



HOW TO STANDARDIZE YOUR ORGAN-ON-CHIPS

ISO 22916:2022(E) - Microfluidic devices – Interoperability requirements for dimensions, connections and initial device classification

ISO22916:2022(E)



Adapting your organ-on-chip to interfacing standards for Translational Organ-on-chip Platform (TOP)

- 1 DESIGN CHIP LAY-OUT**
Create your chip design to meet your experimental goals - Be creative! This part is not covered in ISO 22916:2022.
- 2 DETERMINE THE FOOTPRINT**
Specific chips sizes are highlighted in the standard. Fit your planned chip into a defined building block footprint, keeping in mind benefits of compactness for scalability.
- 3 DEFINE THE INLET PITCH**
There are ISO defined rules to decide where your inlets and outlets (i.e. microfluidic ports) will go. Setting consistent locations is valuable for translatability.
- 4 CHECK EXCLUSION ZONES**
The standard reserves space on the chip for liquid-tight connections and interfacing. Double check that you have respected the exclusion zones when finalizing a design.
- 5 FABRICATE YOUR CHIP**
Time to make the chip! The ISO provides guidelines for how thick fluidic layers can be and what diameter ports are permitted.
- 6 DOCUMENTATION**
The goal of the ISO is to make communicating chip function and orientation easier. Assign names that indicate specific functions to each port.

