

V5™ FORMULA SYSTEM FOR CONTROL AND LOT TRACEABILITY

Paperless Lot Traceability



Product Consistency



Reduced Batch Production Time



Allergen, Safety & Recipe Messaging



Simple Real Time ERP Integration



Formulation Control System

SG Systems' V5 Formula Control Scale System is the perfect way to ensure ingredients are measured & traced accurately and consistently, without costly giveaway or out of specification batches.

The system ensures each weighed ingredient has enforced +/- unique tolerances, preventing recipe completion until all ingredients are weighed using the speedometer style target zone.

The system scans and validates lot numbers, providing real time inventory usage and eliminating costly traceability paperwork.

Hundreds of configuration options exist in the standard system, enabling each workstation to be setup to handle many applications including batch, campaign and combination weighing.

The V5 Formula Control Scale System provides effortless compliance with BRC, FDA, FSMA, and many other quality standards.

ADD: 1001 (SALT) - 3.70LB

FORMULA: (RB1) Regular Buns

ING CODE	LOT	JOB	IN STOCK	STEP USAGE	OTHER
1001	10100173	J001-10122017	2178.650	0.000	---
SALT	10100173	10100173	2178.650	0.000	---
100%	GENERAL	GENERAL	---	---	---

FORMULA: (RB1) Regular Buns

Description

- Mix and knead all of the dough ingredients — by hand, mixer, or bread machine — to make a soft, smooth dough.
- Cover the dough, and let it rise for 1 to 2 hours, or until it's nearly doubled in bulk.
- Gently deflate the dough, and divide it into 8 pieces. Shape each piece into a round ball, flatten to about 3" across. Place the buns on a lightly greased or parchment lined baking sheet, cover, and let rise for about an hour, until noticeably puffy.
- Brush the buns with about half of the melted butter.

SEQUENCE	TYPE	COMMODITY	DESCRIPTION	TARGET	ADJUSTED	REMAINING	UNITS	DONE
1	Question		CCP Message (Critical Control Point)...	0.000				✓
2	Weigh	1003	Salt	1.300	0.000	1.300	lb	
3	Weigh	1006	Soft Bake	1.200	0.000	1.200	lb	
4	Weigh	1002	BJ Conditioner	1.100	0.000	1.100	lb	
5	Weigh	1001	Sugar	0.500	0.000	0.500	lb	
6	Weigh	1005	Flour	0.500	0.000	0.500	lb	
7	Weigh	1007	Oil	0.500	0.000	0.250	lb	
8	Weigh	1008	Wheat	0.500	0.000	0.500	lb	

Import / Export Possibilities

Allow automated timed data exchange using the optional Gateway module.

Import possibilities include commodities, formulations, production schedules, locations, users, allergens, safety instructions, recipe messages, supplier PO, customer SO, inventory and more.

All data captured can be exported using a timer or event (batch or job completion, receipt or a PO, completion of a SO etc.).

Warehouse Management System (optional)

- WMS operates on fixed terminals or mobile tablets.
- Receive, move, withdraw and label inventory.
- Record commodity specific QA data.
- Allocate finished batches to sales orders, pick stock, manage freshness and label pallets and ship (against a SO).
- Cycle counting using barcode scanning.
- Multiple unit of measure support, with bulk unit selection for rapid, efficient receipt.



At SG Systems, we understand that poor production control and lack of real time factory floor data can reduce the profitability of a manufacturing business between 2-6%.

That's why we have developed the V5 Formula System for Control & Lot Traceability - the most advanced production floor traceability system available.

An optional software interface 'Gateway' lets the user connect to existing IT/ERP systems, allowing critical production, recipe and inventory data to be shared automatically.



Comprehensive Traceability

Track lot specific received inventory through production (batching, mixing, finished products) to shipping. Track operators through Pin Codes (used to control access levels).

Complete forward and backwards traceability allows supplier and customer led recalls to be resolved quickly and effectively.

Production, Formulation & Rework Control

Location specific production and formulation control allows management to prioritize production batches and monitor the ingredient usage with scaling weight accuracy. Supports BOM within BOM for hierarchical production.

Flexible formulation control allows rigid or flexible formula setup. Post production batch editing allows ingredient adjustment and substitution post mix (including rework).

Production and Usage

Setup a library of recipe messages (for SOP, HACCP, COSHH). Graphical on screen prompts ensure commodity specific Safety & Allergen messages are displayed using GHS Symbols.

Batch Validation allows supervisor only batch sign off when completing a formulation.



Hardware Specifications:

The SG15 Touch Screen is a NEMA4X (IP66) heavy industrial computer designed for harsh manufacturing applications. It is usually supplied with a stainless steel fabricated stand with a built in scale, however the terminal can be supplied and connected to most existing scales and balances using internal connections.

The terminal is constructed using compression seals to maximize ingress protection. Cable entries are sealed and protected. All Terminals are supplied with software applications which run on Windows or Linux as a background operating system.

Stainless steel stands, scales and printer enclosures are fully welded and polished to high manufacturing standards.

System Design Features

- Touch Screen Operation
- +/- Ingredient Tolerances
- Unlimited Ingredients, Recipes & Users
- Excel Reports
- Label Printer & Scanner Options
- Inventory Control Software Available
- Bulk Ingredient Control Options
- End of Line Labeling Options

Networking

The terminals utilize TCP/IP communications to a database using a wired or wireless LAN. This allows multiple terminal to communicate with a central database.

Terminal support is conducted using VNC or RDC.

Supported Peripherals

- Weighing Equipment (4 x analogue inputs, 4 x serial RS232 inputs).
- Barcode Readers (hardwired USB or Bluetooth)
- Label & RFID Printers (network)
- Report Printers (network)
- Temperature Probes (serial RS232)
- PLC & switchgear (serial or network)

Application Summary

- Bakery (Commercial & Retail)
- Beverages
- Chemical, Plastics, Polymers
- Food Processing
- Pharmaceuticals
- Seasonings & Blended Ingredients

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