## Histopathological evaluation of hard tissues and biomedical devices in their tissue implantation surrounding, using a Plastic Embedding Technique (Ramot)

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Plastic embedding is a method that allows histological examination of soft and hard tissues (e.g., blood vessels, bones, teeth, joints and skin tissue), containing solid medical devices of different sizes and made of various materials. In addition to the standard histological observations, such as necrosis, inflammation and fibrosis, this technique provides reliable data on size and shape of anatomical structures, such as blood vessels' diameter or tissue proliferation adjacent to the implant.

In order to perform plastic embedding, it is not necessary to remove the biomedical device from the tissue. Therefore, this technique is ideal for the examination of tissue-implant interaction. Furthermore, the use of diamond saws enables us to cut through extremely hard materials. For example, we can successfully create histological slides even from titanium-based implants.

In the frame of our histological services using the plastic embedding technique, we offer our clients the opportunity to examine the pathological changes and tissue reactions to an implanted medical device, a goal that cannot be adequately achieved using other techniques, such as the paraffin embedding technique.

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