Factfile:
Trac-IT Recipe Formulation

Recipe Formulation is at the heart of a wide range of manufacturing processes in the food and beverage industries. In a nutshell, its precision and effectiveness set the benchmark for maintaining product quality, optimising stock management and minimising costly waste in processes that have to rely predominantly on manual recipe assembly procedures.

Manufacturers face a number of critical issues and challenges in this area, with many still relying on time consuming manual paperwork systems to manage the recipe procedure. These are inherently inaccurate and do not provide the necessary control and traceability required in these fast paced dynamic industry sectors. Without accurate, real time factory floor data, ERP/MRP systems run 'blind' and unaccountable losses are inevitable.

The Marco Recipe Formulation Module (RFM) has been specifically developed to manage your manual recipe processes, accurately and repeatably. The system guides operators through the formulation process; ensuring each and every ingredient; each and every sub batch is correctly collated. A key advantage is that it can be implemented as a standalone module within your existing factory structure providing a rapid return on investment.

Marco RFM can be used to control the manual addition of micro ingredients, pre-mixes, sub batches and bulk additions. It is ideal for the preparation of:

- Beverage syrups
- Sauces, pastes, dressings, preservatives and gravies
- Dough and cake mixes

How does it work...?

The Marco system manages the whole recipe process from the time a Bill of Materials (BOM) is downloaded to its central DataMaster Terminal through to final mixing. Operator friendly workstation weighing scales, with clear unambiguous graphics, guide the operator through the formulation process. Barcode scanners are used to identify ingredients, premixes and sub batches, ensuring a strict FEFO use by date regime is followed. Simple touch screen prompts guide the user through the recipe process. The weighing of ingredients is controlled via a visual coloured bar graph system, removing the need for operators to concern themselves with actual weight values. Operators cannot proceed to the next addition stage unless correct target weights have been met for the current ingredient. COSSH related parameters for each ingredient are highlighted on the screen, advising operators on all the important factors relating to the actual ingredient being dispensed. The Marco RFM system features include:

- Operator accountability via ID recording
- Use by date compliance
- Stock visibility/availability
- BOM within BOM capabilities
- Ingredient and Recipe validation sign off from allocated users
- Priority scheduling of work orders
- Monitoring of BRC approved suppliers
- Rework routines
- Full COSHH messaging utilising latest GHS symbology
- Allergen warnings displayed at operator terminal for specific ingredients

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Case Study:

Company: Greggs Plc

Location: 12 sites throughout the UK

Project Objectives: To ensure product consistency and to improve traceability and Yield

A prime example of the effectiveness of Marco's Recipe Formulation Module is at Greggs Plc. Founded over 70 years ago, Greggs is the UK's leading bakery retailer, serving delicious, freshly baked quality food to around a million customers each day in over 1,500 shops around the country.

The Marco RFM systems provide important controls during the manual recipe procedures at 12 of Greggs' bakeries. They further satisfy the growing demands being placed on companies such as Greggs for greater traceability and accountability for their products. The systems at each site are based on dual scale DataMaster workstations and detailed bills of materials for specific recipes are transmitted from the bakery's central computer to these workstations. The operators can then select the correct amount and type of each ingredient by keyboard entry or bar code scanner. The RFM system has the ability to size recipes for constantly changing demands and will not allow the operator to continue if ingredients are missed out or added in error.

Operators are guided through the ingredient addition process via an easy-to-read analogue bar graph showing weight change trends as product is added. This method for displaying and controlling operator initiated filling processes is highly effective: weights below the target are shown as amber, changing to green in the acceptance zone. Overweight is highlighted in red and where possible the system will recalculate the size of a batch if too much of a particular ingredient is accidentally added. The dual scale feature allows both major and minor ingredients to be weighed with the optimum accuracy.

"Marco's RFM provides us with systems that integrate seamlessly with our main management software system. Recipe accuracy and consistency parameters are ensured and we can now control our production scheduling from a central location at each bakery. Stock records can be automatically updated as product is used and as a result our stock control and product usage are optimised. Each and every action during the recipe process is electronically recorded to provide us with comprehensive traceability data. All this translates to improved quality and profitability."
Simon Wales, Greggs Plc

GREGGS

Contact us for details on our other Profitability Modules:
Waste Management Module
Yield Control Module
Average Weight Module
Line Control Module

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