Item Number 148 - Analysis Of Whole Blood

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Technology description

Summary

The existence of infectious diseases, and particularly AIDS, presents a hazardous situation for the laboratory and clinical personnel whose responsibility it is to analyze contaminated blood samples for analytes unrelated to these diseases.
This has given rise to the creation of "Universal Precautions" which have further increased the difficulties of handling and the complexity of the processing procedures. This is a major problem, for hundred of millions of clinical tests are run annually in the USA alone using blood as the sample source, and it has been estimated that as much as 7% of all such specimens contain HIV, the causative agent for AIDS. It is clear that advances which reduce the number of procedural steps offer both increased safety and decreased assay time.
The development at hand provides a straightforward and inexpensive method for the quantitative assay of analytes contained in whole blood. No pretreatment of the blood, converting it to serum or plasma, is necessary. Any analyte that can be coupled to the co-factor NADH can, in principle, be quantitated. Scores of such coupled assays have been described. Proof of principle has been established initially with the therapeutic drug, phenytoin.

Advantages

The sampled volume of blood is small, lessening trauma and disposal problems.
The technology requires minimal sample handling, thereby lessening personnel exposure.
Procedural simplicity also results in time savings, making this development appropriate for stat and patient bedside testing.

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