METHODS & EQUIPMENTS in 1970's

[1] NEURAL REGULATION OF ATRIOVENTRICULAR CONDUCTION

Japan. J. Physiol., 21,pp. 15-25,1971

Hiroshi IRISAWA,* W. M. CALDWELL and M. F. WILSON

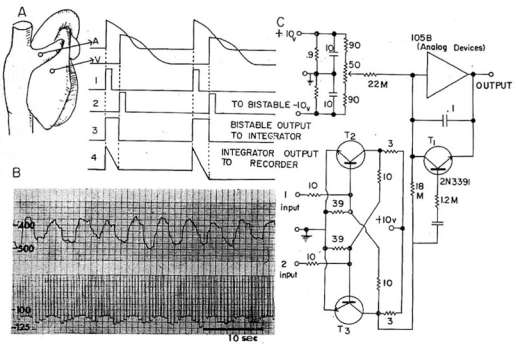
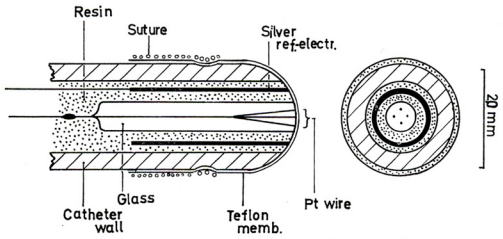


Fig. 1. Method for registering the A–V interval. A: Inset picture indicates the localization of the electrodes on the right atrium and the right ventricle. A and V are the original tracings. The pulses immediately below correspond to the onset of the action potentials A and V. These pulses control the duration of bistable multivibrator output which is equal to the A–V interval. Finally, the negative moving ramp is the integrated output of the recorder. B: Relation between R–R interval (upper tracing) and the A–V interval (lower tracing). Ordinate numerals are msec. C: Circuit of A–V interval meter: T_1, T_2 and T_3 are 2N3391.

[2] A HYDROGEN CATHETER ELECTRODE FOR THE DETERMINATION OF BLOOD FLOW THROUGH ORGAN TISSUE AND CORONARY BLOOD FLOW UNDER CONTINUOUS HYPOXIA

Japan. J. Physiol., 21,pp. 209-228,1971

Tomiyasu KOYAMA and Yoshiaki MARUTANI



Figl 1. Schematic illustration of the H_2 catheter electrode.

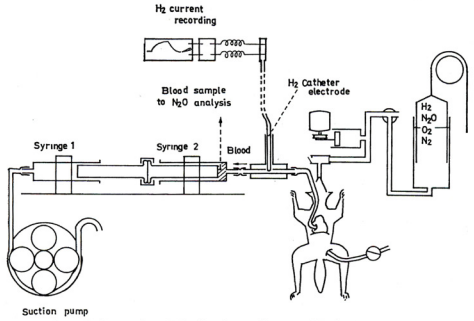


Fig. 2. Schematic illustration of the blood sampling assembly for simultaneous determinations by use of the N_2O and H_2 methods.

[3] EFFECTS OF Na^+, K^+, AND OUABAIN ON MICROPHONIC POTENTIALS OF THE GOLDFISH INNER EAR

Jap. J. Physiol., 21, 563-578,1971

S. MATSUURA, K. IKEDA and T. FURUKAWA

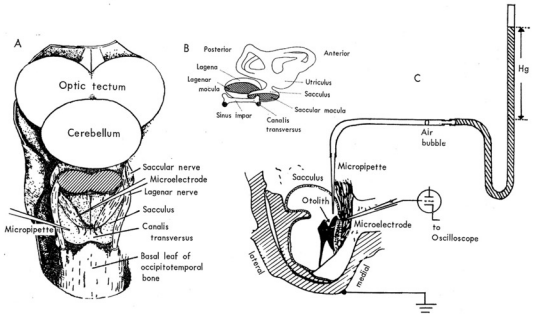


Fig. 1. Structure of the hearing organ of goldfish. A: base of the cranial cavity after medulla and vagus lobes have been removed. Sites for insertion of the recording electrode and the perfusing pipette are shown. B: left labyrinth of goldfish, viewed from medial side. C: schematic diagram of the experimental methods for perfusion of the endolymphatic tube and recording of the microphonics.

[4] THE ELECTRIC POTENTIAL CHANGE OF INTERNAL MEMBRANE DURING PROPAGATION OF CONTRACTION IN SKINNED FIBRE OF TOAD SKELETAL MUSCLE

Jap. J. Physiol., 25, 51-63,1975

Reiji NATORI

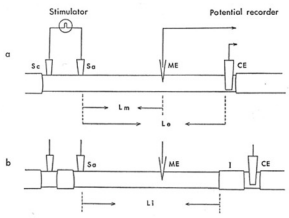


Fig. 1. Schematic illustration of recording of potential change of skinned fibre. Sa: anodic stimulating electrode (Ag-AgCl). ME: microelectrode. CE: Ag-AgCl electrode. I: unskinned portion. Le: distance between Sa and CE. Lm: distance between Sa and ME. Li: distance between Sa and I.

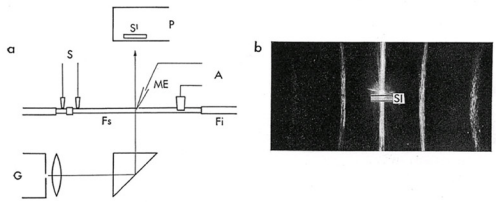


Fig. 2. Diagram of recording of potential change and change in light quantity due to diffraction of gas-laser beam. a, Fs: skinned portion of muscle fibre. Fi: intact portion of muscle fibre. S: stimulator. ME: microelectrode. A: potential recorder. G: gas laser. P: photomultiplier tube. Sl: slit in front of photomultiplier tube. b, Diffraction spectrum and slit in front of photomultiplier tube.

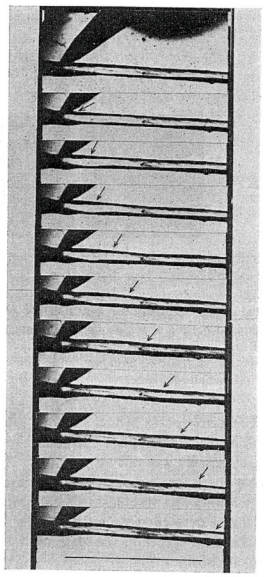


Fig. 3. Cine photographs of propagating contraction of skinned fibre. Cine film was taken at 32 frames per second. Scale bar: 1 mm.

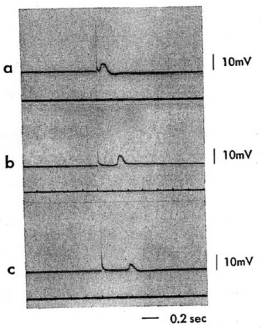


Fig. 4. Records of potential change of propagating contraction of skinned fibre. Skinned fibres of m. adductor magnus of toad, 18°C. a, distance between Sa and ME (Lm): 0.3 mm. The resistance of ME (Re): 50 MΩ. b, Lm: 0.8 mm. Re: 30 MΩ. c, Lm: 1.3 mm. Re: 40 MΩ. The first spike in each electrogram is an artifact due to stimulation.