

MARINE MOLLUSCS AND MOLECULAR MARKERS:
PROTEIN ELECTROPHORESIS

Vibeke Simonsen & Kongkiat Kittiwattanawong

*Department of Marine Ecology, Institute of Biological Sciences, Finlandsgade 14,
DK-8200 Arhus N, Denmark*

*¹Present address: National Environmental Research Institute, Vejlsoevej 25, P.O. Box 314,
DK-8600 Silkeborg, Denmark*

ABSTRACT

The aim of this review is to present the protein electrophoresis method, and to demonstrate the application of these molecular markers for investigating populations of marine molluscs. The method may be used for studying Mendelian inheritance of markers and population dynamics, *eg* inbreeding, Wahlund effect, genetic differentiation or gene-flow among populations, or selection. Examples of identification of broodstocks as well as estimation of the number of individuals are presented. The application of protein electrophoresis for taxonomic studies has been very successful. The present review shows that gel electrophoresis of isozymes combined with morphological characteristics or with life history characteristics, *eg* reproductive mode, is a versatile tool for identification of species and populations of molluscs.