A. Batch (reference)

Substrate
Enzymes
Nutrients
Yeast

B. Fed-batch: all enzymes added to the fermentor at start-up

Substrate
Enzymes
Nutrients
Yeast

C. Fed-batch: enzyme addition distributed between batch and substrate feed, mixed at start-up

D. Fed-batch: enzyme addition distributed between batch and substrate feed, added separate from substrate

Substrate
Enzymes
Nutrients
Yeast

Substrate
Enzymes
Nutrients
Yeast

Substrate
Enzymes
Nutrients
Yeast

Substrate
Enzymes
Nutrients
Yeast