Culturing Euplotes crassus to high densities using E. coli as the only food source Version 9

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Abstract

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Protocol

Step 1.

Grow 1 L culture of E. coli in Luria broth to saturation overnight (usually we dilute previous bacterial culture 1:100).

NOTES
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We have been using strain HT115, but any strain of E. coli will likely do. Do not use antibiotics.

Step 2.

For 1 L Euplotes crassus culture, pellet E. coli from 200 ml of culture (4000 rpm for 10 minutes). The remaining bacteria can be stored in their 1 L flask at 4 ºC for at least a month and used to feed Euplotes crassus as necessary.

Step 3.

Wash the pellet once with ddH_2O and pellet it again at 4000 rpm for 10 minutes.

Step 4.

After discarding most of the excess water, resuspend the bacteria (e.g. with a micropipette using a 1 ml tip) before adding them to the Euplotes crassus culture.

Step 5.

Euplotes crassus cells typically consume all the bacteria after 2 or 3 days at 24 ºC with aeration system, reaching a density of 3000 cells/ml.