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Microdissected tissue vs tissue slices - a comparative study of tumor explant models cultured on-chip and off-chip. Supplément

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Supplementary tables

Microdissected tissue vs tissue slices - A comparative study of two tumor explant models cultured on-chip and off-chip.

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Table S1 dimensions of devices

Parameter	**value**		
Channel height (mm)	MDT chip	0.9	
	Tissue slice chip	Top layer	0.9
		Bottom layer	1.1
Channel width (mm)	MDT chip	1.1	
	Tissue slice chip	Top layer	1.1
		Bottom layer	1.1
Channel length	MDT chip	6	
	Tissue slice chip	Top layer	23
		Bottom layer	18
Tissue diameter (mm)	MDT	0.5	
	Tissue slice	3	
Tissue thickness (mm)	0.35		
Tissue chamber dimension (mm)	MDT well (cubical)	0.7	
	Tissue slice (cylindrical)	Diameter	7
		Height	2.5
	96 well-plate (Corning ®-cylindrical)	Diameter	6.4
		Height	17

Table S2 tissue uptake parameters and diffusion properties

Parameter	**value**		
Diffusion constant of glucose (cm^2/s)	Tissue	$2.7x10^{-6}$	
	Medium	$9.27x10^{-5}$	
Diffusion constant of oxygen (cm^2/s)	Tissue	$1.8x10^{-5}$	
	Medium	$2.6x10^{-5}$	
	PDMS	$3.4x10^{-5}$	
Saturation concentration (mM)	Oxygen	Tissue	1.02
		medium	0.21
		PDMS	1.43
	Glucose	11	
Partition coefficient	PDMS-Medium	0.15	
	Medium-Tissue	4.8	
Maximum cellular uptake rate (mM/S)	Oxygen	2.07	
	Glucose	1.09	
Michaelis-Menten constant (mM)	Oxygen	$4.63x10^{-3}$	
	Glucose	$4x10^{-2}$	