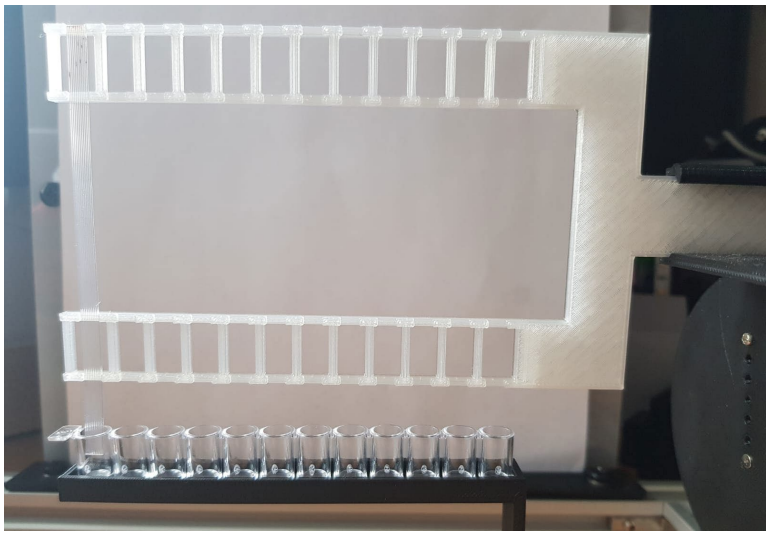
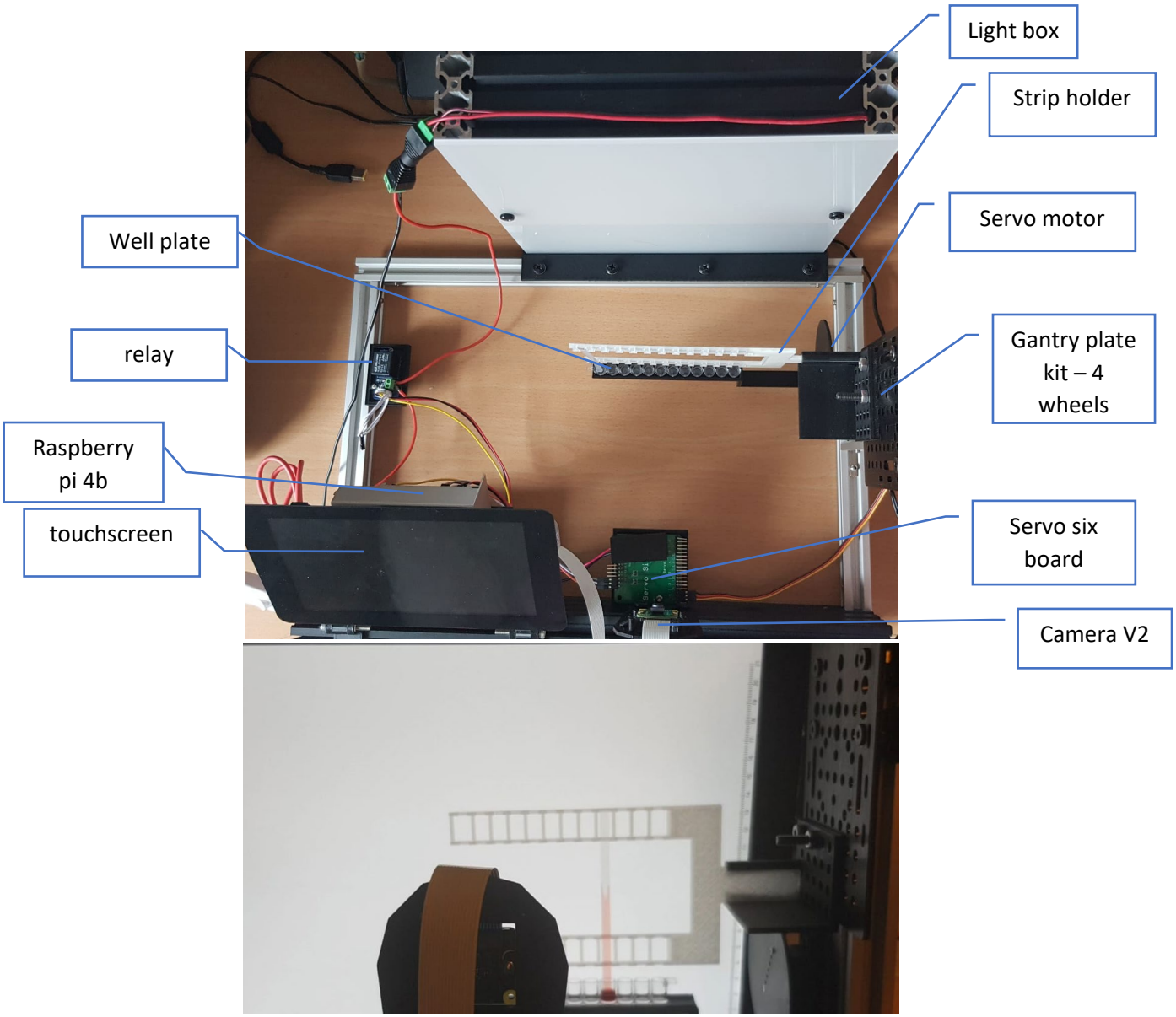
Technical Specifications:

This is a platelet function test device. It is contained melt-extruded fluoropolymer MCF containing 10 microcapillaries. Capillary film is shown below.

A white strip holder contains 12 strips of the microcapillary film. The strip holder is shown below.



Initially, a handmade LED turns on by controlling a relay, after that a servo motor via the gantry plate and wheels dips the strip holder into the blood sample which moves into the capillaries by capillary action and after the test completed the strip holder goes back and the LED turns off. The servo motor needs 4 batteries. In the meantime, a raspberry pi camera V2 takes images during the experiment. This camera can take between 6 and 8 images within 1 second. In order to be able to take 6 to 8 photographs in 1 second, the number of photographs to be taken during the test period is determined and the photographs are first recorded in the memory and after the test is completed, the photographs are saved as backup and the measurement is started. Its resolution is 3280x2464. Taking the images can be previewed on the touchscreen and the test can be started by clicking run on the script via touchscreen. There is only one script which can control the relay (LED), the servo motor and the camera. With the one-click, the test can be done. The python script has instructions about what the script do and how to change features such as camera resolution, fps, experiment time etc. The device is shown below.



After the images are taken, the calculation part begins. From the photos taken in first step, the rise of the blood sample and velocity are calculated, and the data are saved.

The rig gives images like the following: