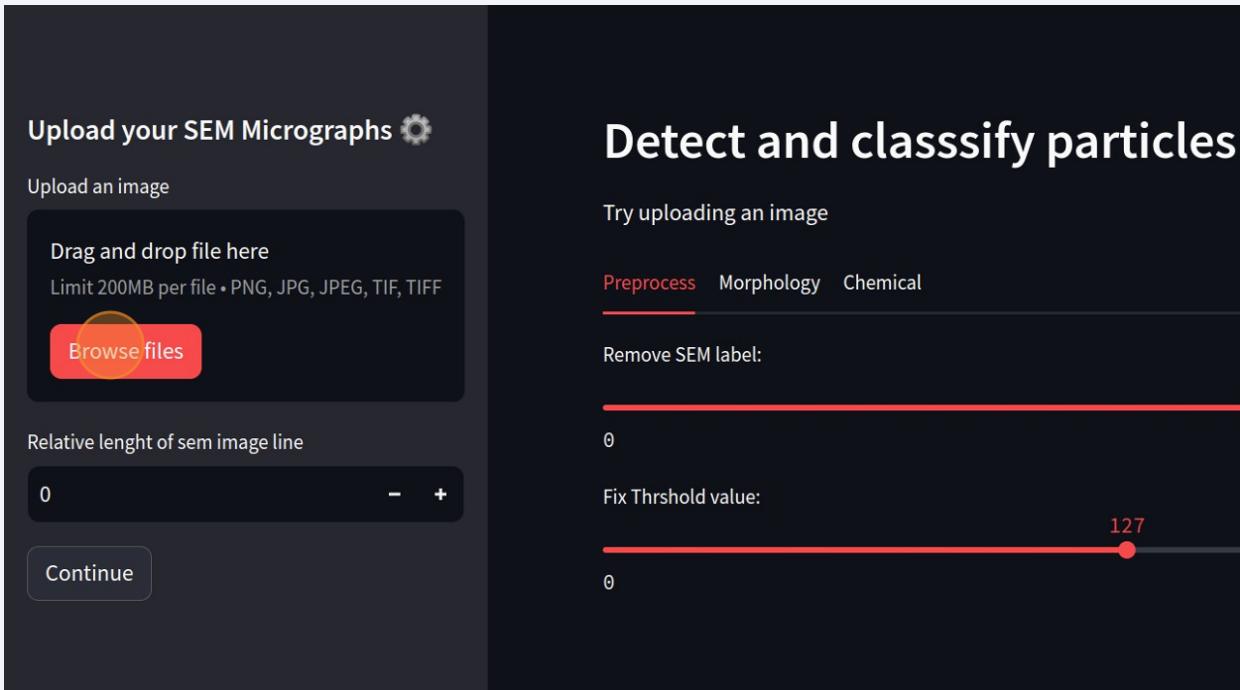


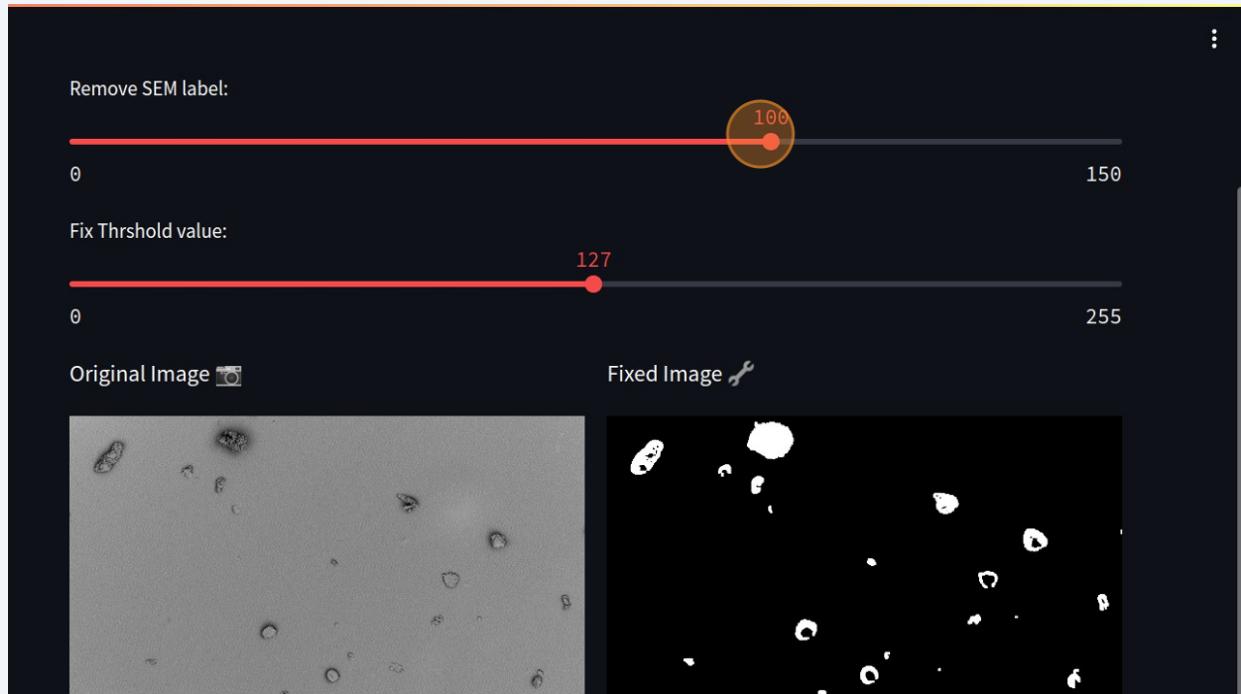
## SEM Particle Analyzer - User Guide.

1

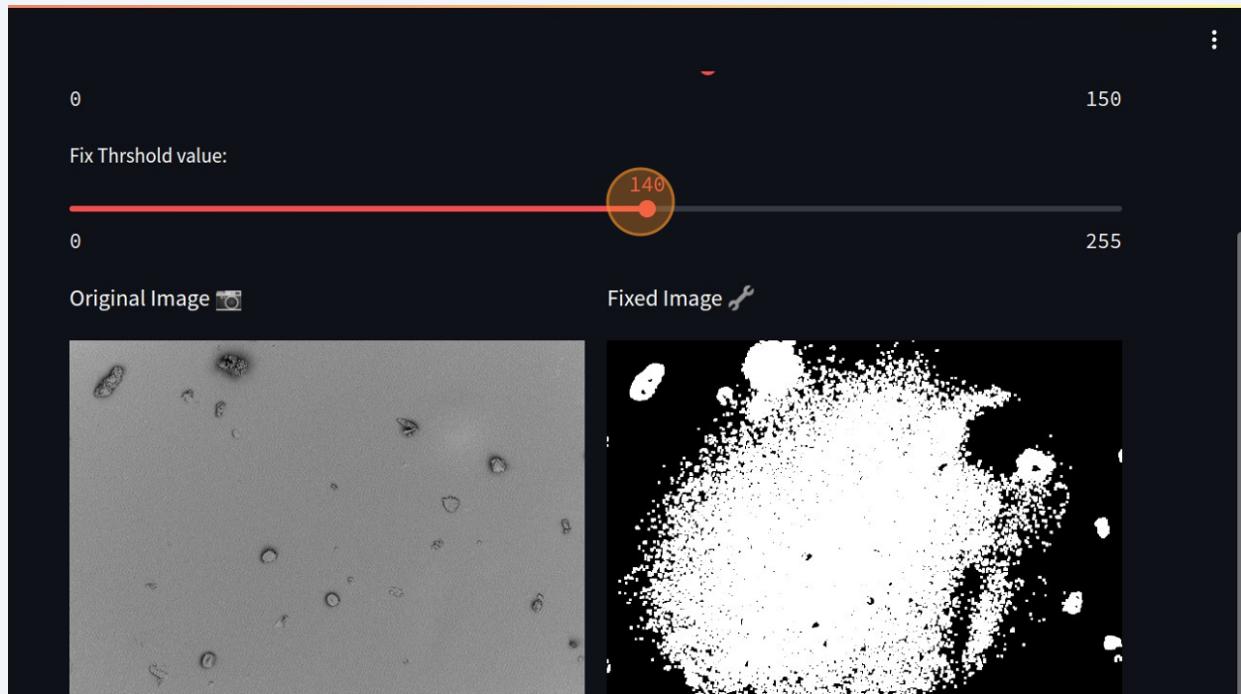
Browse for files or drag and drop your SEM micrographs.  
Multiple image formats are supported.

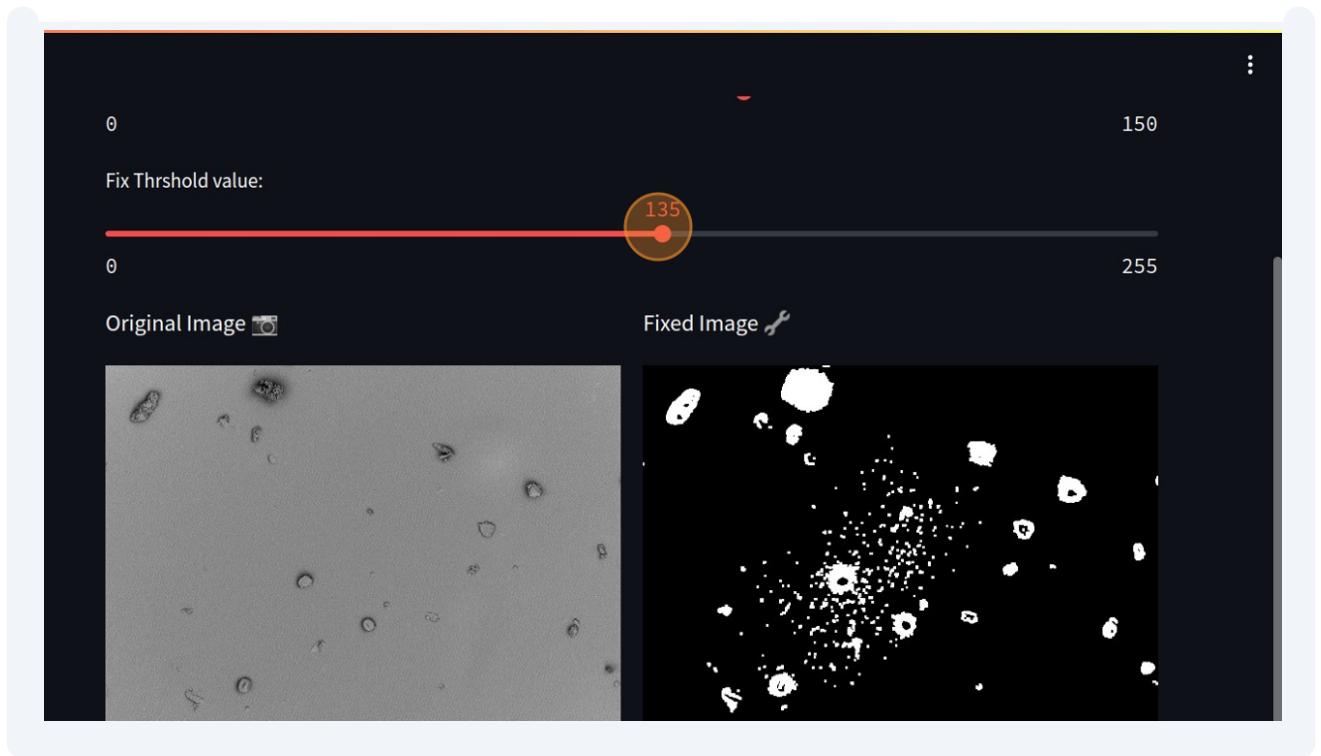


- 2 Use the remove SEM label slider to adjust the bottom crop portion to fit only the micrograph part in the segmentation mask.

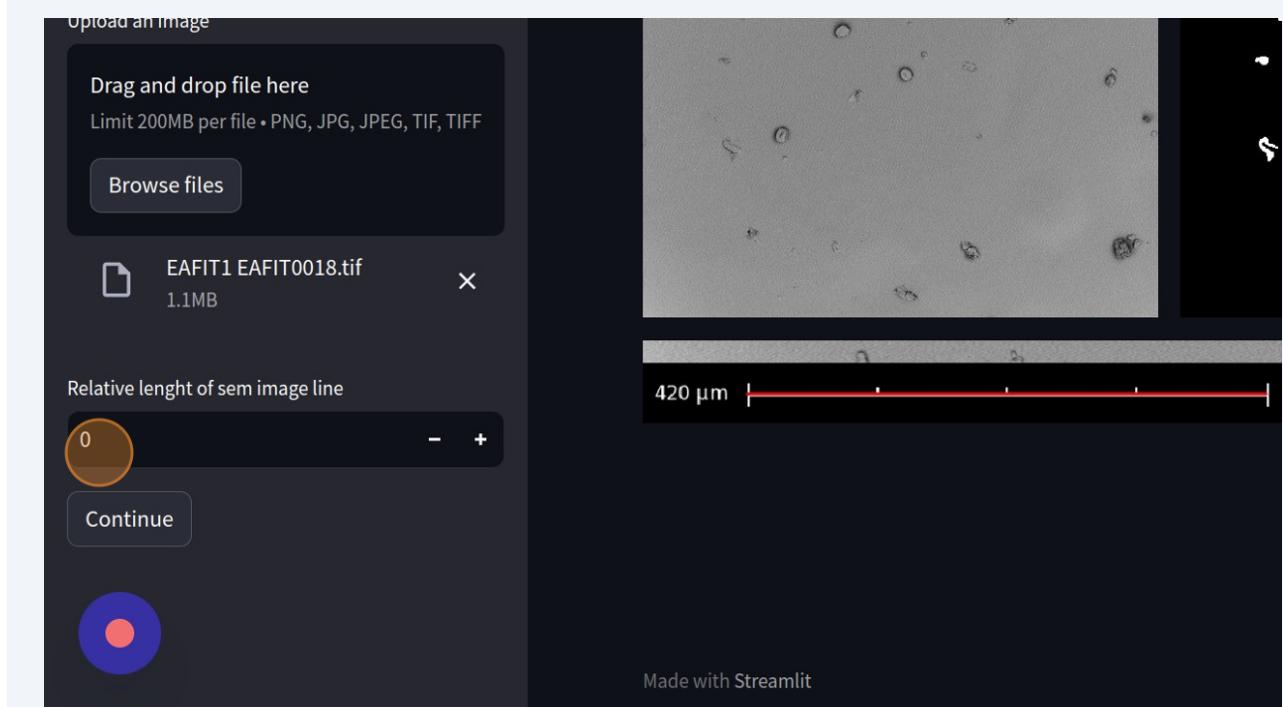


- 3 Adjust the fix threshold slider to segment the particles in the micrograph. Try different values to capture the most of all the particles.



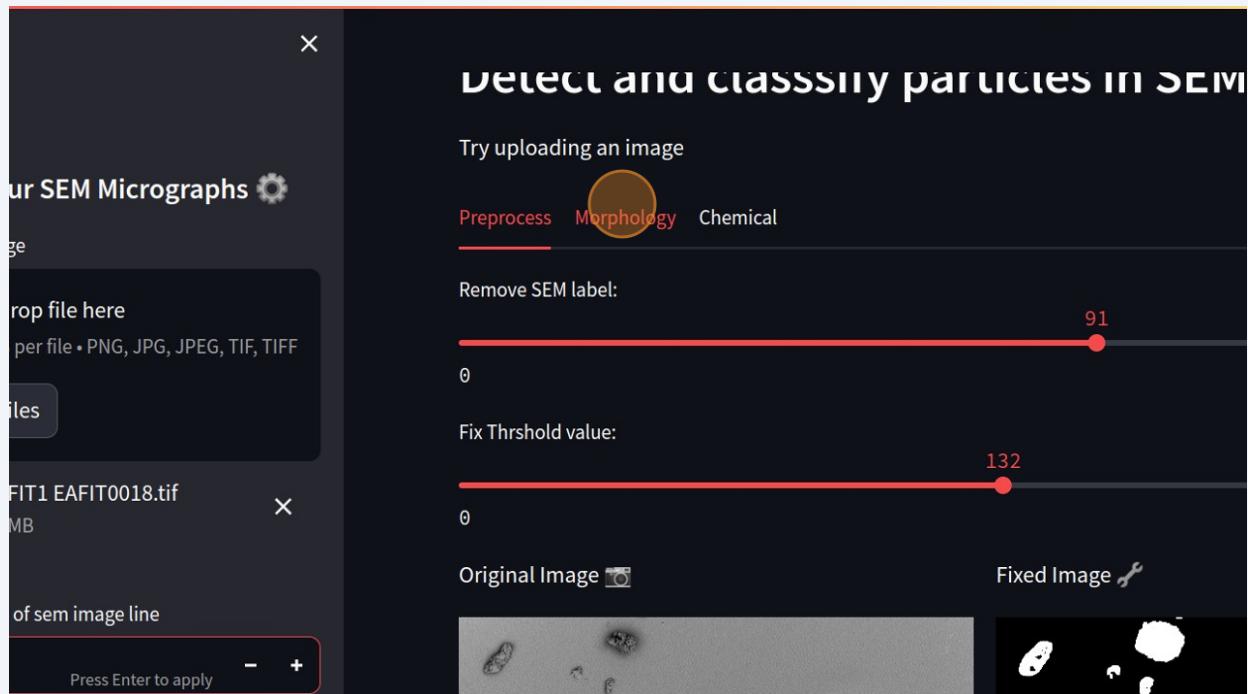


#### 4 Input the length of the measurement line in the SEM Image.



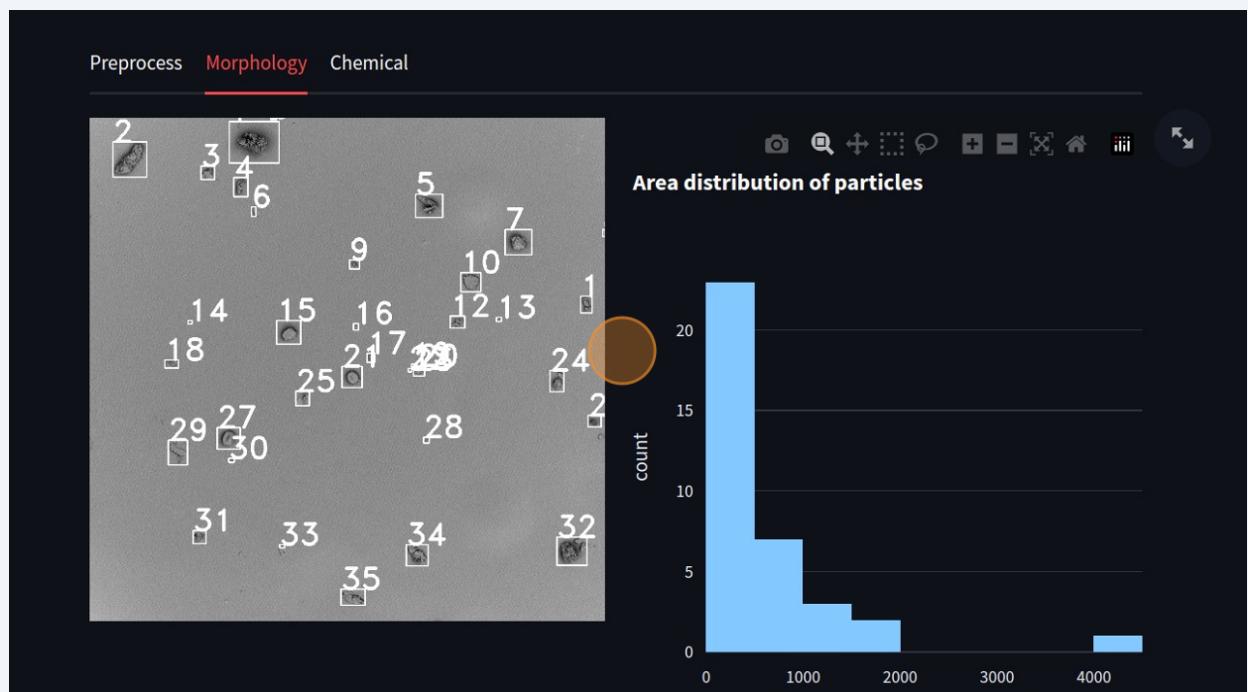
5

Morphology analysis is available after loading the image.  
Click the Morphology tab to see more information on detected particles.



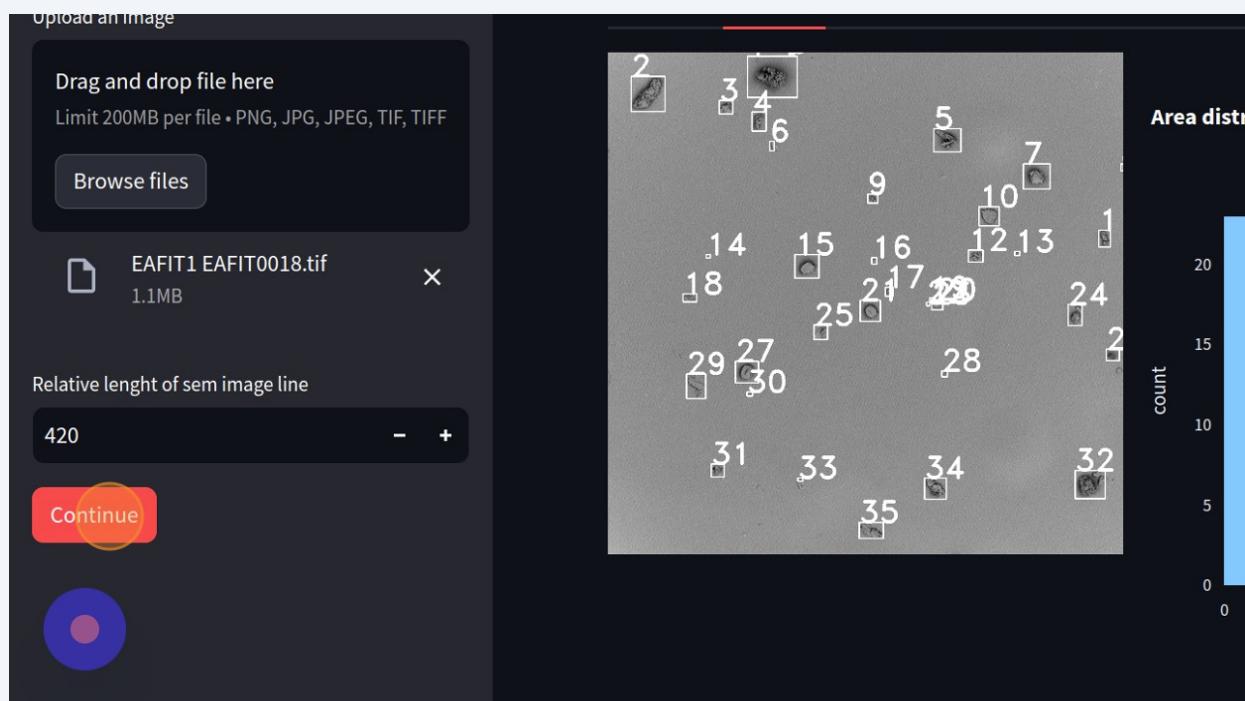
6

Morphology tab displays information of the detected particles.  
The graphic show the area distribution of particles in the sample area.  
More morphological features are displayed in the datafram at the bottom of the tab, calculated features includes feret\_diameter\_max, area, perimeter and more, all features are given in the same units at the inputted relative length of the SEM image line.



	intensity_mean	solidity	perimeter	feret_diameter_max	eccentricity	area	intensity_std	equiv_dia
2	103.7749	0.9095	279.4025	73.0083	0.8769	1,883.4906	27.675	
3	107.9933	0.7702	94.7629	25.3902	0.6717	310.5719	26.395	
4	109.8808	0.93	104.8613	33.6806	0.7769	551.2824	25.5345	
5	104.481	0.9356	156.2585	48.4451	0.5533	1,275.4891	31.3087	
6	115.2824	0.8851	41.0134	16.8403	0.9237	90.6123	20.3482	
7	109.5839	0.8588	206.5977	47.5225	0.4544	1,261.6551	24.1457	
8	121.5536	0.9333	26.3285	11.7618	0.9407	38.735	11.2216	
9	113.7579	0.9628	51.599	18.9653	0.6176	197.1336	22.7575	
10	114.8882	0.6751	182.7052	36.6318	0.448	569.2665	24.7891	
11	108.7764	0.913	98.0061	28.7262	0.7928	399.1091	27.3242	
12	115.931	0.9247	79.5320	26.1154	0.7274	329.6222	25.7014	

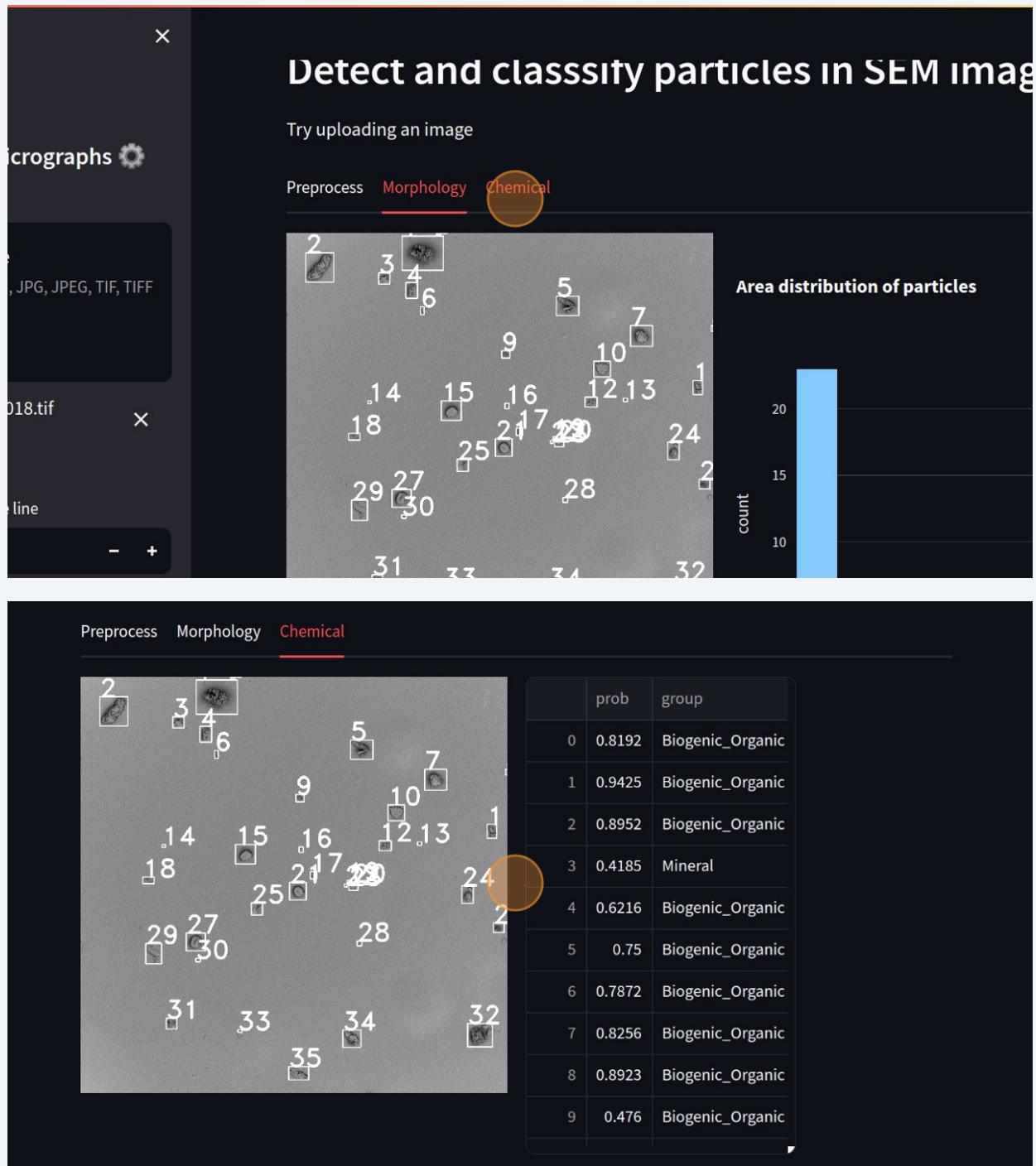
- 7 Click continue for performing chemical analysis over the detected particles.



8

Go to chemical tab to see more information over the detected groups in the sample particles.

The analyzer perform inference using a computer vision model that directly works over each individual particle. The model classify each particle in the groups Mineral, Organic, Metal, and Agglomerated.



9

After the analysis is completed, the result data can be downloaded as a Zip File from the download button.

The downloaded file contains the processed images with the numbered detected particles, segmentation mask for the original images and the csv file with the calculated features.

