

ULTRAMAX[®] Application Profile

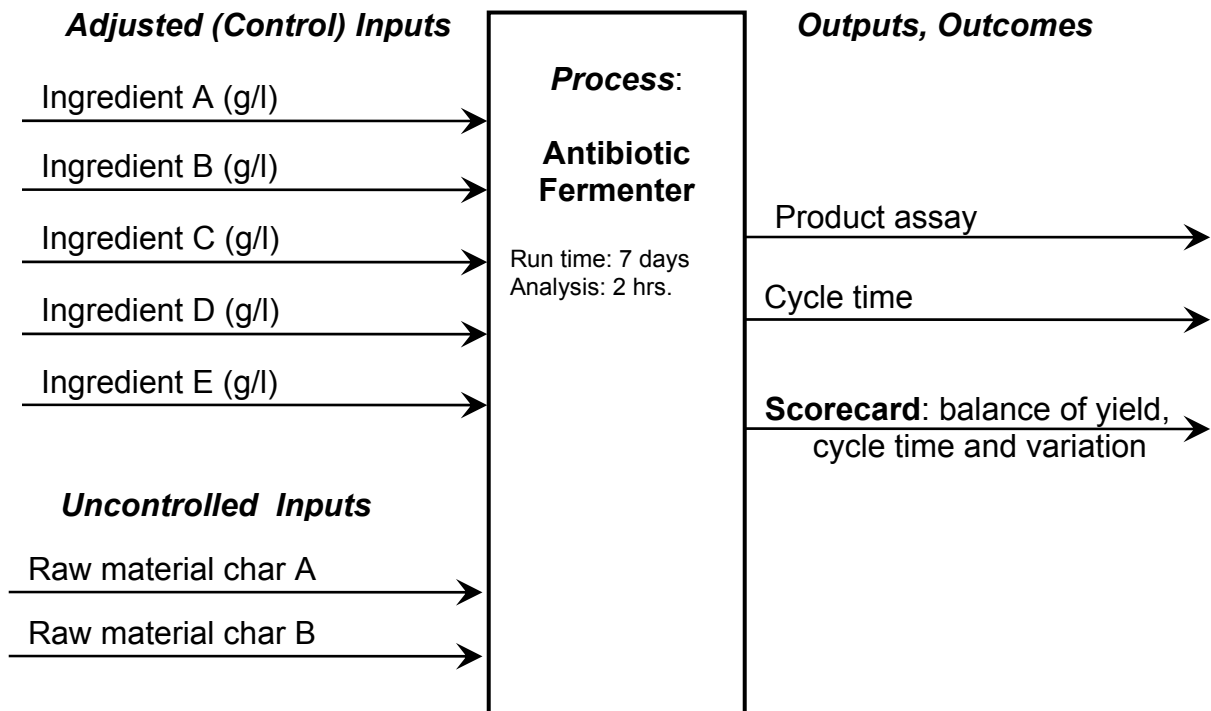
Pharmaceutical: Antibiotic Fermentation

Process: The fermentation metabolism results in the production of a secondary metabolite as well as the primary product. The quality and quantity of raw materials used is critical to a successful product. Raw materials are loaded in the batch process, sterilized, inoculated, and harvested around 200 hours later.

Objectives: To increase the yield and the consistency of yield from batch to batch.

Results Summary: Antibiotic yield was increased by about 15% and batch cycle time was reduced by about 20%. In addition, engineering analysis results in narrower tolerances on raw material variation.

DECISION INPUT/OUTPUT DIAGRAM



Optimizing the Scorecard implies satisfying constraints (not shown)