

# An Adapted Optical Density-Based Microplate Assay for Characterizing Actinobacteriophage Infection

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jove.com/video/65482

## Materials

Name	Company	Catalog Number	Comments
Agarose	Omni-Pur	2090	for filling border wells of microplate
Costar 96 Well Lid Low Evaporation Corner Notch	Corning	3931	replacement microplate lid
Isopropanol	Fisher Chemical	A461-4	for lid coating
Microplate reader	Tecan Spark 20M		
Microplate Shaker with 4-Place Platform	Thermo Fisher Scientific	88-861-023	to shake plates during incubation
Non-Tissue Culture-Treated Plate 96 well	Falcon (a Corning Brand)	351172	microplate for growth curve assay
Peptone yeast calcium (PYCa) agar	Homemade		1 g peptone 15 g yeast extract 15 g agar 990 mL dd H <sub>2</sub> O 4.5 mL 1 M CaCl <sub>2</sub> 2.5 mL 40% dextrose 1 mL 10 mg/mL cycloheximide
Peptone yeast calcium (PYCa) broth	Homemade, from Reference 16		1 g peptone 15 g yeast extract 990 mL dd H <sub>2</sub> O 4.5 mL 1 M CaCl <sub>2</sub> 2.5 mL 40% dextrose 1 mL 10 mg/mL cycloheximide
Peptone yeast calcium (PYCa) top agar	Homemade		1 g peptone 15 g yeast extract 4 g agar 990 mL dd H <sub>2</sub> O 4.5 mL 1M CaCl <sub>2</sub> 2.5 mL 40% dextrose
Petri plates	Thermo Fisher Scientific	FB0875713	for determination of bacterial concentration and phage titer assay
Phage Buffer	Homemade, from Reference 7		10 mL 1 M Tris, pH 7.5 10 mL 1 M MgSO <sub>4</sub> 4 g NaCl 980 mL dd H <sub>2</sub> O

R software	<a href="https://www.r-project.org/">https://www.r-project.org/</a>	version 4.3.0	
Sterile Disposable PETG Flask Baffled Bottom w/Vented Closure	Thermo Fisher Scientific	4116-1000	for bacterial culture
Triton X-100	Sigma Aldrich	9036-19-5	for lid coating