

WimCAM

Analysis results in detail

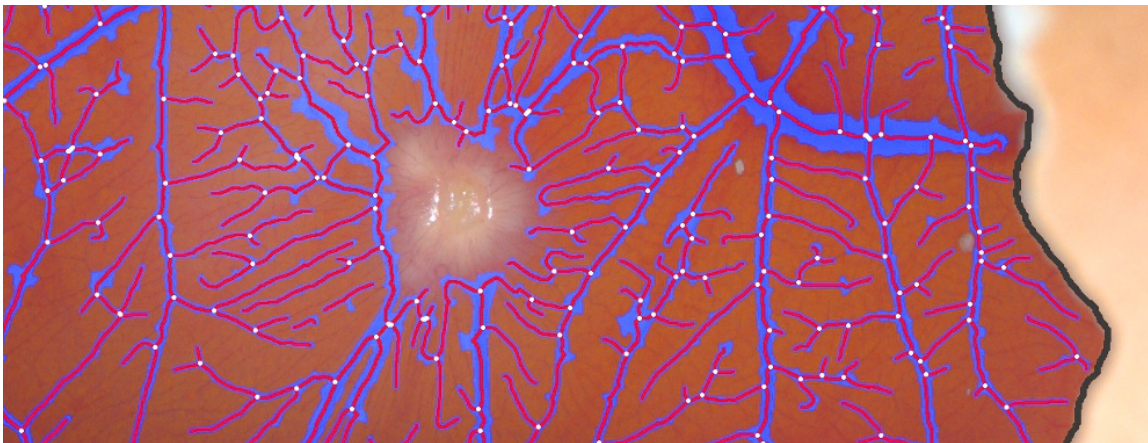
For every set of images that you upload to WimCAM, you will receive the following data files, bundled inside a zip file:

- A Results Control Image for each uploaded image, consisting of your original images with an overlay of the detected tubes in it.
- CSV format Results Data Sheet with the vessels-related measured data for each image.
- An extra CSV format Results Data Summary of the whole order.

Let's check them in detail.

1. Results Control Image

Every input image will produce a control image to assess the accuracy of the analysis output. It consists of the input image with the vascular structure and the other tube formation parameters outlined on it, as shown in the image below:



Sample result image where the vessels covered area (blue), vessels segments (red), branching points (white) and region of interest (black) are marked.

This image will have the name of your input image followed by “_Exp01” and will be saved in “jpg” format.

2. Results Data Sheet

Every input image will also generate an output CSV file (comma separated value format, similar to an Excel sheet) with the following measurements:

General Metrics:

- **Vessels Density [%]:** It is the percentage of covered area, that is, the percentage of vessels in the whole area of the image. It is calculated dividing the total number of pixels of the image by the pixels that belong to the vessels.
- **Total Vessels Network Length [px]:** The length in pixels of the vessels.
- **Total Branching Points:** The branching points are parts of the skeleton where three or more segments converge.
- **Total Nets:** A net is an isolated region of vessels that contains, at least, one branching point; so, isolated vessels are not considered as nets.
- **Total Segments:** It is the number of vessels segments on the image. A segment is considered as the part of the vessels between two branching points or a branching point and a loose end
- **Mean Segment Length [px]:** Arithmetic mean of the individual vessels lengths.
- **Standard Deviation Segment Length [px]:** It is the standard deviation of the vessels lengths.

3. Results Data Summary

Every uploaded order also produces a CSV file that summarizes the measurements contained in all the individual results data sheets of your order. This file will have the name of the order number followed by “_Summary”.

Would you like to get any other parameter?

This is our standard colour coding but it is not fixed. If you need a different colour combination or marking schematic for publishing your work, do not hesitate to ask us at:

hello@wimasis.com

We will be happy to customize it to make your work stand out.