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Voids vs Non Voids pixel ratio

```
% This script will count the total number of pixels in the sample
% and the total number of pixels in the voids. To be able to compare
% the various samples together, the same volume will be used
 (rectangle
% column of width, height, nbr_slices
```

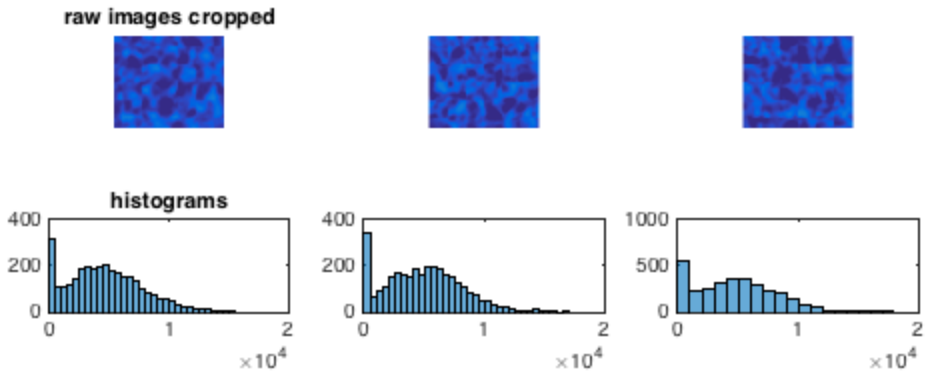
Select the mat file and load it

```
disp('loat mat file (created with roi_selection');
title = 'Select mat file ...';
[mat_file, ct_path] = get_mat_file(title, path);

% load mat file
load([ct_path, '/', mat_file]);

% cleanup workspace
clear ct_path mat_file title
```

```
loat mat file (created with roi_selection
```

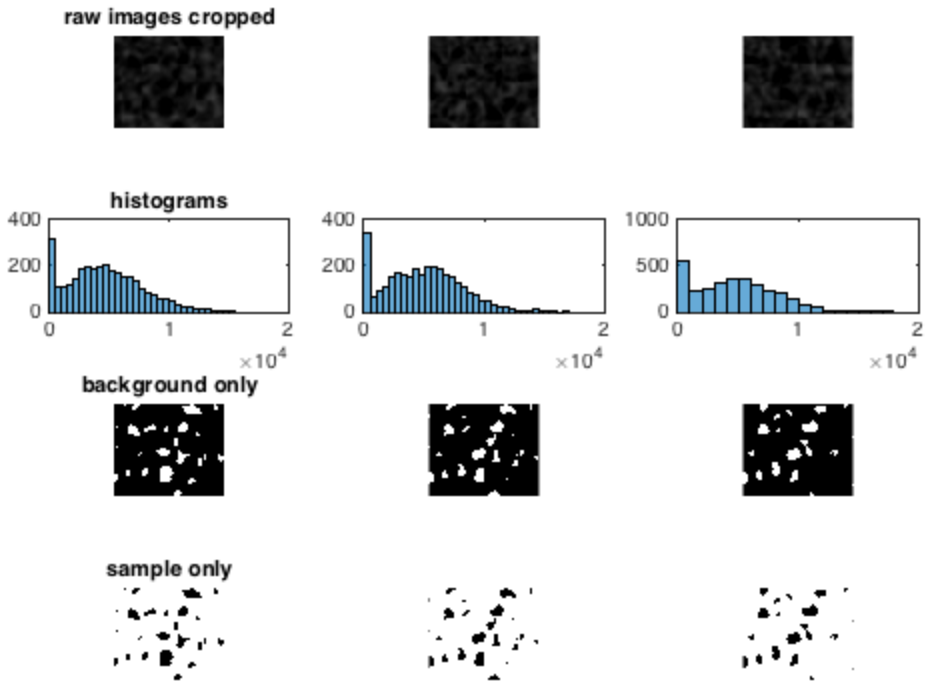
select segmentation value (based on histogram)

```
nbr_row = 4;
nbr_column = 3;
nbr_images = numel(ct_images_cropped);
images = {ct_images_cropped{1},
 ct_images_cropped{int32(nbr_images/2)}, ct_images_cropped{end}};
type = 'imshow';
preview_images_with_axis(nbr_row, nbr_column, 1, images, type, 'raw
 images cropped');
type = 'histogram';
preview_images_with_axis(nbr_row, nbr_column, 2, images,
 type, 'histograms');
```



define cut off (background from sample)

```
cut_off = 500; % using previous histogram, select an appropriate cut
 off value

background_only = segmentation_handler(ct_images_cropped,
 cut_off, 'keep_below');
sample_only = segmentation_handler(ct_images_cropped,
 cut_off, 'keep_above');
type = 'imshow';
preview_images_with_axis(nbr_row, nbr_column, 3, background_only,
 type, 'background only');
preview_images_with_axis(nbr_row, nbr_column, 4, sample_only,
 type, 'sample only');
```



calculate the total number of pixels in each region (background and sample) and ratio

```
[pixel_in_background, total_pixel] =
 get_nonzero_values(background_only);
[pixel_in_sample, total_pixel] = get_nonzero_values(sample_only);

% ratio of sample over background is
str = sprintf('Pixels sample / pixels background = %.2f',
 pixel_in_sample / pixel_in_background);
disp(str);
str = sprintf('%% of pixel in background: %.2f%%',
 (pixel_in_background / total_pixel)*100);
disp(str);
str = sprintf('%% of pixel in sample: %.2f%%', (pixel_in_sample /
 total_pixel)*100);
disp(str);
```

```
Pixels sample / pixels background = 6.04
% of pixel in background: 14.21%
% of pixel in sample: 85.79%
```

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