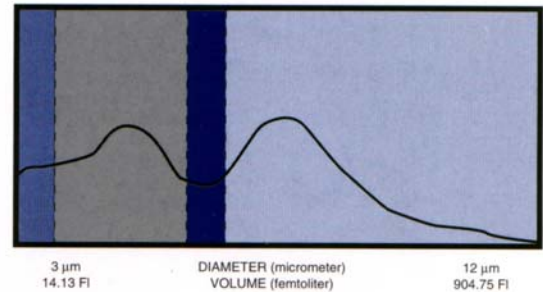


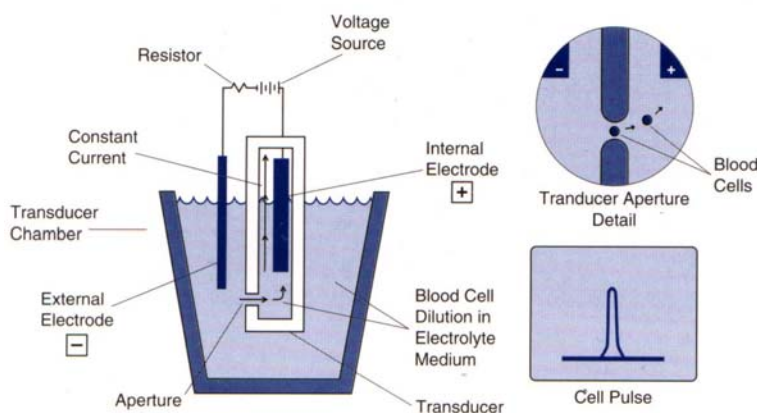
The ALCAT Diagnostic System

Recognizing that patients' reactions to foods, molds, chemicals, and drugs follow various pathways, a technologically simple method of measuring the effects of multiple pathogenic mechanisms on cellular populations provides the most logical and cost-efficient approach to testing such sensitivities. It appears that most, if not all, of the various mediator pathways involved in these sensitivities affect reactions in associated blood cells. The ALCAT Diagnostic System is designed to measure these blood cell reactions. The methodology includes using innovative laboratory reagents allowing for accurate cell measurement in their native form. Individually processed test samples, when compared with the Master Control graph, will show cellular reactivity (cell count and size) if it has occurred. Scores are generated by relating these effective volumetric changes to the control curve.

Master Control Histogram



- Area of curve where PLATELET AGGREGATION (if any) can be observed
- MIXED CELL DISTRIBUTION region
- LYMPHOCYTE region
- GRANULOCYTE region



PRINCIPLE OF OPERATION

Measurements are made using the electronic principle of particle counting and sizing, which is based on changes in electrical resistance (pulses) produced by a particle (in this case a blood cell) suspended in a conductive liquid traversing a small aperture. The particles, or cell pulses, are counted and discriminated by size comparators to produce a histogram. The histogram is displayed by plotting the relative number of counts on the y-axis. The cell size (in femtoliters) is displayed by plotting on the x-axis. Relative number (frequency) will refer to the number of cells of a particular size. The relative number is depicted by the height of a peak or the depth of a valley between two peaks.

TEST RESULTS

In simple terms, the ALCAT procedure is the formulation of histograms after a blood cell suspension has been incubated with a specific substance and then compared to the Master Control histogram derived from a blood cell suspension treated identically, except without including the reagenic substrate. (Although platelet aggregation is depicted here to illustrate the precise real area where it would be observed, modification of the program will cause it to also be depicted as an increase in cells in the lymphocyte fracture, so that its occurrence can be calculated as part of the overall percent score.)

Sample Reaction Histograms

