



How to use Black Piranha with GE Templates on Senographe Pristina

This Quick Guide refers to use of the Black Piranha using GE Templates of version 1.1.0.0001 and higher on the GE Senographe Pristina.

Before starting

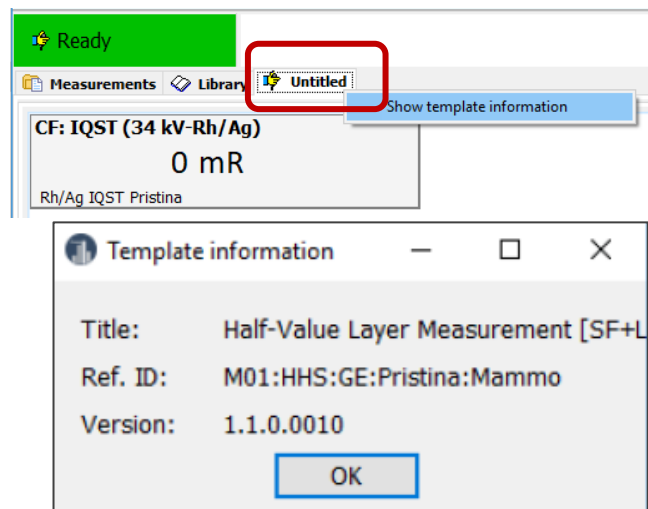
- The Black Piranha¹ must have a calibration for mammography performed at RTI² after May 1, 2016.
- The Ocean software version should be 2019.01.24.269 or higher.
- The GE Templates³ for Ocean, that comes with the installer "Ocean 2014 GE Templates v1.1F setup", must be installed.
- Make sure to have the Piranha Pristina holder, GE part # 5758284, available (image to right).



¹ Piranha ordered under GE Part # 5758293 is Black, and must have a calibration for mammography performed at RTI after May 1, 2016. Red Piranhas ordered under GE Part # 5401610, or 5458262 must have been upgraded to Black Piranha with calibration at RTI after May 1, 2016.

² Calibration must have been performed at RTI in NJ or Sweden. A third-party calibration laboratory has no capability to update the Piranha with the Pristina calibrations.

³ For Ocean version v2019.01.24.269 and later, the template version can be found by right-clicking on the template tab (Untitled) and select *Show template information* as shown in image (right). A Template information window will be showing that includes the Version (1.1.0.0010 in the example shown to the right).



Measure using GE Quick Check Templates

Setup

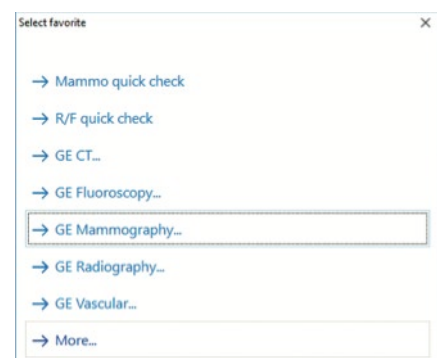
- Place the Black Piranha in the holder as shown in image (right). The Black Piranha will only fit in one way.
- Slide the holder into the GE dosimeter support.
- The Black Piranha can be left in this position for all measurements described below.
- Follow the job card instructions when it comes to image detector protection, IQST phantom set-up, compression paddle set-up, etc...



Measure

When starting Ocean the measure guide as shown in image (right) should appear. If not, the option "Auto-start Quick Check" is deactivated. This function can be activated under Options.

- Select GE Mammography...
- In next screen select GE Mammography[Senographe Pristina]...

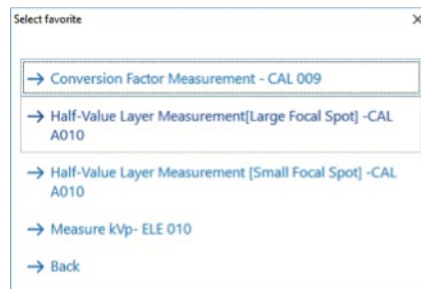




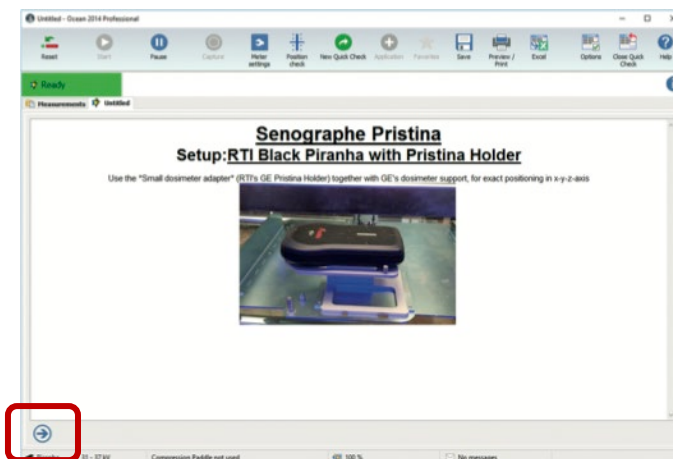
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- 7. In next screen (image to right) select the proper application: Conversion factor, HVL, or kVp.



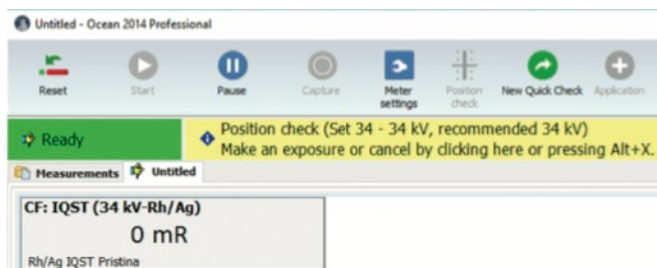
- 8. When starting one of the tests a set-up instruction (hint) will pop-up, see image.
- 9. Press the right arrow key to get to the measure screen.



Notice:

Depending on configuration of Ocean, a Position Check may be suggested (yellow bar besides the green "ready" box). If so, just **abort the Position Check by clicking anywhere in the yellow area**. This will be the case for every new target/filter selection.

With the good geometry of the Pristina unit, and use of the Piranha Pristina holder, GE part # 5758284, the Position check does not add confidence to the measurement.



Conversion Factor – CAL 009

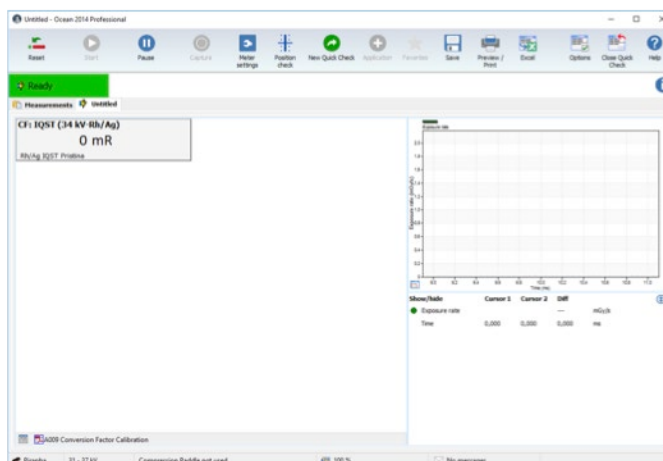
The image to the right shows the template for the conversion factor measurement. Follow the GE job card instructions for the measurement.

Template version shall be 1.1.0.0001 or higher.

Notice:

The template is built for mR units. If mGy units shall be used, just right click on the unit and select mGy.

When ready for next test, just press the *New Quick Check* button. You shall now be back to the selection screen as described under (5) above.





HVL – CAL A010

The template is built for the sequence to measure small and large focus in the same sequence, but can be used also for one at the time.

The template can be used for one shot HVL as well as for traditional measurements by adding layers of aluminum sheets.



The image to the right shows the template for the HVL measurement on Small Focus.

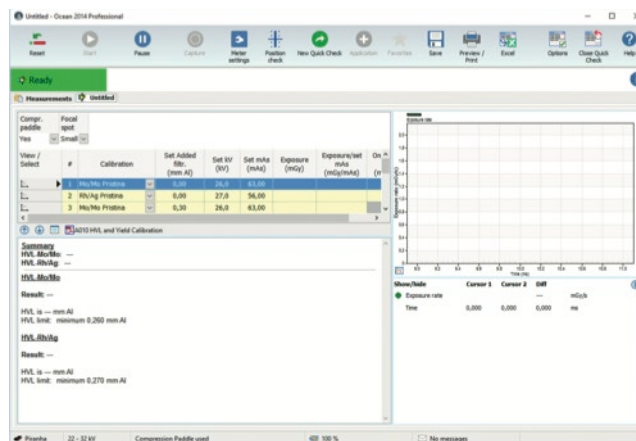
The template supports one shot HVL as well as traditional method by adding layers of Aluminum. Follow the job card instructions for the measurement. No settings in Ocean should have to be made.

Template version shall be 1.1.0.0010 or higher.

Notice:

The Position check may be suggested (yellow bar besides the green "ready" box). Is so, abort by clicking in the yellow field as described above.

When ready for next test, just press the *New Quick Check* button. You shall now be back to the selection screen as described under (5) above, or exit Ocean.



Tube Voltage – ELE 010

The template is built for measurement without compression paddle. The compression paddle may be used. Then you need to go *Meter Settings*, and change the setting to *Use* compression paddle.

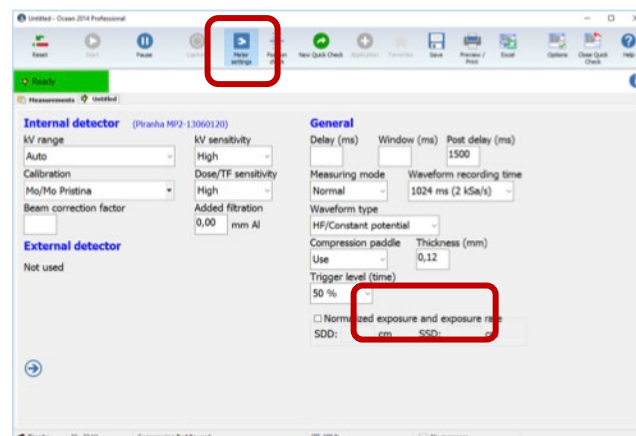
Follow the GE job card instructions for the measurement.

Template version shall be 1.1.0.0004 or higher.

Notice:

The Position check may be suggested. If so, abort by clicking in the anywhere in the yellow area as described above.

When ready for next test, just press the *New Quick Check* button. You shall now be back to the selection screen as described under (5) above, or exit Ocean.



Alternative Method #1 - Measure using GE Mammo Quick Check

Setup

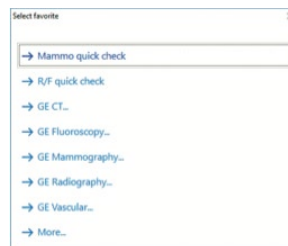
- Place the Black Piranha in the holder as shown in image (right) with the left pin inside the tripod mounting hole.
The Black Piranha will only fit in one way.
- Slide the holder into the GE dosimeter support.
- The Black Piranha can be left in this position for all measurements described below.
- Follow the job card instructions when it comes to image detector protection, IQST phantom set-up, compression paddle set-up, etc...



Measure

When starting Ocean the measure guide as shown in image (right) should appear. If not, the option "Auto-start Quick Check" is deactivated. This function can be activated under Options.

5. Select Mammo quick check.
6. A set-up instruction (hint) will pop-up.
7. Press the right arrow key in the lower left corner to get to the measure screen.
8. Select calibration, by clicking the model/beam quality. See image to the right. As default compression paddle is in use. If compression paddle is not in use, go to Meter settings and deselect.



Notice:

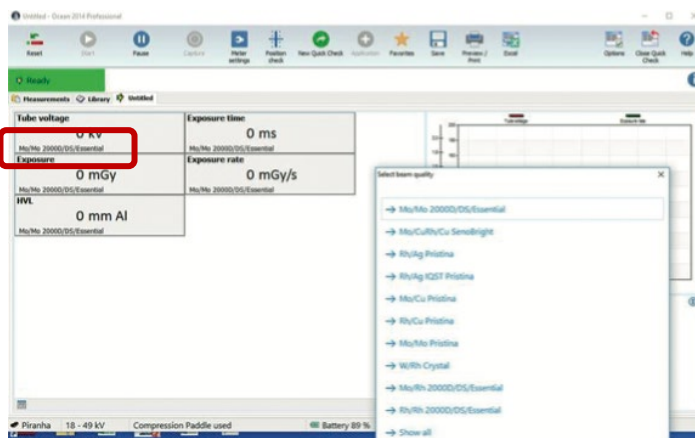
The Position check may be suggested (yellow bar besides the green "ready" box). If so, abort by clicking in anywhere in the yellow area as described above.

Notice:

If doing traditional HVL measurements by adding layers of Al sheets, the thickness of the filter must be entered in the field for Added filtration under Meter Settings.

Notice:

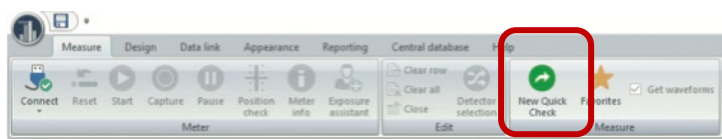
When measuring the CF factor using the IQST phantom the displayed kV may not be within 34 ± 1 kV. This does not affect the accuracy of the dose reading which is the primary target of this measurement.



Alternative Method #2 - Measure using standard Ocean configuration

In case the GE Quick Check Templates are not configured with the Ocean in use, the procedure is slightly different from what is describe under heading 3 above.

After entering *Quick Check* (see image below), the measure guide will look a little different.



Follow the guide sequence and select Mammography - GE Healthcare - Pristina - Rh/Ag IQST Pristina - Compression Paddle not used.

The image to the right shows the template for the conversion factor measurement.

Follow the GE job card instructions for the measurement.

Notice:

The Position check may be suggested (yellow bar besides the green "ready" box). If so, abort by clicking in anywhere in the yellow area as described above.

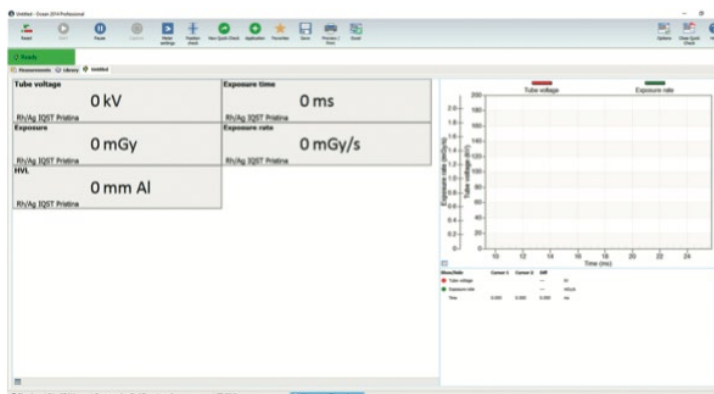
Notice:

Depending on Ocean configuration the unit will be mR or mGy. Unit can be changed - Just right click on the unit and select unit.

Notice:

When measuring the CF factor using the IQST phantom the displayed kV may not be within 34 ± 1 kV. This does not affect the accuracy of the dose reading which is the primary target of this measurement.

When ready for next test, just press the *New Quick Check* button. You shall now be back to the selection guide described above.



For deeper understanding and guidance, please see User's Manuals for Piranha and Ocean.

*** END ***