

[54] COLOR CONTROL SYSTEM

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[57] ABSTRACT

An assay system useful for the determination of NAD(P)H, NAD(P), or a substrate of an enzyme which reacts with the formation or consumption of NAD(P)H. Concentrations of organic substrates for example alcohol, cholesterol, uric acid, in a biological fluid such as saliva, blood or urine may be determined. The system includes a diaphorase which catalyzes a NAD(P)H-dependent reduction of a chromogen to cause a visible color change; this color change is indicative of the concentration sought to be determined. The system includes a chromogen which is a first substrate for the diaphorase which causes a color change when reduced by NAD(P)H, and a second substrate which is a competing substrate for the diaphorase; the competing substrate is irreversibly reduced by the diaphorase. The system is capable of measuring colorimetrically without dilution concentrations of organic compounds in biological fluids which previously could not be measured in such concentration. The system provides a convenient, practical sobriety test. The invention also provides a method for such determination and diagnostic kit.

61 Claims, 13 Drawing Sheets