

Bauer Core Standard Protocol		
Title: Using the BioscreenC		
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1. Purpose

This protocol provides instructions for using the BioscreenC to generate growth curves from yeast or bacteria. The protocol is designed as a reference and is not a substitute for training. Users must complete a training session before using any of the Bauer Core's instrumentation.

2. Materials

- 2.1. 100 well "honeycomb" plate (Growth Curves USA, part # 9502550)
- 2.2. Yeast or bacterial cells (typical volume = 150ul/well, max volume = 400ul/well)
- 2.3. Heat transfer fluid (50% ethylene glycol in water) is provided by the Core.

3. Instrumentation

BioscreenC

4. Reagent preparation

none

5. Procedure

- 5.1. Load samples into the plates, filling the wells in order.
 - 5.1.1. Up to two plates may be run at a time, plate #1 is on the left and #2 is on the right.
- 5.2. Turn on the Bioscreen using the power switch on the right side, at the back.
- 5.3. Check the level of the heat transfer fluid.
 - 5.2.1. If needed, unscrew the thumb screw and add fluid using a 1ml pipette.
- 5.4. Load the plates
 - 5.4.1. Open the door to the incubator and remove the tray cover by pushing on the latch.
 - 5.4.2. Place the plates in the tray so that notch is at the front left.
 - 5.4.3. Carefully replace the incubator tray cover by first setting it on its rear hinges then pushing down on the front near the latch. Check that the cover is on straight, then close the door to the incubator.
- 5.5. Program the EZ Experiment Software.
 - 5.5.1. Open the EZ Experiment Software using the icon on the desktop.
 - 5.5.2. Enter the number of samples to run.
 - 5.5.3. Enter the filter to use (most common setting: 600 nm).
 - 5.5.4. Enter the desired incubation temperature.

- 5.5.5. Enter the experiment length.
 - 5.5.5.1. If starting from 1 cell per well, then choose up to 3 days.
 - 5.5.5.2. If starting from 10^4 cells per well, then 1 to 2 days is sufficient.
- 5.5.6. Enter measurement interval (most common setting: 15 minutes).
- 5.5.7. Click on “Settings” tab to set shaking parameters
 - 5.5.7.1. Most common setting: continuous shaking, amplitude = medium.
- 5.5.8. Click “Start” and set file name and location.
 - 5.5.8.1. File format is CSV (Excel compatible).
 - 5.5.8.2. Save to the local drive and transfer files off when the run is over.
 - 5.5.8.3. If you stop a run in progress, the data already collected will be saved.
- 5.6. Wait to ensure the run starts properly.
 - 5.6.1. The Bioscreen should complete a self test, perform the first read, and start shaking.
- 5.7. Clean up after the run.
 - 5.7.1. Dispose of your spent plate in a biohazard box.
 - 5.7.2. Transfer your data to your own storage space and delete from the hard drive.