



SOME LOW RISK BACTERIAL STRAINS SUITABLE FOR USE IN PC1 LABORATORIES

All cultures are \$18 each (+GST). Available as streaks, slopes, stabs, or broths (10 ml) - please state your preference.

ALSO AVAILABLE: *Saccharomyces cerevisiae* (yeast) – eukaryote (Fungi). Able to tolerate more acidic conditions than most bacteria. Supplied on a malt extract agar plate, \$18 (+GST)
Physarum Polycephalum (slime mould) - a streaming multinucleate protoplasm- \$25 (+GST). Includes a container of food and a spare plate.
Oil eating microbes (powder) - just add tap water, establish the culture, then feed a range of oils and monitor the response- \$25/0.5 g (+GST). Makes a 50 ml culture.

ORGANISM	NORMAL HABITAT	GROWTH TEMP (°C)	GRAM STAIN	BACTERIUM SHAPE	RESPIRATION	MOTILITY	INTERESTING FACTS	NOTORIOUS RELATIVES	PIGMENT
<i>Bacillus subtilis</i>	Soil, water, wool, hair	25-37	Positive	Rod	Aerobic	Yes	One of the most widely used bacteria for the production of enzymes and specialty chemicals.	<i>B. anthracis</i> (anthrax)- Often fatal > internal haemorrhaging, lung abnormalities	Cream
<i>Bacillus thuringiensis</i>	Soil and plants	30	Positive	Rod	Aerobic	Yes	Used extensively as a microbial insecticide.	<i>B. anthracis</i> (anthrax)- Often fatal > internal haemorrhaging, lung abnormalities	Cream
<i>Citrobacter freundii</i>	soil, water, sewage, and food	37	Negative	Rod	Aerobic	Yes (most)	Often found in clinical specimens as an opportunistic or secondary pathogen.	Some strains cause enteritis	Cream
<i>Escherichia coli</i>	Gut of humans and animals	37	Negative	Rod	Facultative anaerobe	Yes	The 'workhorse' of modern biotechnology- from cloning to protein production.	Various strains cause diarrhoea	Cream
<i>Pseudomonas fluorescens</i>	Water	26	Negative	Rod	Aerobic	Yes	Will not grow at 37°C, but can grow at 4°C. Secretes a soluble fluorescent pigment used in stains.	<i>P. aeruginosa</i> > Burns infections. Colours pus	Fluorescent bluish tinge
<i>Rhodospirillum rubrum</i>	Mud, pond water	25	Negative	Spiral	Aerobic (in the dark)	Yes	Can grow anaerobically using light for photosynthesis. Used for sewage treatment, animal food, fertilizer, and to produce vitamins.	-	Purple- red
<i>Sarcina Lutea</i> (<i>Micrococcus luteus</i>)	Mammalian skin, soil, mud	26	Positive	Coccus	Aerobic	No	Causes the unpleasant odour of sweat. Associated with the spoilage of fish products	<i>S. ventriculi</i> > Pyloric ulcers	Yellow
<i>Serratia marcescens</i>	Ubiquitous	25-37	Negative	Rod	Facultative anaerobe	Yes	Poor pigment production at 37°C Very sensitive to UV light.	Some variants cause infections	Pink- red
<i>Staphylococcus epidermidis</i> (albus)	Mucous membranes, skin	37	Positive	Coccus	Facultative anaerobe	No	Tolerates high salt (up to 15%)	<i>S. aureus</i> > Boils, abscesses and wound infections	White