

Materials List for:

Antimicrobial Characterization of Advanced Materials for Bioengineering Applications

Miguel Martí^{*1}, Belén Frígols^{*1}, Angel Serrano-Aroca¹

¹Facultad de Veterinaria y Ciencias Experimentales, Universidad Católica de Valencia San Vicente Mártir

*These authors contributed equally

Correspondence to: Angel Serrano-Aroca at angel.serrano@ucv.es

URL: <https://www.jove.com/video/57710>

DOI: [doi:10.3791/57710](https://doi.org/10.3791/57710)

Materials

Name	Company	Catalog Number	Comments
Cylindrical punch			10 mm diameter
Petri dishes	soria genlab	P101	90 mm diameter, sterile
Tryptic soy agar (TSA)	Liofilchem	610052	Dehydrated medium 500 g (powder)
Tryptic soy broth (TSB)	Liofilchem	610053	Dehydrated medium 500 g (powder)
Sterile cotton swab	EUTOTUBO	300200	
Centrifuge tubes	VIDRA FOC, SA	429900	50 mL, sterile
Ethanol	VWR	83813360	Absolute ethanol
Sterile 48-wells plate	COSTAR	3548	Flat bottom with lid, tissue culture treated, non-pyrogenic, polystyrene
A pair of tweezers	BRAUN	24612036	Toothless
Sterile phosphate buffered saline (PBS).	VWR	E404-100TAPBS	
Vacuum oven with a connected vacuum pump	JP Selecta, SA	5900620	
Laminar flow hood	TELSTAR Technologies, SL	TELSTAR AH-100	12.0 W lamp of UV-C radiation
Class II Biological safety cabinet	LABOGENE	MARS 1200	
Incubator	ASTEC CO, LTD	SCA-165DR	
Vortex mixer	Biosan	V-1 Plus	
Spectrophotometer	Macherey-Nagel, Germany	Nanocolor UV/VIS II	
Bunsen burner	JP Selecta, SA	7001539	
Alcohol burner	VIDRA FOC, SA	1658/20	In case sterilisation is necessary to be performed inside class II biological safety cabinet
Orbital shaker	sartorius stedim	8864845	
Sonicator	SELECTA	3000617	50/60 Hz
Digital calliper	ACHA	17-260	0-150 mm
Serological pipette	Fisherbrand	13-678-11	25 mL, sterile
Serological pipette	VWR	612-4950	5 mL, sterile
Serological pipette	VWR	612-5541	10 mL, sterile
Micropipette	GILSON	FA10005P	Pipetman L P200L, plastic 20-200 µL
Micropipette	GILSON	F123602	Pipetman P1000, 200-1000 µL
Micropipette	GILSON	FA10016	Pipetman L P12X300L, 20-300 µL
Micropipette tips	LABBOX	TIBP-200-960	2-200 µL

Micropipette tips	LABBOX	TIBP-1K0-480	100-1000 µL
Pre-sterilized tube	INSULAB	301402	10 mL
Photo camera	Canon EOS 5D		Any camera with high resolution can also be utilized
<i>Gram-positive bacteria</i> <i>Staphylococcus aureus</i>		strain V329	Cucarella et al. <i>J Bacteriol</i> 183 (9), 2888–2896 (2001)
<i>Gram-negative bacteria</i> <i>Escherichia coli</i>	Colección Española de Cultivos Tipo CECT	CECT 101	
Yeast <i>Candida albicans</i>	Colección Española de Cultivos Tipo CECT	CECT 1394	
Microcentrifuge tubes	DASLAB	175508	1,5 mL
Autoclave	JP Selecta, SA	4002136	
Spectrophotometer-cuvettes	UVAT Bio CB	F-0902-02	4,5 mL
Drigalski spatula	LABBOX	SPRP-L05-1K0	Sterile, disposable
glass balls (2 mm diameter)	Hecht Karl	1401/2	Autoclavable, alternative device to the Drigalski spatula
Autoclave bags	DELTALAB	200318	To sterilize microbiological residues or contaminated material
Electronic pipette filling device	JetPip	JET BIOFIL	
Laboratory bottle with ISO thread, graduated, borosilicate 3.3	LABBOX	SBG3-100-010	100 mL, for autoclaving culture media
Laboratory bottle with ISO thread, graduated, borosilicate 3.3	LABBOX	SBG3-250-010	250 mL, for autoclaving culture media
Laboratory bottle with ISO thread, graduated, borosilicate 3.3	LABBOX	SBG3-500-010	500 mL, for autoclaving culture media
Laboratory bottle with ISO thread, graduated, borosilicate 3.3	LABBOX	SBG3-1K0-010	1000 mL, for autoclaving culture media
Latex gloves	DENIA	2278000000	
Indicator tape for sterilization	LABBOX	STAP-A55-001	Self-adhesive tape with impregnated paper turning to colour when exposed to sterilization process.
Universal test tube rack	LABBOX	MTSP-001-001	To hold centrifuge tubes
Microcentrifuge tube rack	VWR	211-0210	To hold microcentrifuge tubes
Sterile loop	ACEFE S.A.	100140055	10 µL of capacity for microbial culture
Material M1	Universidad Católica de Valencia San Vicente Mártir (UCV)		Material type 1
Material M2	Universidad Católica de Valencia San Vicente Mártir (UCV)		Material type 2
Material M3	Universidad Católica de Valencia San Vicente Mártir (UCV)		Material type3
Material M4	Universidad Católica de Valencia San Vicente Mártir (UCV)		Material type 4
Material C	Universidad Católica de Valencia San Vicente Mártir (UCV)		Control material