

Video Article

# Fabrication of micro-tissues using modules of collagen gel containing cells

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## Abstract

This protocol describes the fabrication of a type of micro-tissues called modules. The modules can be made of collagen as well as any other gelable or crosslinkable material. They are approximately 2 mm in length and 0.7 mm in diameter after being formed but often shrink in size if there are cells embedded in the modules or the modules are coated with endothelial cells. The modules individually are small enough that the embedded cells are within the diffusion limit of oxygen and other nutrients but modules can be packed together to form larger tissues that are perfusable. These tissues are modular in construction because different cell types can be embedded in or coated on the modules before they are packed together to form complex tissues. There are three main steps to making the modules: (1) neutralizing the collagen and embedding cells in it, (2) gelling the collagen in the tube and cutting the modules and (3) coating the modules with endothelial cells.

## Disclosures

No conflicts of interest declared.