

Spot Assay for Yeast

Zongtian Tong*

Department of Cell Biology, Center for Metabolism and Obesity Research, Johns Hopkins School of Medicine, Baltimore, USA

*For correspondence: tongzong@gmail.com

[Abstract] This protocol can be used to compare the cell growth rate of yeast under different growth conditions. It involves the serial dilution and spotting of yeast colonies.

Materials and Reagents

1. Yeast cells
2. YES medium

Equipment

1. Multichannel Pipetman (Eppendorf)
2. OmniTray (V&P Scientific)
3. Microfuge tube
4. Standard laboratory spectrophotometer

Procedure

1. Start cultures from a 2 day old plate. Use pipette tip to pick up strains and resuspend them in 1.5 ml YES medium or water.
2. Vortex and transfer 1 ml to another microfuge tube. Test OD₆₀₀ for an accurate reading, the OD should be between 0.1 and 0.5.
3. Dilute the rest of the suspension to 16 OD₆₀₀, around 1.6×10^6 cells per ml, 1,600 cells per μl . That is 4,800 or 5,000 cells per 3 μl . Spot 3 μl cells on each position.
4. If using OmniTray, start with the 1st column (8 wells in each column).
5. Do 5 fold serial dilution from the 1st to 5th column. Leave the 6th column empty. Transfer another 8 strains culture into the 7th column and do another 5 fold dilution.

A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12
E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12
F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12
G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12

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References

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