Organisms used in Microbiology Lab

* *Staphylococcus aureus*
	+ Gram+ coccus, clusters
	+ TSA – small, pinhead colonies; golden brown to cream color
	+ MaConkey – no growth
	+ EMB – no growth
	+ Blood agar – beta hemolysis
	+ Motility test – no motility
	+ UV light – more susceptible than *Bacillus*
	+ Lysozyme test – resistant (unlike other Gram+ bacteria)
	+ Protein A
		- Can detect using agglutination assay
	+ Coagulase positive
	+ Catalase positive
	+ Oxidase negative
* *Staphylococcus epidermidis*
	+ Gram+ coccus,
	+ TSA – small, pinhead colonies; color of agar to whitish
	+ MaConkey – no growth
	+ EMB – no growth
	+ Blood agar – gamma hemolysis
	+ Motility test – no motility
	+ Catalase positive
	+ Oxidase negative
* *Streptococcus pyogenes*
	+ Gram+ coccus, chains
	+ TSA – white/translucent
	+ MaConkey – no growth
	+ EMB – no growth
	+ Blood agar – beta hemolysis
	+ Motility test – no motility
	+ Catalase negative
	+ Oxidase negative
	+ Bacitracin susceptible
* *Streptococcus pneumoniae*
	+ Gram+ coccus
	+ TSA –
	+ MaConkey - no growth
	+ EMB – no growth
	+ Blood agar – alpha hemolysis
* Mycobacterium phlei
	+ Rod
	+ Acid-fast
* *Enterococcus faecalis*
	+ Gram+ coccus
	+ TSA – white colonies
	+ MaConkey – no growth
	+ EMB – no growth
	+ Blood agar – gamma hemolysis
* *Bacillus subtilis*
	+ Gram+ rod
	+ TSA – dry, irregular colonies
	+ MaConkey – no growth
	+ EMB – no growth
	+ UV light – less susceptible than *S. aureus* (because of endospores)
* *Micrococcus luteus*
	+ Gram+ coccus
	+ TSA – small, pinhead colonies; yellow
	+ MaConkey – no growth
	+ EMB – no growth
	+ Lysozyme test – sensitive to lysozyme
* *Serratia marcescens*
	+ Gram- rod
	+ TSA – red or white colonies
	+ MaConkey – clear colonies (can’t ferment lactose), slow growth
	+ EMB – pink colonies
* *Psuedomonas aeruginosa*
	+ Gram- rod
	+ Strict aerobe
	+ TSA – green
	+ MaConkey – clear colonies (can’t ferment lactose), fluoresce under uv
	+ EMB – pink colonies (non lactose fermenter)
	+ Motility test – motility
	+ Lysozyme test – resistant to lysozyme (unlike most Gram+ bacteria)
	+ Catalase positive
	+ Oxidase positive
	+ Citrate Positive
* Family Enterobacteriaceae – all of these can be characterized using the enterotube, all oxidase negative and catalase positive
	+ *Escherichia coli*
		- Gram- coccobacillus
		- TSA – shiny colonies sometimes with dark center
		- MaConkey – pink colonies (can ferment lactose)
		- EMB – metallic green colonies (excessive lactose fermenter, lowers pH)
		- Blood agar – beta hemolysis with infective strains
		- Motility test – motility
		- Citrate Negative
	+ *Enterobacter aerogenes*
		- Gram- rod
		- TSA – shiny
		- MaConkey – pink colonies (can ferment lactose)
		- EMB – purple dark center colonies (lactose fermenter, but not excessive like E. coli)
	+ *Salmonella typhimurium*
		- Gram- rod
		- MaConkey – clear colonies (can’t ferment lactose)
		- EMB – pink colonies (non lactose fermenter)
		- Motility test - motility
	+ *Proteus mirabilis*
		- Gram- rod
		- MaConkey – clear colonies (can’t ferment lactose)
		- Enterotube
	+ *Proteus vulgaris*
		- Gram- rod
		- MaConkey – whitish to clear colonies
		- EMB – pink colonies (non lactose fermenter)
		- Motility test - motility
	+ *Citrobacter*
	+ *Klebsiella*
	+ *Yersinia*
	+ *Shigella*