Abstract

A voltammetric electronic tongue consisting of a composite metal base electrode array for discrimination of basic taste has been presented. The electrode array consisting of Gold, Nickel, Palladium, Copper and Glassy Carbon as working electrode, has been used for transforming information of taste substances into electric signal. The electrodes output show different patterns for chemical substances that have different taste qualities such as saltiness, sourness,
Basic and Mixed Taste Analysis using Voltammetric Electronic Tongue

sweetness and bitterness. Experiments were carried out on 10 different chemical solutions eliciting 4 different basic tastes (namely salty, sour, sweet and bitter) at 1 M (or 1N) aqueous solution. Experiments have also performed on the mixed taste i.e., taste consisting of four basic taste parameters. Principal component analysis (PCA) was used for visual inspection of data set. Classification was performed by statistical method. A fairly high degree of discrimination was obtained.

Reference


Index Terms

Computer Science Wireless

Key words

Electronic Tongue

Voltammetry

Basic Taste

Virtual Instrumentation