tensive Lichtblitze (Photoblitz Deutsche Elektronik, effektive Dauer ca. 1 msec) möglich (Figur 2). Ein Nachteil der Methode liegt in der Brüchigkeit des Materials, welche die Bearbeitung erschwert. Die Herstellung photoartefaktfreier Elektroden erscheint jedoch im Hinblick auf die Darbietung energiereicher Lichtreize einerseits und die Registrierung praktisch latenzloser Potentiale («early receptor potential») andererseits von Bedeutung, um Verwechslungen von Becquereleffekt und ntraokulär entstandenen Biopotentialen zu vermeiden.

Summary. Distortion of the electroretinogram by Becquerel effect may be excluded by using carbon rod instead of metallic wire in connecting the electrode.

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Liquid Scintillation Counting Medium for Aqueous Samples

Determination of the radioactive content of biological samples which are soluble in water but insoluble in organic solvents presents a problem since scintillation counting is usually carried out in organic solvent systems. Such solvent systems have only very small capacities for water, and addition of water above the limit results in the formation of a two phase system and/or precipitation of the scintillator solutes. Even many commercially available liquid scintillator systems which have some capacity for water in fact only accept small proportions of water.

Dioxan is a suitable base for a high water capacity liquid scintillator system, and various systems incorporating dioxan were assessed. The one having the best characteristics, described subsequently, was prepared by dissolving 2,5-diphenyloxazole (PPO, 40 g), 1,4-*bis*(2-(5-phenyloxazolyl))benzene (POPOP, 2 g) and naphthalene (325 g) in xylene (500 ml), 2-ethoxyethanol (1500 ml) and *p*-dioxan (1500 ml).

This system was capable of accepting water at the rate of 2.2 ml/10 ml scintillator, and the presence of salts in the water did not appreciably alter this figure, e.g. the capacity for 0.5 *M* sodium chloride was 2.1 ml/10 ml scintillator. Counting efficiencies greater than 65% for carbon-14 and 55% for sulphur-35 were obtained for this scintillator system when it contained 2.1 ml 0.5 *M* sodium chloride/10 ml.

An advantage of this scintillator system is that it combines high water capacity with high naphthalene content. The latter reduces oxygen quenching to a negligible value and hence eliminates the need for nitrogen flushing of each counting vial. Furthermore, the system gave a low background count. Although dioxan can give higher backgrounds, these are attributable to impurities, and provided analytical grade was used, no trouble was experienced. Photoluminescence background was negligible after storage of the counting vials in the dark for 6 h after preparation. Since most counters are automatic, storage and counting at 4 °C (which further reduces background) are easily achieved.

Since the scintillator is capable of accepting salt, it is not only suitable for counting aqueous solutions, but can be used for solid biological specimens which are soluble in acid or alkali. After dissolution, the solution is merely neutralized before addition of scintillator. This is an advantage over the use of hyamine for dissolution, and the method of planchette counting.

The presence of the secondary scintillator (POPOP) in the scintillator fluid renders it suitable for tritium and mixed isotope counting[1].

Résumé. Nous décrivons la composition et les propriétés d'un milieu liquide qui permet de mesurer la scintillation et qui est capable d'absorber des quantités importantes d'eau et de sel. Nous donnons des précisions sur la méthode et ses avantages; elle convient surtout pour compter les isotopes suivants: carbone-14, soufre-35 et hydrogène-3.

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ACTUALITAS

International Cell Research Organization (ICRO)

1. *Training Courses.* One of the main activities of ICRO is the organization of training courses on topics of high novelty and on modern techniques in cellular and molecular biology: Principles and techniques of tissue and organ culture; Genetics and Physiology of Bacterial viruses; Energy transducing systems on the sub-cellular level; Methods in mammalian cytogenetics; Membrane Biophysics; DNA-RNA Hybridization; Biogenesis of Mitochondria; Embryology and Epigenetics; Interaction between Animal Viruses and host cells, application of computers to experimental work in biology and chemistry; Methods in molecular biology, etc. The courses generally last 3–5 weeks, and include 16–20 young participants (sometimes more). The ICRO courses are fully international, both the teaching staff and the participants coming from the largest possible number of countries.

2. *The Problem of Developing Countries.* Most of the past ICRO courses have been organizing in European countries – east and west – but the demand from developing countries is increasing steadily. ICRO activities in developing countries may tend to give preference to topics of potential economic usefulness, such as applied microbiology, microbial protein production, fermentation industries, soil microbiology, plant genetics, etc.

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