Overview

Tayana Process Manufacturing

Target Industries

Process Manufacturing – Industries and Sectors

Target Industry



Food & Beverages

Chemicals





Pharmaceuticals

Metals



Industry Sectors

Food

- General Food
- Bakeries
- Beverages
- Dairy
- Fruits & Vegetables
- Canned & Frozen Food
- Dressings & Sauces
- Seasonings & Additives
- Seafood
- Edible Oil & Fats
- Beer
- Meat & Poultry
- Packaged Food
- Organic Certified Food
- Fresh Produce
- Candy & Confectionery
- Sweets
- Chocolates
- Pet Food

Chemicals

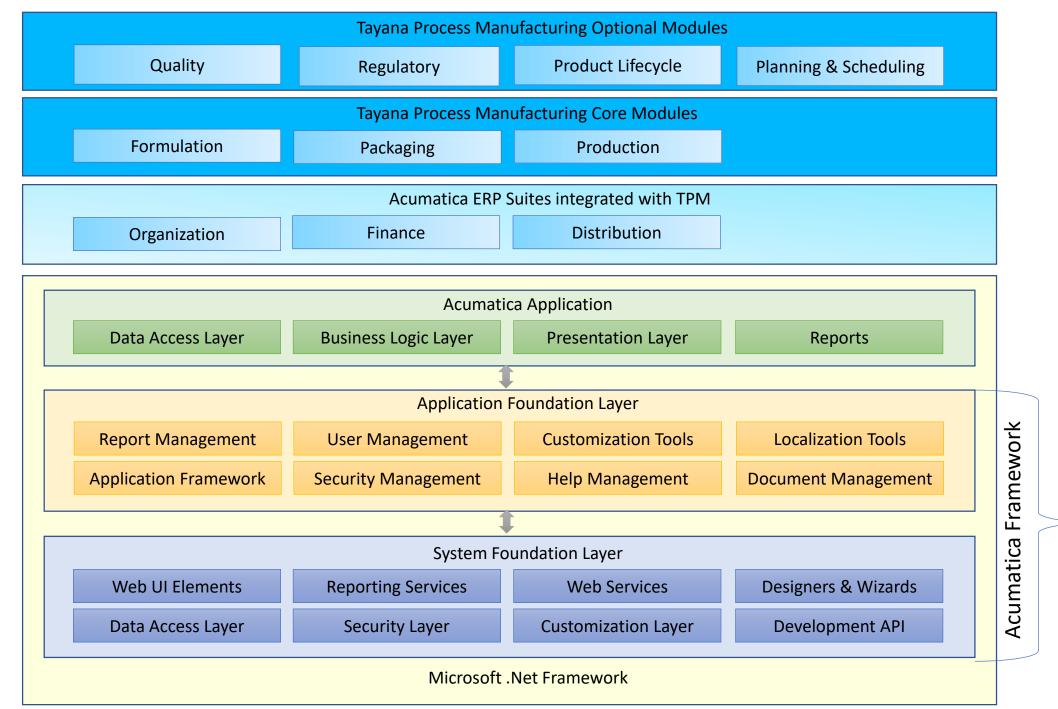
- Paints & Coatings
- Ink
- Paper & Packaging
- Pigments/Dyes
- Fuel & Lubricants
- Cement
- Oil & Gas
- Personal Care & Cosmetics

Pharma & Nutra

- Life Sciences
- Bio-Pharma
- Bulk Drugs
- Nutraceutical
- Veterinary
- Medical Devices

Acumatica Architecture

Tayana Process Manufacturing – Embedded Solution



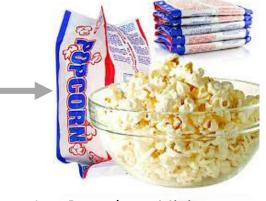
Popping Corn Popping Corn Formula Ingredient for **Popping Corn Full Corn with** Kernel having 12.5 -13.5% Moisture **Popping Corn in a Container**

Microwave Popcorn Formula

Ingredient for Microwave Popcorn

- 1. Popping Corn
- 2. Salt
- 3. Citric Acid
- 4. Palm Oil
- 5. Butter
- 6. TBHQ Preservative
- 7. Artificial Flavor
- 8. Annatto Color

Bill of Material – MWXBMINI - 1 Pack having 32Gms of Microwave Popcorn



- L. Paper bag Mini
- 2. Plastic Wrap Mini
- 3. Label
- Formula for Microwave Popcorn is linked to this BOM



Bill of Material – MWXB3MINI 1
Box having 3 Packs of MWXBMINI
Mini Microwave Popcorn

- Xtreme Butter Carton Box
 3 Mini
- 2. Labels/Sticker

Microwave Pop Corn

- 3. Sticking Glue
- 4. 3 packs of MWXBMINI



Formulation

Formula Features

Features of Formulation

Revision Controlled	Multilevel Workflow	P.O. P.O. P.O. P.O. P.O. P.O. P.O. P.O.		By-Products	Scrap/Quarantine	Consumables	
Substitution Rules	Ingredient Composition in Percentage & Values	Embedded Manufacturing Instructions	Intermediates & Multi Level Formulas	Routing with Material, Equip, SOP, Labor, Text	UOM in Weight & Volume	Formula Process Loss/Gain	
Formula Ingredient Loss/Gain	Physical Properties	Lot Strength/Potency	Scaling	Premixing Materials	Economic Batch Quantity	Costs Std & Overheads	
Formula Comparison & Analysis	Storage Conditions	Formula Certifications	Formula Licenses	Labeling e.g. FDA	Allergens & Ingredients	Backflush Materia/OH	
	flush Embedde Labor/OH Con				(Facilitate	el Security es Formula recy)	

Formulation

Multi-level Example for Food Industry – Popcorn

Formula for Popping Corn - Intermediate



Ingredient for Popping Corn

10.00

GM

0.01 GM

0.000000

0.099900

Full Corn with Kernel having 12.5 - 13.5% Moisture



Products Wholesale • Formula Master * CUSTOMIZATION ACTIONS ▼ RE-CALCULATE COST SUMMARY 000082 - POPPING A POPPINGCOR - PC D Formula ID: Inventory ID: √ Hold * Formula Type: INTERMEDIATE GC Ø Products Count: Status: On Hold Formula Define By: Specific Unit Co-Products Count: 0 Formula Class: CLASS2 - Food Product Manager: EP00000001 - Andn 🔎 By-Products Count: 3 Ω * Revision Nbr.: Product Workgroup: Ingredients Count: Eff Start Date: 10/11/2018 * Ω Total Weight: Owner: 5.000000 Eff End Date 10/11/2018 * Total Volume: 5.000000 POPPING CORN Description: BY-PRODUCTS CONSUMABLES INGREDIENTS AND ROUTE ALLERGENS PRODUCTS AND CO-PRODUCTS STORAGE CONDITIONS RESOURCE ATTRIBUTES COSTING COSTING SUMMARY *Item Description Allow Warehouse ID Issue Location Required Qty Require Base Base Volume % Weight % Process Cell Type Substitute Required Qty Unit Time ID Unit □ INV FULLCORN Full Corn with Kernal having 12.5 - 13.5% HQ Retail War... Storage and re... 10.00 KG 10.00 GM 0.000000 100.000000 EQP SCALPER The scalper strips the kernels from the cobs 0.00 0.00 0.000000 0.000000 EQP CRONCLEAN Corn Cleaning-cleaner and de-stoner 0.00 0.00 0.000000 0.000000 METALBRUPOLI... EQP Corn Kernal Metal Brush Polisher-Remove the chaff 0.00 0.00 0.000000 0.000000 GRAVITYSEPAR... Corn Kernal Gravity Separator Light - Properly Dried; Heavy - D... 0.00 0.000000 0.000000 0.00 EQP FANNINGMILL Corn Kernal Fanning Mill Equipment-0.00 0.00 0.000000 0.000000

HQ Retail War...

Storage and re...

Preservative - treated with a natural, inert fumigant to eliminate i...

□ INV

PRESERVATI

Formula for Microwave Popcorn

Bring the Coated kernels to the Popping Table via the catch pans

□ INV

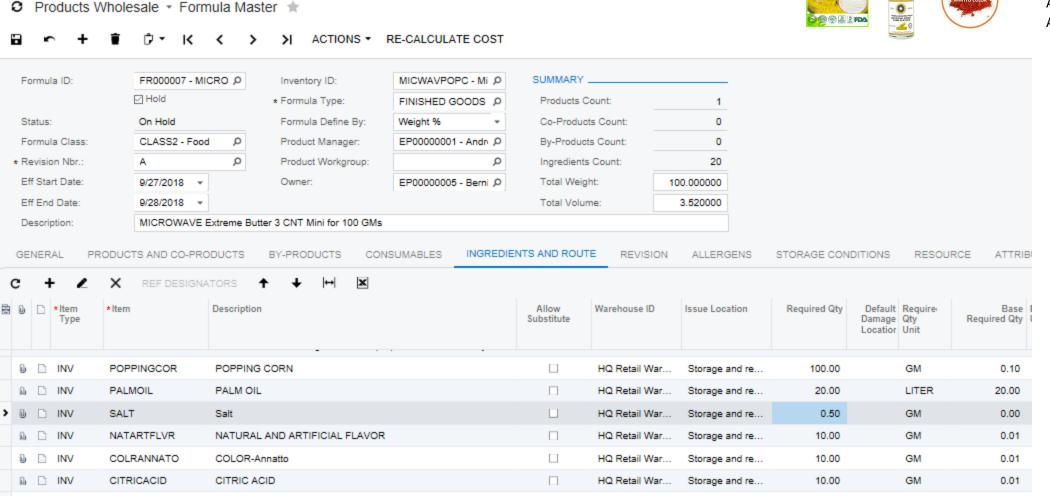
B SOP

BUTTER

COATEDKERNELS



Ingredient for Microwave
Popcorn
Popping Corn
Salt
Citric Acid
Palm Oil
Butter
TBHQ – Preservative
Artificial Flavor
Annatto Color



HQ Retail War...

Storage and re...

30.00

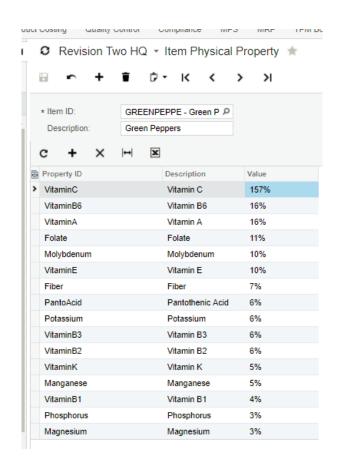
0.00

GM

0.03

0.00







Item Properties

Packaging Configuration

Bill of Material with Multilevel Definition

Bill of Material

Separation of Bill Multilevel Revision of Material for Workflow Controlled Packaging Finished Goods, Intermediate & Manufacturing Consumables Assembly Type Instructions BOM Routing with Costs Std & Material, Equip, **Backflush Material** Overheads SOP, Labor, Text **Embedded Quality** Backflush **BOM Analysis** Machine/Labor Control

Packaging

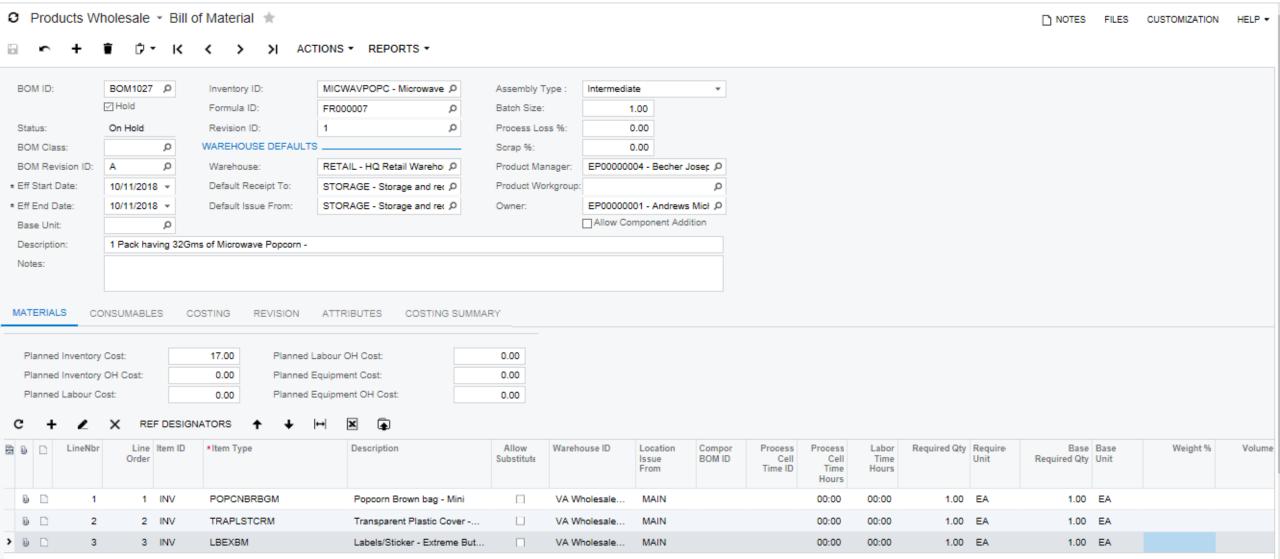
Bill of Material – Multi Level Example – Popcorn Single Pack and 3 Pack Box

Bill of Material for 1 Pack Microwave Popcorn



Bill of Material for 15 Gm Pack Mini Microwave Popcorn - MWXBMINI

Paper bag – Mini Transparent Plastic Wrap – Mini Formula for Microwave Popcorn



Bill of Material for 32 Gm Pack Mini Microwave Popcorn



Bill of Material for 32 Gm Pack Mini Microwave Popcorn

3 X MWXBMINI Labels Stickers



|--|

ACTIONS ▼ REPORTS ▼

BOM ID:	MV	VXB3MII	٥	Inventory ID:	PAPBTCAM3C - Popcorn Bt P	Assembly Type :	Assembly		*								
	□н	old		Formula ID:	۵	Batch Size:	1.	.00									
Status:	Act	ive		Revision ID:	٥	Fill Level:	3.	3.00									
BOM Class:	ВС	M2	ρ	WAREHOUSE DEFAULTS		Fill Unit:	EA		ρ								
BOM Revision	n ID: A		٥	Warehouse:	RETAIL - HQ Retail Wareho 🔎	Process Loss %:	0	0.00									
* Eff Start Date	9/2	6/2018	¥	Default Receipt To:	STORAGE - Storage and rec D	Scrap %:	0	0.00									
* Eff End Date:	9/2	6/2018	*	Default Issue From:	STORAGE - Storage and rec D	Product Manager:	EP0000000	01 - Andrews	Micł O								
Base Unit:	ВС	X	ρ			Product Workgrou	p:		٥								
						Owner:			٥								
							Allow Con	mponent Addit	tion								
Description:	MI	CROWA	VE Extren	ne Butter 3 CNT Mini for 100) GMs												
Notes:																	
MATERIALS	CONSU	JMABLE	s co	STING REVISION	ATTRIBUTES COSTING SUMMA	ARY											
Planned Inv	entory Cos	t		17.00 Planned Li	abour OH Cost:	0.00											
Planned Inv	entory OH	Cost:		0.00 Planned E	quipment Cost:	0.00											
Planned Lal	bour Cost:			0.00 Planned E	quipment OH Cost:	0.00											
c +	∠ ×	REF	DESIGN	ATORS ↑ ↓ I	→ 🗷 👍												
₿ 0 C Li	ineNbr	Line Order	Item ID	*Item Type	Description	Allow Ware Substitute	house ID	Location Issue From	Compor BOM ID	Process Cell Time ID	Process Cell Time Hours	Labor Time Hours	Required Qty	Require Unit	Base Required Qty	Base Unit	Weight %
B D	1		INV	POPCNBRBGM	Popcorn Brown bag - Mini	□ но	Retail War	Storage					1.00	EA	1.00		1.00
B D	2		INIV	TDADI STCDM	Transparent Plastic Cover		Potail Was	Storage					1.00	ΕΛ	1.00		1.00

Production Execution

Batch Order & Batch Ticket

Batch Automation

Dynamic Scaling

Material Issue, Receipt, Return, Adjustments, Labor Postings – Material & GL Postings

Batch Reversals & Close

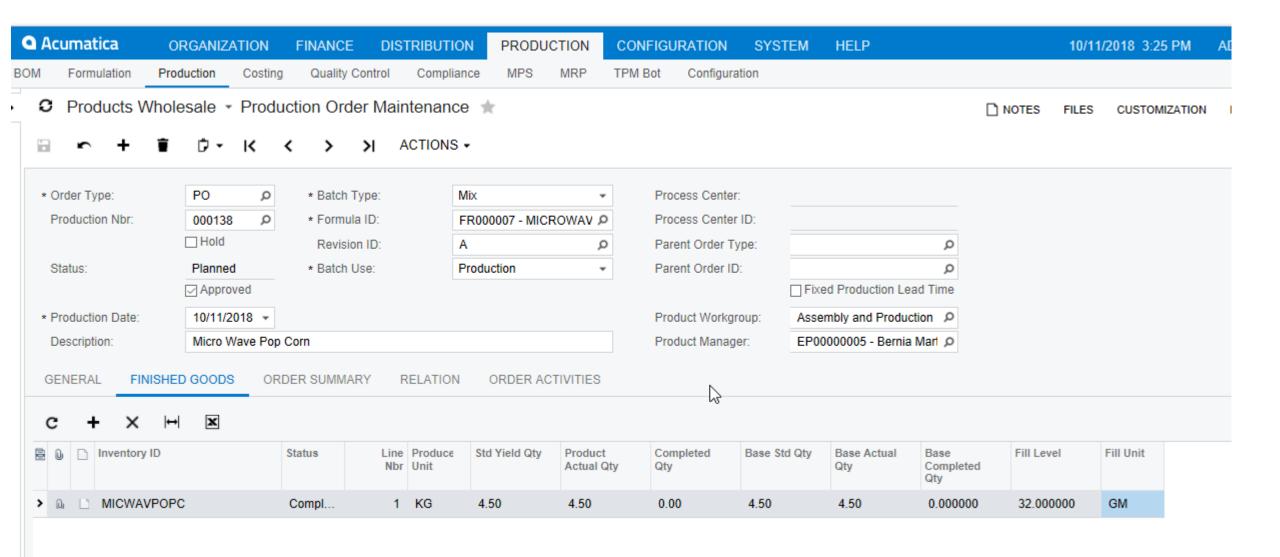
Integration with Sales, Purchase, CRM

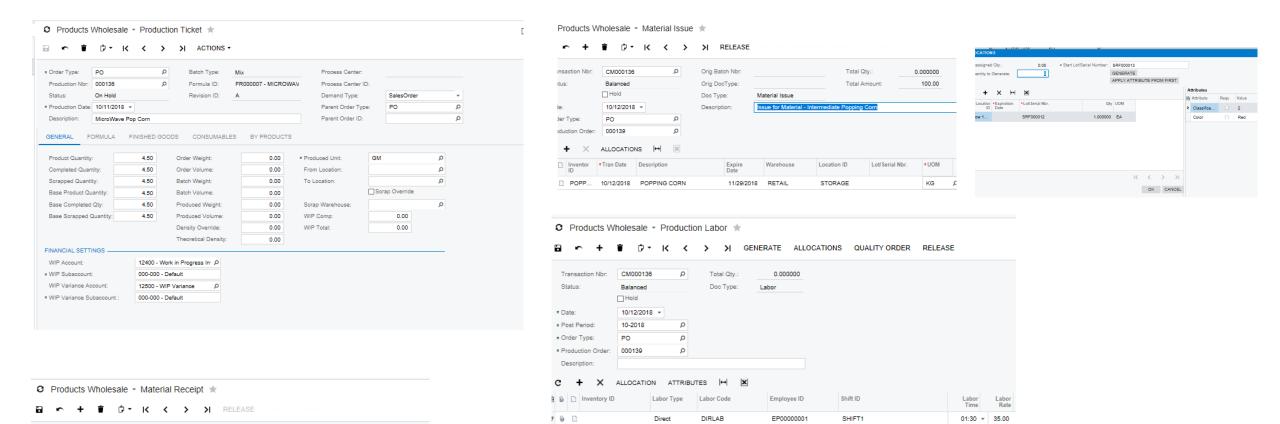
Embedded Quality & Regulatory

Production **Production Overview Production Order** Utilities **Production Transactions** Acumatica Module Integration TPM Module Integration

- Batch Sources
- Sales to Production Order
- Direct Production Order
- Batch Automation
- Handle Product, Co-Products and By-Products
- Handles Batches with Multiple FG Packaging
- Contract Manufacturing/Outside Processing
- Batch Order
- Type Mix/Blend, Fill, Quality Rework Orders
- Batch Ticket
- Batch Automation Sub Batches
- Dynamic Batch Scaling
- Adjust Formula Qty based on Potency or Strength of Lot
- Substitute Materials
- Allocation of Lot Nbr & Tracking Lot Traceability
- Embedded Quality Control
- Material Shortage Analysis
- Batch Reversal
- Batch Close
- Ingredient & Consumables Material Issue, Production Picklist
- Intermediates & Finished Goods Material Receipt
- Labor & Machine
- Ingredient & Consumables Return
- Adjustments
- Sales Order Integration
- Purchase Order/Requisition Integration
- Opportunity/Cases for Sample Production Order
- Quality
- Regulatory

Production Order





Transaction Nbr:

Status:

* Date:

* Post Period: Description:

linventory ID

∂ □ PAPBTCAM3C

CM000136

Balanced

10/12/2018 🔻

Popcorn 3 Pack - 45 Batch

ALLOCATIONS ATTRIBUTES |↔|

Quantity Warehouse

45.000000 RETAIL

Total Qty.:

000139

Location ID

STORAGE

0.000000

Receipt Lot/Serial Nbr.

LREX000000

Production Screens

Optional Modules Costing Product Lifecycle Quality Management Planning & Regulatory Scheduling

Costing & Quotation

Cost Analysis & dynamically reformulate

Opportunity & Quotation Integration

Sales Order Integration

Costing

Cost Overheads

Cost Rollup

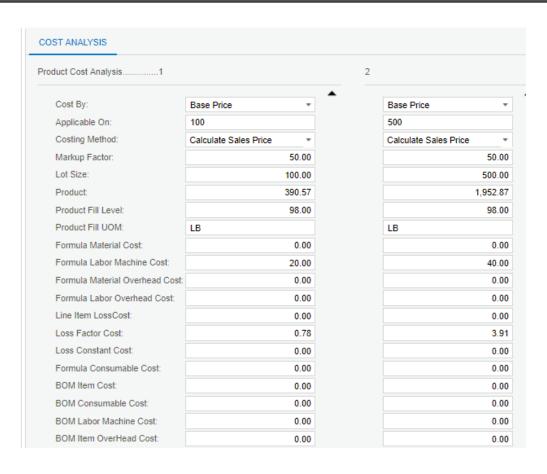
Dynamically resize formulas to meet target costs

Cost Comparison across different BOMS

Fixed & Variable Costs & Losses

Integrates with Acumatica CRM

Formula Cost analysis & Estimate Generation



BOM Labor OverHead Cost:	0.00
Ingredient Costs:	0.00
Ingredient Item Cost:	0.00
Ingredient Consumable Cost:	0.00
Ingredient Labor Machine Cost:	0.00
Ingredient Item Overhead Cost:	0.00
Ingredient labor Overhead Cost:	0.00
Formula Variable Labor Cost:	0.00
Formula Variable OH cost:	0.00
Fixed Labor Cost:	0.00
Fixed OH Cost:	0.00
Setup Labor Cost:	0.00
Setup OH Cost:	0.00
By-Product Cost:	0.00
By-Product OH Cost:	0.00
Total Cost:	411.35
Formula Cost per Unit:	4.11
Margin per:	25.21
Selling Price:	5.50

0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
1,976.78
3.95
28.12
5.50

Quality

Quality Orders

Grading

Sample Plans

Inspection Checklist

Specialized Tests – Test Methods, Units, Test Definitions

Action Plans & Rework Production Orders

Deviation Reports

CAPA, COA, Non Conformance

Case Integration

Customer & Vendor Specific Quality Configurations

Inventory Stability Test Plans

Quality Integration with Acumatica Modules & Production Modules

Material

- Vendor Specific Quality Control Applicable during Purchase Receipts
- Customer Specific Quality Control Applicable during Sales Shipments
- Inventory Stability Tests
- Production Execution Pre, During and Post Production

Equipment

- Planned Tests at defined intervals
- Production Execution Pre, During and Post Production

Warehouse/Location

Planned Tests at defined intervals

Quality Control Features

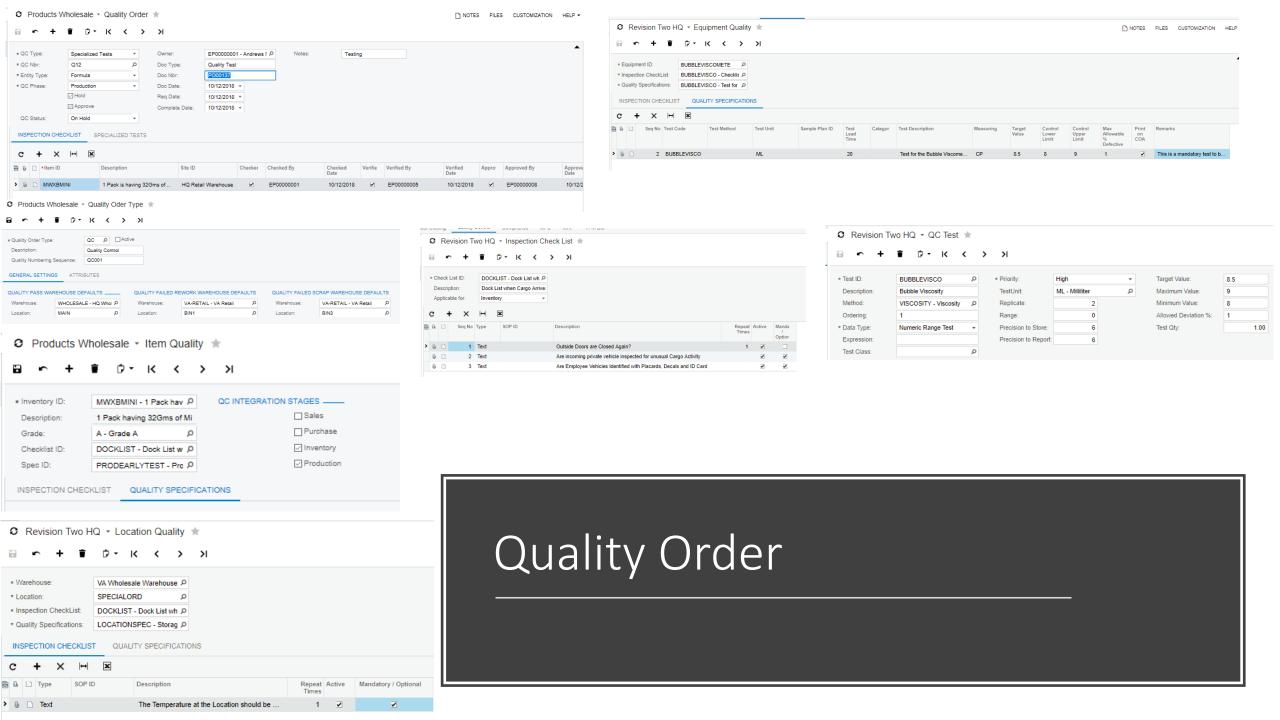
Inspection Planning Sample Plans **Action Plans** & Scheduling Multi Level Non Conformance Certificate of **Approval Workflows** Certificate **Analysis** Rework Orders – CAPA Reports History of Quality Reports Configurable - QC **Quality Trend Scrap Process Flow Results Mandatory** Analysis Integration or Optional Lot Status & Recall for Tracking Bi-directional Lot based on Quality Customer Traceability Reports

Quality Control Implemented Via

Lot Level Grading

Inspection Checklists

Specialized Tests



Regulatory

Compliance – In Roadmap

Regulatory

Food

- Hazard Analysis & Critical Control Point (HACCP)
- FDA & FSSAI Compliance
- Design & Print FDA Labels

Pharma & Nutra

- FDA 21 CFR Part 11 Compliance
- Supports GFSI and cGMP requirements
- Design & Print Supplemental Information Panels

Regulatory

Chemicals

- OSHA, EPA, ISO, DoT, INCI, Compliance
- GHS Labeling Requirement
- HAZMAT Bills of Lading, VOC, SARA Compliance
- REACH Reporting
- EMA, BRC, IFRA
- Safety Data Sheets(SDS/MSDS) and SARA Title III reports

Generate bi-directional lot traceability reports against suspect FG or

Materials

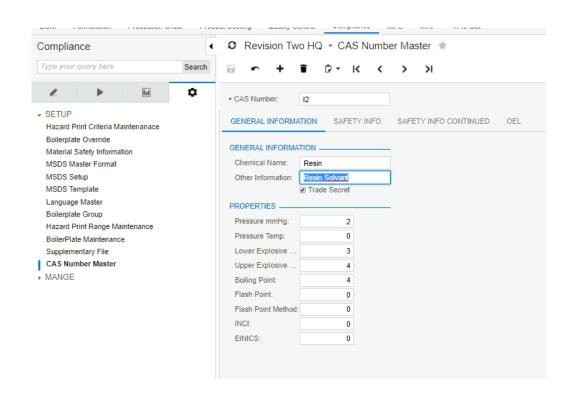
Design & Print Custom Lot Recall Letters

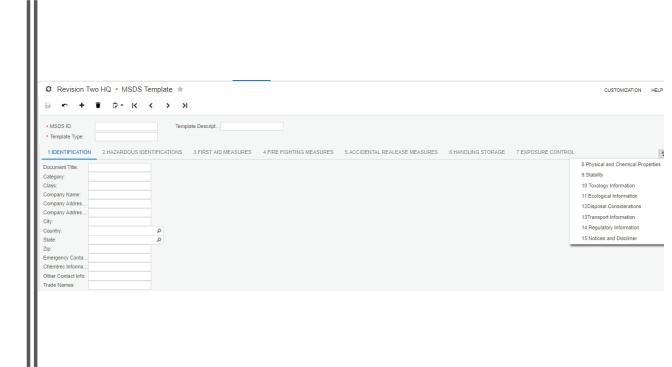
COA Documents

Workflows for Approvals

Revisions and Audit Trails

Comply with external auditor requirements





CAS & SDS

Product Lifecycle Management

CRM Integration – Opportunity & Cases Integration with Production Development Requests

Product Lifecycle Management

CRM Integration

Laboratory/Product Development

Formulation/Packaging

Production Execution

Formula Revisions

Formula Archiving

- Opportunity to Product Development Request
- Cases to Product Development Request
- Product Development Request to Formula Definition
- Formula Validation and use for Laboratory
- Workflow Integration
- Formula Creation Utilities
 - Auto adjust formula specifications by target property values
 - Auto adjust formula specifications by ingredient product strengths
 - Auto adjust formula specifications by ingredient product and process losses
 - Auto adjust formula specifications by ingredient costs
- Formula approved for Production Use
- Sample Production
- Production for Make to Order or Make to Stock
- Effective Dates & Revisions
- Obsolete Formula are not available for Production