier and erase it in the scanner, before returning it to the dispensary for replacement. Do not kick or walk on the sensor.

The erasing step is done to remove the tag, since the plates had already been tagged at the Scan and Go.

### **On the counter outside the operatory**

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#### **Disinfect barrier wrapped PSP plates**

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Wipe each barrier wrapped PSP plate with a cloth moistened with one part 5.25% sodium hypochlorite diluted with ten parts of water, and place onto the second clean cloth.

#### **Remove gloves**

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- Remove gloves and carefully transfer the air-dried plates into the denture cup. Cover with empty sterilization bag to prevent exposure to excessive ambient light.
- Remove lead apron/thyroid collar from patient.
- Carry the cleaned, barrier-wrapped PSP plates, in the denture cup, to the scanning station.

### **At scanning station**

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#### **Processing PSP plates**

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- Write your name on the envelope(s) provided.
- Open the barrier from one PSP plate, so that one end of the plate projects out. Make sure that during scanning, you only remove the barrier from one plate at a time, while processing, to prevent excessive exposure to light.
- Feed the opened plate into the scanner.
- Dispose of barrier.
- The PSP plate is scanned, erased and ejected into a dish.

- Carefully pick up the ejected PSP plates by the edge, and place into labeled envelope(s).

**PSP plates should be sorted by size into separate envelopes; Size #1 in one envelope, and Size #2 in another.**

### At imaging operatory

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- Return to imaging operatory to confirm capture of images. **Put on new gloves.**
- Images should appear within the Stella AG Plug In.
- Close plug-in. Images will be transferred to the MiPacs file.
- **Save images and close MiPacs:** You may click on “Save” icon, or simply close MiPacs by clicking the X and you will be prompted to save all images. Students cannot approve images. If a dialogue box opens requesting a user name and password for approving images, select “Cancel” or “Don’t approve”.
- Log out of axiUm.

### Clean the imaging operatory

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- Dispose of all film barriers, surface barriers and tray covers. Remove lead apron/thyroid collar. Wipe all surfaces to disinfect, as required by infection control protocol in the clinic.
- Direct the patient back to clinic chair. Carry the used instruments gathered within the tray cover back to your clinic chair, where they will remain, ready to carry back to the imaging chair, in the event that retakes or further imaging is required.
- Return envelope(s) containing erased PSP plates to the dispensary and obtain tag(s).

### At clinic chair:

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#### Steps to review and approve images

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- Ensure that axiUm is open with the correct patient selected. Open MiPacs. Select the new series to review from list on left of screen. This should be the series with a red triangle.
- Mount images from the overflow area into the template in the correct positions, making any necessary rotations to correct image orientation using “Rotate 90 degrees clockwise” icon, found on the left of the menu bar.
- If images are placed into the FMS 20 template, the anatomic information will automatically be labeled to the image, depending on where it is inserted into the template.

If images are placed in a generic template (i.e. PA1, PA3), you will need to label each image with the anatomic position. If you don’t complete this step an error message will pop-up, when you try to save and have the series approved.

## To label the anatomic information of each image in a generic template:

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- Highlight each image individually, and then select the appropriate teeth description from the drop down list, found in the Anatomic information list on the left of the screen. Continue until all images have been labeled.
- Self-evaluate the images and then review them with your clinical instructor.

**No changes should be made to the images (i.e. density or contrast) in the unapproved state. Any changes that are made should be undone using the “Undo All” icon, while all images are selected.**

## If retakes are required:

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- The retake-imaging request is completed and approved by instructor into axiUm. **MiPacs must be closed again with the series in an unapproved state.**
- Proceed to the dispensary and pick up a new package of the appropriate barrier wrapped PSP plates.
- Return with the patient to the imaging chair, and follow the steps as outlined above. Corrected images are added to the original series.

## Making adjustments to series mounting in MiPacs

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### **The series must be mounted correctly prior to approval.**

- Unapproved images can be dragged to different positions within the template.
- Rotations can be done as required to reflect the proper anatomic position, using “Rotate 90 degrees clockwise” icon.
- Any retaken images that are not diagnostically useful should be pulled out of the template, and dragged into the overflow area at the bottom.
- If you have taken more images than fits in the original template, or wish to include the original retake with the corrected view, remount the series. Accomplish this by selecting a new appropriate template and choosing “Remount current series”.

This will cause all images to drop into the overflow area. Remount the images into the new template into the appropriate positions and orientation.

- Once images are **confirmed to be adequate and mounted correctly**, select all images to ensure that no changes (ie. density or contrast) have been made purposely, or inadvertently, and click the “Undo All” icon. The clinical instructor can then approve the series.
- The planned procedure code is swiped as completed in axiUm.
- Before the end of the session, enter the radiographic interpretation of the images in the daily record of the electronic health chart as part of the treatment note for that visit.

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Article Reviewed By

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