

Development of a Micro-Blood-Typing System Using Micro-Stereolithography Technology

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ABO typing is the first test done on blood used for transfusion. A person must receive ABO-matched blood, as ABO incompatibility is the major cause of fatal transfusion reactions. Until now, this blood typing has been done manually. There is a need for an automated typing machine that uses a very small volume of blood. In this paper, we present a new micro-blood-typing system with a fully 3-dimensional geometry, which was realized using micro-stereolithography. This system was fabricated using a novel integration process based on a virtual environment, and blood-typing experiments using this system were successfully performed.

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