

Testing ultrasound

TISDAG, 2018-07-10

Visit the Center for Experimental Biomedicine of Göteborg University to use their ultrasound machine.

https://www.gu.se/english/about_the_university/units/?languageId=100001&departmentId=035801 (https://www.gu.se/english/about_the_university/units/?languageId=100001&departmentId=035801)

Two plates were brought, one containing a regular strain of yeast (i.e not containing gas vesicles) and an empty plate. This was done in order to establish whether a discernable difference could be seen in an empty plate contra a plate with yeast colonies on it.

The plates were examined with two different ultrasound machines:

- portable machine : Acuson Cypress

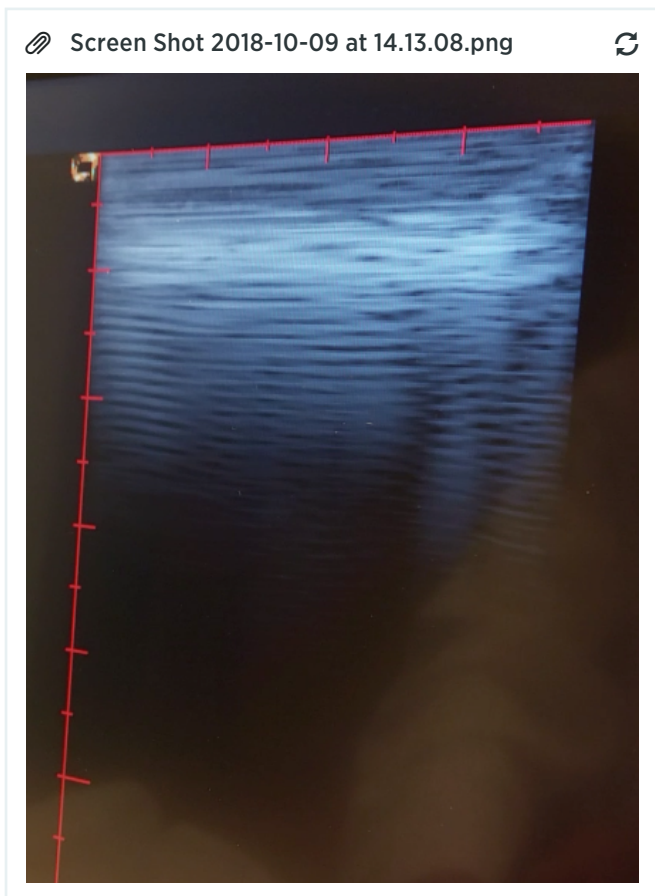


- bulky machine: ATL 5000

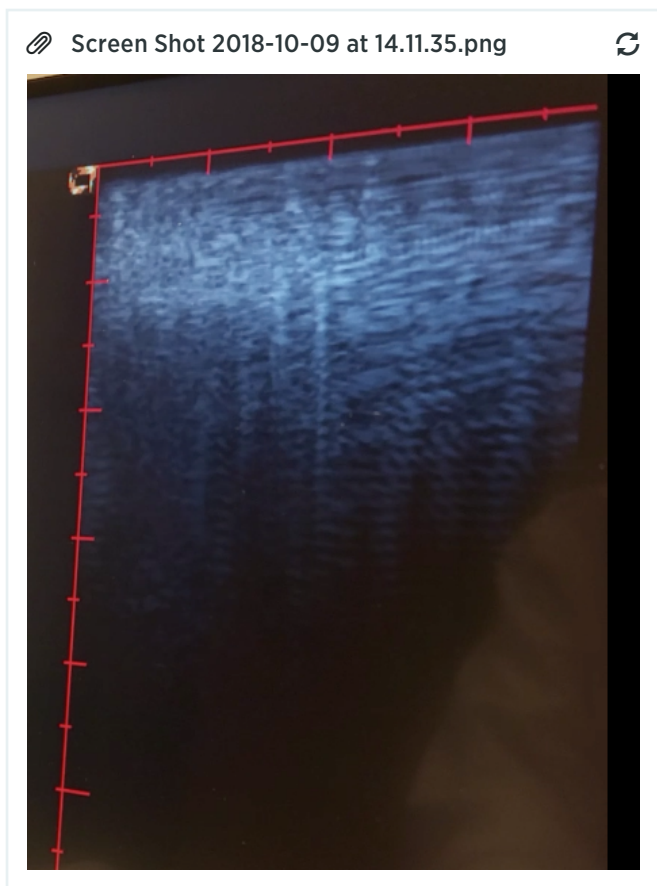
**Results:**

Because both machines were out of printing paper and quite old fashioned thus not having USB ports, the results are presented as pictures taken of the screens, which is not ideal.

When looking at an agar plate without growth, the ultrasound image is composed of regular horizontal stripes on the upper part of the image that become more and more faint the lower they are. See figure bellow.



When looking at an agar plate with *S. cerevisiae* growth on it, the horizontal stripes are still visible (to the right in figure below) in the parts with less growth and are interrupted by vertical disturbances, which are the colonies (to the left and in the middle in figure below).



The images were of much higher resolution when displayed on the ATL machine, so we recommend using this for further testing.