ORACLE PROCESS MANUFACTURING PRODUCT DEVELOPMENT

- Product Development Workbench
- Formula security by organization, role, and user collaborative
- S88 compliant recipes
- Graphical recipe designer
- Experimental items in lab formulas and batches
- Rule-based formula and recipe development, approval, and usage
- Change management with mass search and replace tools
- Automatic recipe generation
- Date-driven ingredient substitutions
- Formula and batch optimization based on characteristics and cost

Oracle® Process Manufacturing Product Development delivers comprehensive and powerful tools that allow process manufacturers to manage the product lifecycle from inception through production. With OPM Product Development, you can accelerate innovation to market, assure consistent, quality products, and minimize costs and compliance risks.

Secure and Manage Data with Product Lifecycle Management

The challenge of maintaining existing customers while attracting new ones in an increasingly competitive market requires continual innovation in products and processes. OPM Product Development uses powerful tools such as status control and automated approval workflows to streamline the movement of products from early experimental stages through piloting and into full production.

Global, Secure Information Access

OPM Product Development uses role-based workbenches that organize views of all your product development components such as recipes, formulas, routings and operations into a single, unifying interface. These views are securable, so that critical data like material properties, processing instructions, quality specifications, results, and regulatory data are all accessible to the right people. As a result, improved information access and visibility enables better collaboration in the development and maintenance of new and existing products.

Industry Compliant Recipe Management

OPM supports the recipe structure of defining General, Site, Master and Control Recipes that comply with the S88 standard for batch control. Formulas, routings, and their components comprise recipes that can be managed at a global level, filtered down through the organization, and adjusted to meet local demands. These S88-compliant definitions allow the reuse of recipes to suit your operational needs.

With Oracle Process Manufacturing, you can maintain multiple formula versions and types—including standard, plant-specific, planning, and costing formulations—while exercising rules-based control to guarantee that you always use the appropriate formula for a designated activity.

Accelerate Recipe Development and Innovation

OPM Product Development saves time and reduces errors by automating work processes, enabling easy re-use and modification of proven recipes to facilitate the development of new formulations that meet desired specifications and the transfer and scale-up of approved recipes to production.

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Recipe Designer

Common and structured product descriptions are key requisites to improve product design communication and sharing among all stakeholders. The Recipe Designer greatly simplifies the task of creating and maintaining recipes by providing an integrated, graphical environment where Formulators and Process Engineers can collaborate in the recipe development process.

- Improve productivity with search and copy utilities for existing trials and proven recipes, formulas, and routings

- Reduce training costs and facilitate user adoption with an intuitive, easy-to-use graphical interface

- Manage all aspects of a recipe including operation step dependencies, material utilizations, and processing instructions in a single screen

Mass Search and Replace, Default Status, and Automatic Recipe Generation

The Mass Search and Replace utility enables the identification and replacement of key components in formulas, routings, operations, and recipes for single or multiple organizations. As part of change management control, this tool assists in the management of status and version for each changed component. For industries or companies where extensive sign-offs are unnecessary, two additional features will reduce keystrokes and ensure accuracy. Default Status enables users to bypass the Status Approval process and create recipes that are immediately ready for use in production. Automatic recipe generation provides business rules that will automatically create a recipe and its validity rules whenever a formula is created.

Ingredient Substitution

Ingredient substitution is a critical business need for process industries to meet stringent product specifications during batch production. Ingredients may be replaced for various business reasons such as obsolescence, customizations, pricing, or regulatory compliance. To simplify the change management of approved formulas, OPM supports an approved ingredient substitution list that can be associated to multiple formulas and automatically recognized in planning, costing, and production batches as a one-to-one replacement based on effective dates.

Reduce Costs and Optimize Formulations

Process manufacturing companies need improved efficiencies for modeling new product formulations and an improved ability to accurately estimate the effects of material substitutions on product consistency based on known ingredient characteristics and proven production processes. Product requirements from customers and regulatory agencies can also mandate the limits of certain substances used in the manufacture of goods. OPM Product Development offers tools in a secure, independent environment for experimentation that can help chemists and formulators reduce the uncertainty about the composition of a formula.

Computer Aided Formulation

Driving continuous product improvement, OPM Product Development enables you to model and analyze the impact of formulation changes before producing expensive and time-consuming laboratory test batches. With sophisticated "what if"

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capabilities, you can model new or revised formulations efficiently—without interfering with production.

The Simulator provides the ability to see the impact of different ingredients on a product's total output. A full formula explosion is available for evaluation of ingredient quantities and attributes contributing to the product. It also allows the selection of alternate items and running of laboratory batch simulations using actual lots and quality results. Users can load batches and lots into the simulation tool, enabling the recalculation of quantities and technical characteristics in order to re-balance or update the batch with new quantities and allocations. In addition, the Optimizer enables users to specify product targets and find the best mix of ingredients based on the formulation entered.

Least Cost Formulation

For Process industries that rely heavily on the blending of ingredients or primarily use commodities as the basis for their products, variable characteristics and costs found in the raw materials must be taken into account in order to produce a consistent, high-quality product. OPM's Least Cost Formulation solution creates price-optimal formulas and batches based on product specifications for material, compositional, and quality requirements for regulatory, nutritional, or chemical content, and other industry or customer-specific attributes. The power of Least Cost Formulation is the ability to analyze the myriad of possible material combinations and suggest the best possible mix without an existing formula. That optimal mix is achieved by analyzing ingredient characteristics, up-to-date prices, and the product specification. Implementing Least Cost Formulation can save companies an annual 2% - 10% of the total value optimized.

Conclusion

OPM Product Development offers an in-depth, feature-rich recipe development and formula optimization solution that provides several key benefits:

- Accelerate time-to-market of new products

- Scope out and pursue product development ideas with advanced workbench and simulation capabilities

- Re-direct research efforts early on if results prove to be unprofitable

- Simplify installations and integrations by eliminating other applications currently being used for advanced formulation

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- Accelerate innovation to market
- Assure consistent, quality products
- Minimize costs and compliance risks

RELATED PRODUCTS:

OPM Product Development is part of Oracle Process Manufacturing (OPM) product family, designed to work together with the following products:

- Oracle Advanced Planning and Scheduling
- Oracle Approvals Management
- Oracle E-Records
- Oracle Inventory
- Oracle MES for Process Manufacturing
- Oracle Product Lifecycle Management
- Oracle Workflow

RELATED SERVICES:

The following services are available from Oracle Support Services:

- Update Subscription Services
- Product Support Services
- OnlineDBA
- OnlineDBA for Applications

Oracle E-Business Suite—The Complete Solution

Oracle E-Business Suite enables companies to efficiently manage customer processes, manufacture products, ship orders, collect payments, and more—all from applications that are built on unified information architecture. This information architecture provides a single definition of your customers, suppliers, employees, and products—all important aspects of your business. Whether you implement one module or the entire Suite, Oracle E-Business Suite enables you to share unified information across the enterprise so you can make smarter decisions with better information.

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