ABSTRACT

A HANDHELD DEVICE WITH A DISPOSABLE ELEMENT FOR CHEMICAL ANALYSIS OF MULTIPLE ANALYTES

A portable system and method for measuring the concentration of multiple chemical or biological substances where an onsite analysis of such substances is needed. The new and original handheld sensor system uses a disposable optical test element and a spectroscopic detector that measures the test element response to specific analytes through a change in light absorbance, luminescence, and other forms of light-based response. In this way, reflection light intensities indicative of the test element response can be used to measure the concentration of the target analytes. The sensor system is also capable of being interfaced to an information processing unit or computer so that analytical data can be manipulated or stored electronically.

Figure 1