Production For Food Industries
Achieve your manufacturing goals in terms of reliability, predictability and scalability

Features

- Dynamically size batch jobs
- Prioritize and expedite specific batch production jobs
- Assign equipment and labor
- Report shortages of required ingredients and materials
- Reserve lot controlled inventory for batch jobs
- Manage single super-batch job consisting of multiple linked batch jobs
- Adjust batch formula prior to batch job release and during WIP
- Auto generate lot numbers for intermediates and finished goods
- Mandate execution of QC tests and manufacturing instructions
- Auto back flush consumed ingredients and materials

Benefits

- Control production of intermediates and finished goods, including co-products and by-products
- Comply with FDA, FSMA, GFSI regulations
- Produce expected yields
- Ensure reliability and predictability
- Quickly scale up production

Introduction

The Production module supports the make-to-order, make-to-stock and mixed-mode requirements of finished goods, co-products and by-products. Production staff link formulas to finished goods bills of material to create, size and schedule one or more l.

Linked-Batch-Jobs

Individually scheduling the production of intermediates and its packaging into multiple packaging units requires constant monitoring and manual individual batch job releases. To expedite this complex production process, the Super Batch feature links all related intermediates and finished good requirements together in a single Super Batch job. Production then calculates and schedules the required number of batch jobs, and automatically releases each job in a determined sequence.

Critical Material Shortage

Inventory levels should be checked prior to release of a batch job to ensure that all raw materials, intermediates and packaging items needed for the batch job are available to ensure that the expected yields are met. The Critical Material Shortage report identifies any inventory shortages that will impact expected batch job yields. The module can then automatically calculate inventory requirements, determine the available inventory levels, and generate a Purchase Requisition or a Purchase Order for the required inventory balances.

Inventory Allocation

The 'Allocate' feature reserves ingredient and raw material inventories for batch jobs scheduled in the future, thus preventing any subsequent batch jobs from allocating this inventory. Production selects inventory lots based upon LIFO, FIFO, and FEFO expiration dates, as well as their inventory statuses. Optionally, the user can manually reserve selected lots used for a batch job.

Process Cell Assignment

Batch jobs are assigned to a piece of equipment to perform a specific operation, such as mix, fill or assembly, or to a group of equipment. A process cell can be defined as a single piece of equipment or the group, with specific rate and capacity characteristics. Default process cells are assigned within the formulas, and can be reassigned prior to a batch job release.

Production planning considers the capacity of assigned process cells to calculate the total number of batch runs, including their start and end times, to produce the expected yield of a given batch job. A graphical planning dashboard offers full visibility to active and planned batch runs, and the linkage between dependent batch runs. Planners can reassign batch runs to alternate process cells, prioritize certain batch runs, and add equipment changeovers and maintenance tasks into the schedule.

Batch Ticket

An electronic batch ticket contains a list of required ingredients, intermediates and raw materials for a batch job. The ticket contains inventory locations and quantities, QC steps and specialized manufacturing instructions. Printed batch tickets allow staff to record actual quantities consumed, QC results, yields and other production related data.

Lot Number Assignment and Tracking

Intermediates and finished goods produced are auto-assigned lot numbers by the system, based upon a combination of date, batch job, customer and other user defined values. The lot numbers of all ingredients and raw materials consumed in production are linked to their associated Intermediates and finished goods. A 'Lot Explosion' inquiry drills down into the ingredients and packaging used for a finished good lot number. And a 'Where-Used' inquiry identifies the batch jobs that consumed the lot number and the finished good lot numbers that were generated from these batch jobs.

Inventory Back Flushing

Raw materials are 'Issued' against a batch job, based upon their lot number, which places the inventory into WIP. When the batch job is partially or fully completed, the actual 'Issued' inventory consumed will be determined and removed from WIP. In order for finished goods inventory to be shipped prior to the completion of the batch job, the Partial Batch Close is used to record finished goods yields in an incremental fashion.

When the batch job is complete, the Full Batch Close allows the user to manually record the finished goods yields, labor, overhead and other relevant job data. Raw material inventory consumption is either manually recorded or automatically back flushed by the system, based upon the finished goods yields and the batch job formulas.

Quality Control

The batch ticket contains QC instructions that require the collection of pass/fail or alphanumeric values. The collection of QC data is mandated before moving onto the next step in production, such as closing the batch job. All QC tests results are captured and reported per batch job. Upon completion of a batch job, the user has the option to reject the batch job and disposition the finished good inventory.