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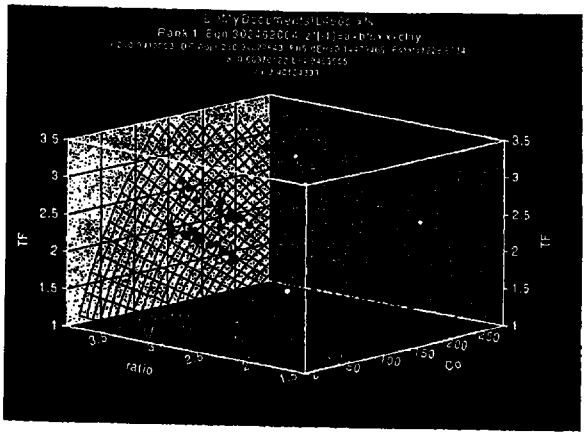
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(54) Title: ELECTROCHEMICAL METHODS AND DEVICES FOR USE IN THE DETERMINATION OF HEMATOCRIT CORRECTED ANALYTE CONCENTRATIONS



(57) Abstract: Methods and devices for determining the concentration of an analyte in a physiological sample are provided. In the subject methods, the physiological sample is introduced into an electrochemical cell having a working and reference electrode. A first electric potential is applied to the cell and the resultant cell current over a period of time is measured to determine a first time-current transient. A second electric potential of opposite polarity is then applied and a second time-current transient is determined. The preliminary concentration of the analyte is then calculated from the first and/or second time-current transient. This preliminary analyte concentration less a background value is then multiplied by a hematocrit correction factor to obtain the analyte concentration in the sample, where the hematocrit correction factor is a function of the preliminary analyte concentration and the variable γ of the electrochemical cell. The subject methods and devices are suited for use in the determination of a wide variety of analytes in a wide variety of samples, and are particularly suited for the determination of analytes in whole blood or derivatives thereof, where an analyte of particular interest is glucose.

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