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## **METHOD: CHEMICAL AND MORPHOLOGICAL STUDYING OF PARAFFIN SECTIONS**

**ABSTRACT. Background.** Interactions between heavy metals and cells are diverse, but can be divided into 3 major categories: 1) metals are essential for metabolism. Toxic metals can stop metabolic reactions; 2) metals can accumulate in cells: intracellular uptake and binding; 3) metals that undergo biochemical transformation (inclusive of leaching). The main objectives in this study were to develop a appropriate methodology to allow histological sections scanning electron microscopy analysis of tissue samples and to apply this and a number of other analytical techniques, to investigate the nature of calcific and heavy metals deposits in tissues and cells. **Objective.** Aim of this study was to find if scanning electron microscopy can be used in chemical composition of tissue. **Methods.** For recognition of various types of tissue paraffin sections and the rate of accumulation of heavy metals in it was used scanning electron microscope equipped with energy dispersive X-ray spectroscope. **Results.** Energy dispersive X-ray spectroscopy analysis revealed that inorganic phases of tissue paraffin sections were available for chemical analysis. Scanning electron microscopy were used for morphological analysis of paraffin sections. **Conclusion.** Rationale and description of the new method of chemical and morphological studying of paraffin sections presented in the article. Scanning electron microscope equipped with energy dispersive X-ray spectroscope can be used in chemical composition of tissue.

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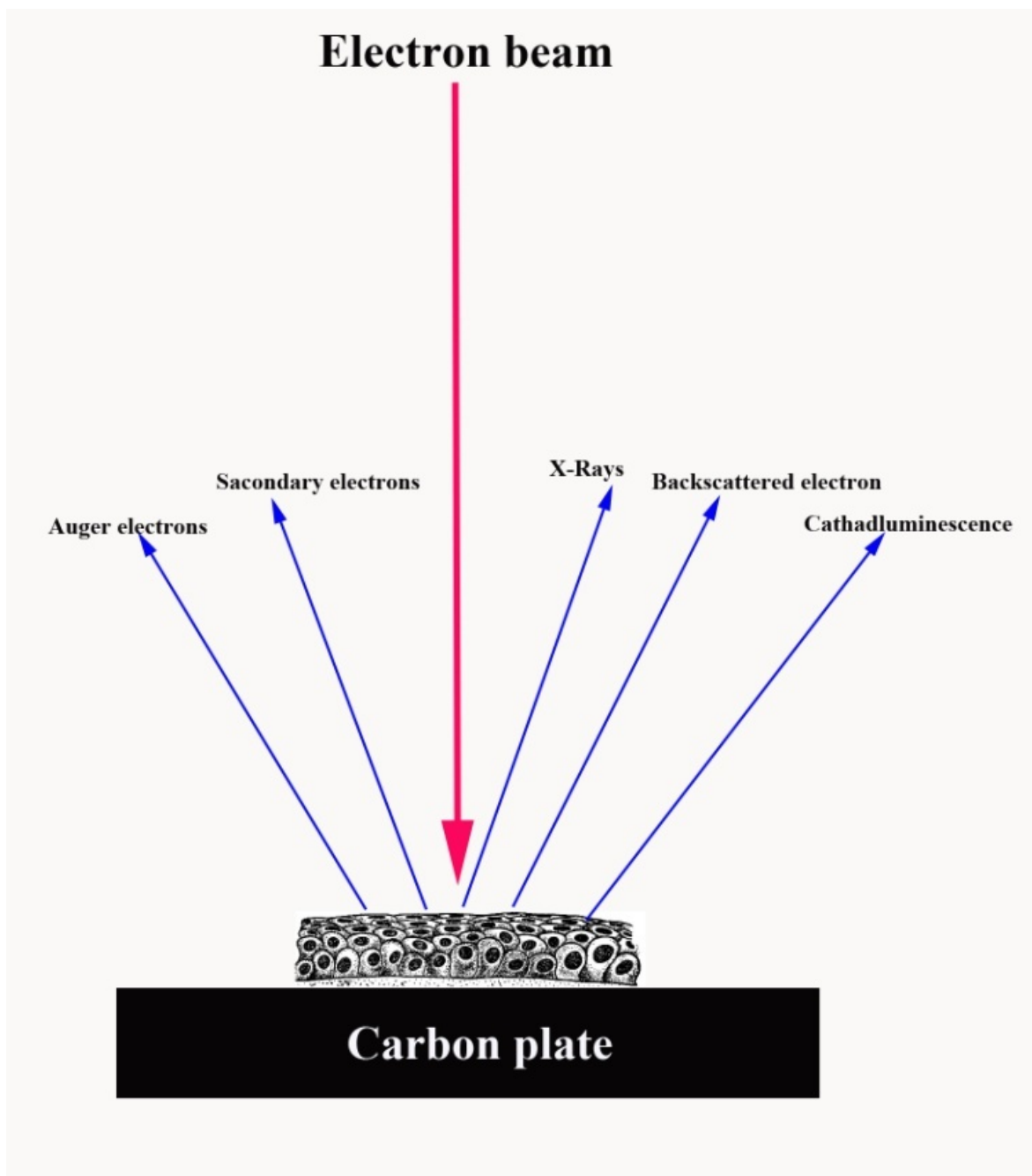


Fig. 3. Interaction scheme of the electron beam with the tissues.

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