

## Scientific Paper:

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### **Interference of magnesium corrosion with tetrazolium-based cytotoxicity assays**

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#### **Abstract:**

Magnesium (Mg) alloys are promising materials for the development of biodegradable implants. However, the current in vitro test procedures for cytotoxicity, cell viability and proliferation are not always suitable for this class of materials. In this paper we show that tetrazolium-salt-based assays, which are widely used in practice, are influenced by the corrosion products of Mg-based-alloys. Corroded Mg converts tetrazolium salts to formazan, leading to a higher background and falsifying the results of cell viability. Tetrazolium-based assays are therefore not a useful tool for testing the cytotoxicity of Mg in static in vitro assays.

Key-words: Cytotoxicity; Tetrazolium-based assays; MTT; XTT; Magnesium