Transformation in *Bacillus subtilis*

1. Put 25 ml of sterile deionized water in a 250 ml flask.

2. Using a swab, add a large inoculum of *Bacillus subtilis phe* + met *–* (IA607) to the flask. Perform a gram stain on this culture and look for endospores. Why?

Perform an isolation streak of the flask contents on one plate of TSA and one plate of Spizizen’s

minimal agar (SMA).

Look at the ingredients of SMA (similar to **Table 3.1** in your lab manual). Do you

expect growth on either of these plates? Why or why not? What is the purpose of the minimal

salts in this media?

3. Place the flask on a hot plate and boil vigorously for 5 minutes. Why are you doing this? Cool to

room temperature.

Perform an isolation streak of this solution onto a plate of TSA and a plate of SMA. Do you expect

growth on these plates? Why or why not?

4. Using a swab, add a large inoculum of *Bacillus subtilis phe –* met + (IA96) into a test tube containing

10 ml of sterile deionized water.

Perform an isolation streak of this solution onto a plate of TSA and a plate of SMA. Do you expect growth on these plates? Why or why not?

Pour the contents of the tube into the flask containing the boiled strain IA607 and incubate the flask

at 37○C on a shaker/incubator for 30 minutes. What do you hope will happen?

5. Pipette 100цl of the culture onto GMSA and TSA. Using a sterile spreading rod, spread the inoculum

over the surface of the agar plates. Incubate all plates at 37○C for 48 hours. Do you expect

growth on these plates? Why or why not?