ABSTRACT

THE USE OF SILICONE PLASTINATED SPECIMENS FOR LIGHT AND ELECTRON MICROSCOPY

Gilles Grondin, Gilles G. Grondin[1]
and Brian G. Talbot
Departement de biologic,
Faculte des sciences, Universite de Sherbrooke,
Sherbrooke (Quebec) Canada, JIK 2R1.

1. Departement de chimie-biologie, Universite du Quebec a Trois-Rivieres, Trois-Rivieres Quebec) Canada, G9A 5H7.

Plastination is a technique which permits the preservation of anatomical specimens in a physical state approaching that of the living condition. We have studied the possibility of using silicone plastinated fragments of the spleen and pancreas for optical and electron microscopy. We have found that, given an adequate fixation protocol, plastinated specimens can be used for both structural and ultrastructural studies. Initial difficulties in obtaining clean cuts were overcome by deplastination in sodium methoxide. Artifacts produced by the plastination/deplastination procedure are almost eliminated by the use of a glutaraldehyde/formaldehyde fixation protocol. The (Biodur) silicone S10 polymer is transparent and stable to electron beams and plastinated tissues can be contrasted or colored in a similar way to tissues embedded in Epon 812. Thus, plastinated tissues, as well as being very life-like, stable and easy to handle, can now be used as a source of material for electron and light-microscopic studies.

Gilles Grondin, Gilles G. Grondin and Brian G. Talbot: A study of criteria permitting the use of plastinated specimens for light and electron microscopy. Biotechnic and Histochemistry 69(4)1994.

Per: Biotechnique & Histochemistry
(Veda L Rich)

Countries Cross Paths

If you can find mistakes in this publication, please consider they are there for a purpose. We publish something for everyone and some people are always looking for mistakes.