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(54) **METHOD OF DETERMINING PRESENCE AND CONCENTRATION OF LIPOPROTEIN X IN BLOOD PLASMA AND SERUM**

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(58) **Field of Search** 422/68.1; 436/71, 436/173; 324/307, 310, 311, 312

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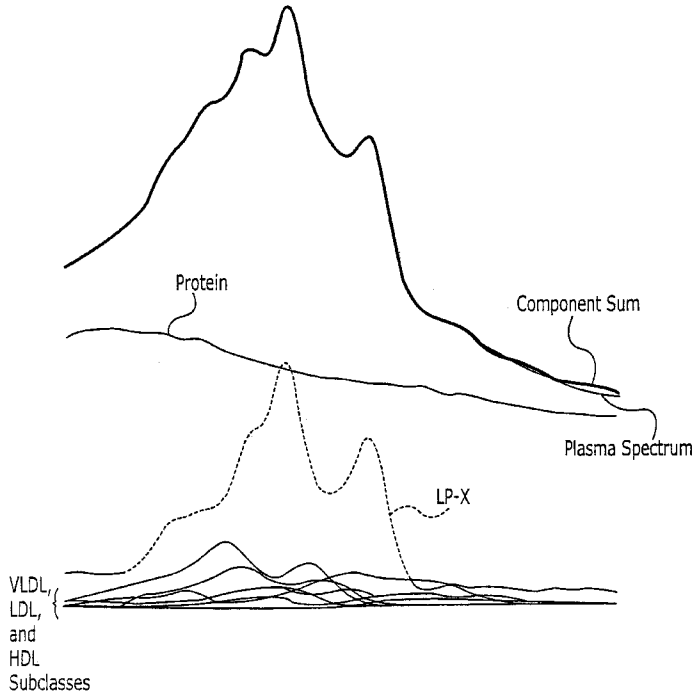
(57) **ABSTRACT**

A method of screening a subject for the presence of lipoprotein X includes the steps of: producing a measured lipid signal lineshape of an NMR spectrum of a blood plasma or serum sample obtained from a subject; generating a calculated lineshape for the sample, the calculated lineshape being based on derived concentrations of lipoprotein components potentially present in the sample, the derived concentration of each of the lipoprotein components being the function of a reference spectrum for that component and a calculated reference coefficient, wherein one of the lipoprotein components for which a concentration is calculated is lipoprotein X; and determining the degree of correlation between the calculated lineshape of the sample and the measured lineshape spectrum of the sample. This method can enable the practitioner, during a routine and easily-conducted cholesterol screening, to identify the presence of LP-X in a subject and begin diagnosis and treatment for conditions associated with LP-X (such as liver disease or LCAT deficiency).

15 Claims, 8 Drawing Sheets