1 a) Example of plate – design layout: Enzyme Activity Samples

	1	2	3	4	5	6	7	8	9	10	11	12
A	S1+ BG	S2+ BG	S3 + BG	S4+ BG	S5+ BG	S6+ BG	S7+ BG	S8+ BG	S9+ BG	S10+ BG	S11+ BG	S12+ BG
B	S1+CB	S2+CB	S3+CB	S4+CB	S5+CB	S6+CB	S7+CB	S8+CB	S9+CB	S10+CB	S11+CB	S12+CB
C	S1+ NAG	S2+ NAG	S3+NAG	S4+ NAG	S5+ NAG	S6+ NAG	S7+ NAG	S8+ NAG	S9+ NAG	S10+ NAG	S11+ NAG	S12+ NAG
D	S1+ PHOS	S2+ PHOS	S3+ PHOS	S4+ PHOS	S5+ PHOS	S6+ PHOS	S7+ PHOS	S8+ PHOS	S9+ PHOS	S10+ PHOS	S11+ PHOS	S12+ PHOS
E	S1+ XYL	S2+XYL	S3+ XYL	S4+XYL	S5+XYL	S6+XYL	S7+XYL	S8+XYL	S9+XYL	S10+XYL	S11+XYL	S12+XYL
F												
G												
H	S1 +LAP	S2 +LAP	S3 +LAP	S4+LAP	S5+LAP	S6+LAP	S7+LAP	S8+LAP	S9+LAP	S10+LAP	S11+LAP	S12+LAP

Legend:
1 – 12 = Microplate well columns
A – H = Microplate well rows
S1 - S 12 represent soil slurry samples codes + (substrates for select enzyme activities)

• Note: Rows F and G are unused in this example, but can be used for other enzyme measurements.

1b) Modifiable Protocol Template: Blank Microplate template for substrate and samples

	1	2	3	4	5	6	7	8	9	10	11	12
A												
B												
C												
D												
E												
F												
G												
H												

Legend:
1 – 12 = Microplate well columns
A – H = Microplate well rows

2) Example of plate – design layout: MUB and MUC Standard Curve (4C and 25C)

	1	2	3	4	5	6	7	8	9	10	11	12
A	S1+ std0	S2+ std0	S3+ std0	S4+ std0	S5+ std0	S6+ std0	S7+ std0	S8+ std0	S9+ std0	S10+ std0	S11+ std0	S12+ std0
B	S1+ std2.5	S2+ std2.5	S3+ std2.5	S4+ std2.5	S5+ std2.5	S6+ std2.5	S7+ std2.5	S8+ std2.5	S9+ std2.5	S10+ std2.5	S11+ std2.5	S12+ std2.5
C	S1+ std5	S2+ std5	S3+ std5	S4+ std5	S5+ std5	S6+ std5	S7+ std5	S8+ std5	S9+ std5	S10+ std5	S11+ std5	S12+ std5
D	S1+ std10	S2+ std10	S3+ std10	S4+ std10	S5+ std10	S6+ std10	S7+ std10	S8+ std10	S9+ std10	S10+ std10	S11+ std10	S12+ std10
E	S1+ std25	S2+ std25	S3+ std25	S4+ std25	S5+ std25	S6+ std25	S7+ std25	S8+ std25	S9+ std25	S10+ std25	S11+ std25	S12+ std25
F	S1+ std50	S2+ std50	S3+ std50	S4+ std50	S5+ std50	S6+ std50	S7+ std50	S8+ std50	S9+ std50	S10+ std50	S11+ std50	S12+ std50
G	S1+ std100	S2+ std100	31+ std100	S4+ std100	S5+ std100	S6+ std100	S7+ std100	S8+ std100	S9+ std100	S10+ std100	S11+ std100	S12+ std100
H												

Legend:
1 – 12 = Microplate well columns
A – H = Microplate well rows
S1…S12 = samples 1-12
std0 - std100 = standard concentrations
S1 - S 12 represent soil slurry samples codes + (standard concentrations)

• Note: Rows H is unused in this example, but protocol can be modifies to use for additional standard concentrations
(i.e. 200uM std).