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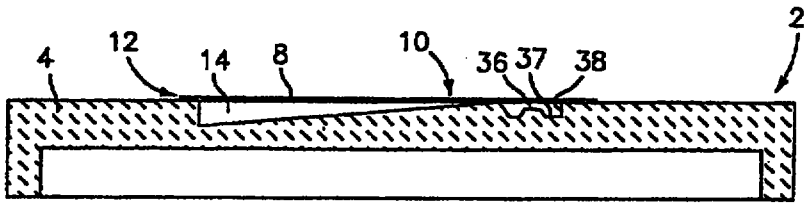
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(54) Title: CALIBRATION OF A WHOLE BLOOD SAMPLE ANALYSER



(57) Abstract

Formed constituents of a quiescent anticoagulated whole blood sample are optically analyzed by an optical scanning instrument (54), which sample is contained in a sample chamber (14) that has a varying through plane thickness. The thickness of any fields of view in the blood sample which contain plasma lacunae can be calculated by the instrument as a function of signal emission strength emanating from the colored plasma in the lacunae. The signal emissions can be the result of sample fluorescence or can be the result of signal density emanating from the sample. Particle volumes can be measured as a function of signal emission suppression which is caused by formed particles in the blood sample. The scanning instrument is calibrated by means of the inclusion of a calibration area (13, 38, 40) associated with the chamber which calibration area includes a portion (37) which receives a known depth of colored plasma from the blood sample, and which calibration area also includes a colorant–emission–altering feature (36) which feature has a known volume. The scanning instrument scans the known depth portion of the calibration area to determine what degree of signal emission strength correlates to the known depth, and the scanning instrument also scans the colorant–emission–suppressing feature to determine what degree of signal alteration correlates to the known volume of the aforesaid feature. The instrument stores the information gained from the calibration area and then proceeds to analyze the blood sample for formed constituent volumes and constituent counts per unit of the blood sample.