

Answer sheet

Plate E *E. coli*

(Only one colony-type is evident. This appears as a Gram negative bacillus suggesting *E. coli*. *Salmonella* is unlikely in this situation.)

Plate F *E. coli*

Cl. sporogenes
B. fragilis with metronidazole disc

(Three colonies are apparent. Two are Gram negative bacilli, one a Gram positive bacillus. The larger Gram negative bacillus has already been identified and is therefore a facultative anaerobe. The colonies appear smaller under the less favourable growth conditions. The other two organisms must be strict anaerobes and are suppressed by metronidazole. The second short Gram negative bacillus is *B. fragilis*. The Gram positive rods are Clostridia and the colony morphology indicates *Cl. sporogenes*.)

Catalogue Number	Small Image	Image Map	Large Image
M_BI_MX_27.jpg	Plate E		Plate E
M_BI_MX_26.jpg	Plate F		Plate F

Plate G *S. aureus*

S. epidermidis

(Two colonies are apparent. Both are Gram positive cocci in grape-like clusters. The colours of the colonies suggest *S. aureus* and *S. epidermidis*)

Plate H *S. aureus*

S. epidermidis

Cl. perfringens

(Three colonies are present. Two Gram positive cocci and one Gram positive bacillus. The cocci are facultative anaerobes but show smaller colonies than on Plate G. The Gram positive bacillus is another Clostridium which from colony appearance suggests *Cl. perfringens*.)

Q1. No. *Cl. sporogenes* does not produce α toxin. On the other hand *Cl. perfringens* produces toxin and this is indicated by an opaque zone on the B half of the plate. This effect is nullified by the addition of antitoxin to the A half of the plate.

Q2. *B. fragilis* is a Gram negative short bacillus which demonstrates pleomorphism.

Catalogue Number	Small Image	Image Map	Large Image
M_BI_MX_16.jpg	Plate G		Plate G
M_BI_MX_25.jpg	Plate H		Plate H