

Materials List for:

# Digital PCR-based Competitive Index for High-throughput Analysis of Fitness in *Salmonella*

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URL: <https://www.jove.com/video/59630>

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## Materials

Name	Company	Catalog Number	Comments
1.5 mL microcentrifuge tubes	Eppendorf	22600028	Procure from any manufacturer
16 mL culture tubes	MidSci	8599	Procure from any manufacturer
5-200 µL pipette tips	RAININ	30389241	Procure alternative tip brands with caution based on manufacturing quality
5-50 µL multichannel pipette	RAININ	17013804	Use alternative multichannel pipettes with caution
Agarose	ThermoFisher Scientific	BP160-500	Procure from any manufacturer
BLAST Analysis	NCBI	N/A	<a href="https://blast.ncbi.nlm.nih.gov/Blast.cgi">https://blast.ncbi.nlm.nih.gov/Blast.cgi</a>
C1000 Touch Thermocycler with 96-Deep Well Reaction Module	Bio Rad	1851197	Must procure ddPCR supplies from Bio Rad. Alternatives are not yet available.
Chemically competent DH5α	Invitrogen	18258012	Procure from any manufacturer or prepare yourself
Chloramphenicol	ThermoFisher Scientific	BP904-100	Procure from any manufacturer
Cytation5 Microplate reader	BioTek	CYT5MF	Procure from any manufacturer, use any system capable of accurately quantifying DNA
Data Analysis Software (QuantaSoft and QuantaSoft Data Analysis Pro)	Bio Rad	N/A	Must procure ddPCR supplies from Bio Rad. Alternatives are not yet available.
ddPCR 96-Well Plates	Bio Rad	12001925	Must procure ddPCR supplies from Bio Rad. Alternatives are not yet available.
ddPCR Droplet Reader Oil	Bio Rad	1863004	Must procure ddPCR supplies from Bio Rad. Alternatives are not yet available.
ddPCR Supermix for Probes (No dUTP)	Bio Rad	1863024	Must procure ddPCR supplies from Bio Rad. Alternatives are not yet available.
DG8 Cartridges for QX200/QX100 Droplet Generator	Bio Rad	1864008	Must procure ddPCR supplies from Bio Rad. Alternatives are not yet available.
DG8 Gaskets for QX200/QX100 Droplet Generator	Bio Rad	1863009	Must procure ddPCR supplies from Bio Rad. Alternatives are not yet available.
Droplet Generation Oil for Probes	Bio Rad	1863005	Must procure ddPCR supplies from Bio Rad. Alternatives are not yet available.
Kanamycin	ThermoFisher Scientific	BP906-5	Procure from any manufacturer

Luria-Bertani agar	ThermoFisher Scientific	BP1425-2	Procure from any manufacturer or make it yourself from agar, tryptone, yeast digest, and NaCl
Luria-Bertani broth	ThermoFisher Scientific	BP1426-2	Procure from any manufacturer or make it yourself from tryptone, yeast digest, and NaCl
PCR Plate Heat Seal, foil, pierceable	Bio Rad	1814040	Must procure ddPCR supplies from Bio Rad. Alternatives are not yet available.
PCR Tubes	Eppendorf	951010022	Procure from any manufacturer
Petri dishes	ThermoFisher Scientific	FB0875712	Procure from any manufacturer
pPCR Script Cam SK <sup>+</sup>	Stratagene/Agilent	211192	No longer available commercially
Primer/Probe Design	IDT	N/A	<a href="https://www.idtdna.com/Primerquest/Home/Index">https://www.idtdna.com/Primerquest/Home/Index</a>
pSKAP and pSKAP_Barcodes	Addgene	Plasmid numbers 122702-122726	<a href="http://www.addgene.org">www.addgene.org</a>
PX1 PCR Plate Sealer	Bio Rad	1814000	Must procure ddPCR supplies from Bio Rad. Alternatives are not yet available.
QX200 Droplet Generator	Bio Rad	1864002	Must procure ddPCR supplies from Bio Rad. Alternatives are not yet available.
QX200 Droplet Reader	Bio Rad	1864003	Must procure ddPCR supplies from Bio Rad. Alternatives are not yet available.
<i>Salmonella typhimurium</i> strain ATCC 14028s	ATCC	ATCC 14028s	<a href="http://www.atcc.org">www.atcc.org</a>
Take3 Micro-Volume Plate	BioTek	TAKE3	Procure from any manufacturer, use any system capable of accurately quantifying DNA
Thermo Scientific FastDigest BamHI	ThermoFisher Scientific	FERFD0054	Procure from any manufacturer
Thermo Scientific FastDigest DpnI	ThermoFisher Scientific	FERFD1704	Procure from any manufacturer
Thermo Scientific FastDigest HindIII	ThermoFisher Scientific	FERFD0504	Procure from any manufacturer
Thermo Scientific GeneJet Gel Extraction and DNA Cleanup Micro Kit	ThermoFisher Scientific	FERK0832	Procure from any manufacturer
Thermo Scientific GeneJet Miniprep Kit	ThermoFisher Scientific	FERK0503	Procure from any manufacturer
Thermo Scientific Phusion High-Fidelity DNA Polymerase	ThermoFisher Scientific	F534L	Procure from any manufacturer
Thermo Scientific T4 DNA Ligase	ThermoFisher Scientific	FEREL0011	Procure from any manufacturer
Thermocycler	Bio Rad	1861096	Procure from any manufacturer
UVP Visi-Blue Transilluminator	ThermoFisher Scientific	UV95043301	Or other transilluminator that allows visualization of DNA
Water, Molecular Biology Grade	ThermoFisher Scientific	BP28191	Procure from any manufacturer