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(54) Title: ESTIMATING COMPOSITIONAL INFORMATION FROM LIMITED ANALYTICAL DATA

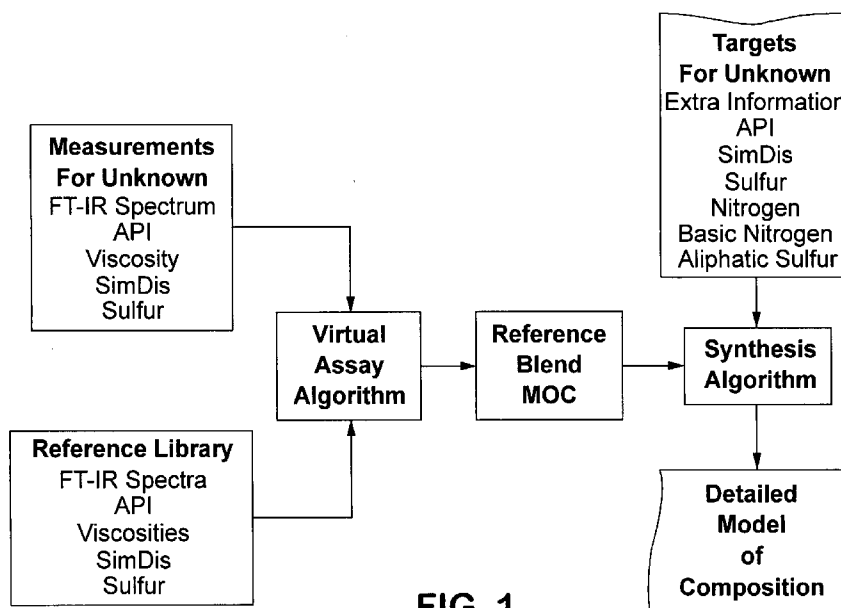


FIG. 1

(57) Abstract: A method for determining the composition of a material including the steps of fitting multivariate analytical data of the material to a combination of multivariate analytical data in a database to determine coefficients of the combination so as to determine a reference model of composition based on the coefficients and the compositions in the database, wherein the database includes multivariate analytical data of database materials whose compositions are known, and reconciling the reference model of composition to match properties of the material.