

## Cytotoxicity Evaluation of Microsystems Materials Using Human Cells

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Cytotoxicity of silicon, silicon dioxide ( $\text{SiO}_2$ ), and silicon nitride ( $\text{Si}_3\text{N}_4$ ) is evaluated *in vitro* on the human lung (WI-38) cell line. The biocompatibility evaluation is performed via protocols based on an ISO 10993 standard, which should provide a comparison with other biomaterials. The microsystem materials are extracted in minimal essential media (MEM). Extracts from natural black rubber and polypropylene served as the positive and negative controls, respectively. The extracts are added to 80–90% confluent cell monolayers, which are subsequently incubated for 48 h. The cell monolayers are examined using light microscopy and scored on a relative scale of 0–4 based on the degree of cellular destruction. All microsystem materials scored 0 while the negative and positive controls scored 0 and 4, respectively.

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