COMPUTER-BASED PRODUCT FORMULATION

ABSTRACT

A computer implemented method of formulating a product (e.g., a chemical product) includes receiving a product formulation script that guides the formulation of a product from a number of different components. The script can, e.g., set forth required and optional components and groups of related alternative components. To provide for such guidance, the script includes (i) a component selection option identifying sets of formulation components, (ii) at least one constraint to identify a numeric range associated with a property of one of the formulation components, and (iii) a target constraint. The product formulation script is processed to determine a collection of formulation components that can be used to produce the product such that one or more properties of the product meet associated target constraint(s). Processing of the script also includes selecting from among optional formulation components. This selection can be performed by determining sets of formulation components to be used in formulating the product and determining a permitted range associated with the formulation components. The permitted ranges enabling the formulated product to meet the target constraint(s).

Fig. 2