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Quality Control for Antimicrobial Susceptibility Testing

ThermoFisher SCIENTIFIC

Trust in your results

To ensure your laboratory antimicrobial susceptibility testing solutions are providing accurate and reliable results the need for comprehensive Quality Control (QC) testing is paramount. **Thermo Scientific™ Culti-Loops™ Quality Control Organisms** enable quick and safe preparation of cultures for QC testing. They are ready-to-use bacteriological loops containing gel-stabilised micro-organisms. Each loop is individually packaged in a foil pouch and each pack contains five loops.

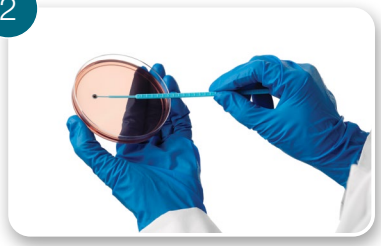
Culti-Loops offer a full portfolio of QC strains according to recommendations by CLSI and EUCAST; the strains are fully characterised harbouring a variety of antimicrobial resistance patterns.

To recover the organism, follow the three simple set up steps:

1

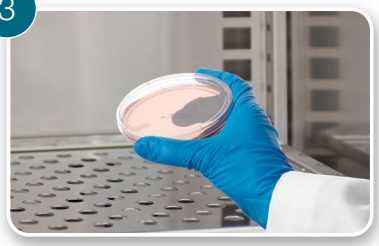
Open package

2



Apply to warm agar

3



Incubate

Both CLSI and EUCAST recommend routine & extended QC testing to monitor test performance.
The frequency of QC testing recommendations:

	CLSI	EUCAST
Routine	Daily or can be reduced to weekly following testing plans: • 15-replicate (3 x 5-day) plan • 20 or 30 consecutive test day plan	Daily or at least 4 x per week.
Extended	• New Lot / shipment • Training • Competence assessment • Test evaluation	• Any change in the testing system • New Lot • Monthly

Find your Culti-Loops Quality Control Organism containing the recommended ATCC® and NCTC strains for CLSI and EUCAST test methods.

Part Number	Description	Strain Designation	Characteristics	EUCAST		CLSI	
				Routine Testing	Extended Testing	Routine Testing	Extended Testing
R4601312	*Aspergillus flavus*	ATCC® 204304™		✓		✓	
R4601311	*Aspergillus fumigatus*	ATCC® 204305™		✓			
R4601250	*Bacteroides fragilis*	ATCC® 25285™	β-lactamase positive.			✓	
R4601260	*Bacteroides thetaiotaomicron*	ATCC® 29741™	β-lactamase positive.			✓	
R4609498	*Campylobacter jejuni*	ATCC® 33560™		✓		✓	
R4601496	*Candida albicans*	ATCC® 90028™				✓	
R4601518	*Candida parapsilosis*	ATCC® 22019™		✓		✓	
R4609452	*Clostridium difficile*	ATCC® 700057™	β-lactamase negative.			✓	
R4601951	*Eggerthella lenta*	ATCC® 43055™				✓	
R4607030	*Enterococcus faecalis*	ATCC® 29212™		✓		✓	✓
R4601996	*Enterococcus faecalis*	ATCC® 51299™	Glycopeptide / low-level vancomycin resistance; *vanB* positive. High-level aminoglycoside resistance; gentamicin and streptomycin resistant.		✓		✓
R4601301	*Enterococcus faecalis*	ATCC®33186™	Suitability of Mueller-Hinton media testing.				✓
R4601307	*Escherichia coli*	NCTC 13353	ESBL producer; CTX-M-15, Cephalosporin resistant.			✓	
R4601314	*Escherichia coli*	NCTC 13846	Colistin resistant; *mcr-1* positive.	✓			
R4607050	*Escherichia coli*	ATCC® 25922™	β-lactamase negative.	✓		✓	
R4601971	*Escherichia coli*	ATCC® 35218™	β-lactamase producing strain; TEM-1. Non-ESBL.	✓		✓	
R4603810	*Haemophilus influenzae*	ATCC® 10211™					✓
R4603830	*Haemophilus influenzae*	ATCC® 49247™	BLNAR (β-lactamase negative, ampicillin resistant); Reduced susceptibility to β-lactam agents due to PBP mutations.		✓	✓	
R4603806	*Haemophilus influenzae*	ATCC® 49766™	Ampicillin susceptible.	✓		✓	
R4601520	*Issatchenkia orientalis*	ATCC® 6258™		✓		✓	
R4603074	*Klebsiella pneumoniae*	ATCC® 700603™	ESBL producer; SHV-18. Carbapenemase producer; OXA-2. Mutations in OmpK35 and OmpK37 outer membrane porins.	✓	✓	✓	
R4609384	*Klebsiella pneumoniae*	ATCC® BAA-1705™	Carbapenemase producer; KPC-2. β-lactamase producer; SHV, TEM.			✓	
R4609385	*Klebsiella pneumoniae*	ATCC® BAA-1706™	Carbapenemase negative.				✓

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Part Number	Description	Strain Designation	Characteristics	EUCAST		CLSI	
				Routine Testing	Extended Testing	Routine Testing	Extended Testing
R4601316	*Klebsiella pneumoniae*	ATCC® BAA-2814™	Carbapenemase producer; KPC-3. β-lactamase producer; SHV-11, TEM-1.	✓		✓	
R4609006	*Neisseria gonorrhoeae*	ATCC® 49226™	CMRNG (Chromosome-mediated resistant *Neisseria gonorrhoeae*): Low level chromosome mediated resistance to penicillin.			✓	
R4607060	*Pseudomonas aeruginosa*	ATCC® 27853™	Inducible AmpC β-lactamase.	✓		✓	
R4609389	*Staphylococcus aureus*	ATCC® BAA-1708™	High-level mupirocin resistance; *mupA* positive.				✓
R4607010	*Staphylococcus aureus*	ATCC® 25923™	β-lactamase negative, *mecA* negative, *mupA* negative.			✓	✓
R4607011	*Staphylococcus aureus*	ATCC® 29213™	Weak β-lactamase-producing strain, *mecA* negative, *mupA* negative.	✓		✓	✓
R4609022	*Staphylococcus aureus*	ATCC® 43300™	Methicillin and oxacillin resistant MRSA; *mecA* positive.			✓	
R4606512	*Staphylococcus aureus*	ATCC® BAA-976™	Macrolide resistant; *msrA* positive. Inducible clindamycin resistance negative control.			✓	✓
R4606513	*Staphylococcus aureus*	ATCC® BAA-977™	Inducible *ermA*-mediated macrolide resistance. Inducible clindamycin resistance positive control.				✓
R4601313	*Staphylococcus aureus*	NCTC 12493	Methicillin resistant MRSA; *mecA* positive.		✓		
R4609015	*Streptococcus pneumoniae*	ATCC® 49619™	Reduced susceptibility to benzylpenicillin.	✓		✓	

References

1. CLSI. Performance Standards for Antimicrobial Susceptibility Testing. 30th ed. CLSI supplement M100. Wayne, PA: Clinical and Laboratory Standards Institute; 2020.
2. The European Committee on Antimicrobial Susceptibility Testing. Routine and extended internal quality control for MIC determination and disk diffusion as recommended by EUCAST. Version 11.0, 2021. http://www.eucast.org

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