

Elektrogustometr uniwersalny EG-1

Universal electrogustometer EG-1

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Summary

Electrogustometry has been used as a clinical tool for diagnosis and assessment of a variety of conditions. Since the lack of versatile electrogustometer for research and diagnosis, the new electrogustometer EG-1 was developed in 2006. It was done in cooperation between Warsaw University of Technology and Military Institute of Medicine in Warsaw. EG-1 allows quantitative estimation of taste perception threshold using both static and impulse electrogustometry with bipolar electrode. It is a fully autonomous, battery powered and portable instrument. Because of small size and weight, it can be easily placed in any environment. Microprocessor controlled measurement system and user-friendly interface (LCD display with simple keyboard) make EG-1 electrogustometer very handy and flexible in operation. Data obtained during measurements is stored in the internal device memory. After taste examinations measurement data can be transferred to a personal computer via inbuilt USB port for further analysis and storage. EG-1 can generate three predefined variously shaped current impulses: sinus-, saw- and rectangle-shaped. There is an optional possibility of creating own shapes of stimulus puls by the user. The electrical parameters of generated pulses are as follow: current amplitude 1-2000 μA regulated with 1 μA step, stimulus frequency 0(DC)-500 Hz regulated with 5 Hz step, controllable fulfillment factor and signal rise time (optional for automatic measurements). The operator can trigger the stimuli via a hand switch on the bipolar electrode (with gold-plated endings), via keyboard or via additional independent hand switch. Three years of experience collected during EG-1 exploitation allow to design a new version of electrogustometer EG-2 with a touch panel and color graphical display.

Key words: taste examination, electrogustometry, impulse electrogustometry, microprocessor measurement system, bipolar electrode, USB port, LCD display, touch panel