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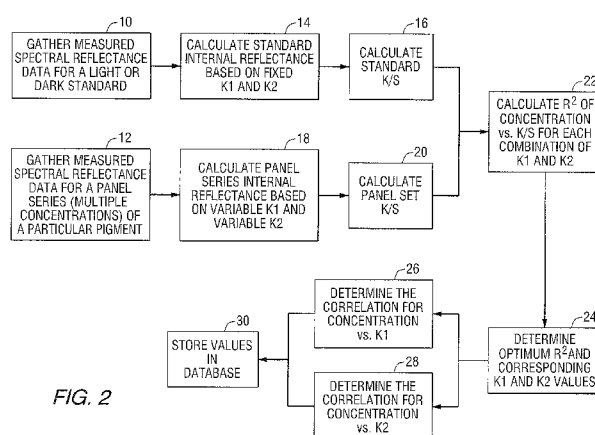


FIG. 2

(57) Abstract: A computer implemented method. The method includes generating, using a processor, a set of calibration data relating to a plurality of pigments that are present in a collection of coatings. Generating includes calculating an absorption/reflectance relationship of a plurality of samples coated with a plurality of the pigments, wherein calculating includes using a color matching calculation, and calculating a plurality of concentrations of a non-standard pigment. Generating also includes plotting a relationship between the concentrations and the absorption/reflectance relationships, and determining a correlation of the concentrations for a plurality of Fresnel coefficients relating to the samples. The method further includes determining, using the processor, a coating formulation of a target coating based on the correlation.