

Determination of Lactic Acid, Niacin, and Alcohol in Various Foods and Beverages by Biosensors

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Summary

Lactic acid and alcohol sensor systems were constructed with lactate oxidase and alcohol oxidase, immobilized on an oxygen electrode. Each electrode was connected to a personal computer and the detected values were processed automatically. Determination of lactic acid, niacin (by the application of lactic acid sensor), and alcohol in various foods and beverages utilizing the biosensors were carried out with favorable results. These compounds can be determined in 1 minute with extreme sensitivity, i.e., as low as 5 ppm for lactic acid and 5 ppb for alcohol. The usefulness of these biosensor systems was proved.