

## عنوان مقاله:

Clarifying an Electrometric Method for Determining Blood Cholinesterase Activity: A Scientific Letter

## محل انتشار:

مجله سم شناسی پزشکی آسیا اقیانوسیه, دوره 11, شماره 1 (سال: 1401)

تعداد صفحات اصل مقاله: 3

## نویسنده:

Fouad Mohammad - University of Mosul, College of Veterinary Medicine

## خلاصه مقاله:

**Abstract** In this scientific letter, a modified electrometric method is clarified for rapid and accurate determination of blood cholinesterase (ChE) activity in man and various animal species. Our electrometric method for ChE determination is a modified one that we refined and developed after several years of research and validations in various animal species as well as in man. The developed method has been applied in many research projects on poisoning with organophosphate and carbamate insecticides. Given the importance of the subject of ChE biomonitoring, and to further clarify the assay technique of the modified electrometric method, a brief and a concise description of the procedure would be beneficial for researchers of limited resources. The enzymatic (ChE) reaction mixture consisted of ۳ ml of distilled water, ۰.۲ ml of plasma, erythrocytes or whole blood, and ۳ ml of barbital-phosphate buffer (pH ۸.۱). The initial pH (pH<sub>1</sub>) of the mixture is measured with a pH meter, and thereafter ۰.۱ ml of the substrate acetylcholine iodide (۷.۱%) or acetylthiocholine iodide (۷.۵%) is added. The mixture is incubated at ۳۷ °C for ۳۰ min in most animal species or for ۲۰ min in man; the pH<sub>۲</sub> of the reaction mixture is measured again. The activity of blood ChE is calculated as follows: ChE activity (D pH/۲۰ min-in man) = (pH<sub>1</sub> – pH<sub>۲</sub>) - D pH of blank (no blood (sample).

## کلمات کلیدی:

Cholinesterase Method, Organophosphates, Carbamates, Insecticide poisoning

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1423356>

