

Materials List for:

Continuous-wave Thulium Laser for Heating Cultured Cells to Investigate Cellular Thermal Effects

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URL: <https://www.jove.com/video/54326>

DOI: [doi:10.3791/54326](https://doi.org/10.3791/54326)

Materials

Name	Company	Catalog Number	Comments
Reagents			
Dulbecco's Modified Eagle's Medium - high glucose	Sigma-Aldrich	D5796-500ML	Add (2)-(4) before use. Warm in 37 °C water bath before use.
Antibiotic Antimycotic Solution (100 ×)	Sigma-Aldrich	A5955-100ML	Containing 10,000 units penicillin, 10 mg streptomycin and 25 µg Amphotericin B in 1mL. Add 5.5 mL in 500 mL medium bottle (1) before use.
Sodium pyruvate (100 mM)	Sigma-Aldrich	S8636-100ML	Add 5.5 mL in 500 mL medium bottle (1) before use (final concentration: 1 mM)
Porcine serum	Sigma-Aldrich	12736C-500ML	Add 50 mL in 500 mL medium bottle (1) before use (final: 10%)
Phosphate Buffered Saline (PBS)	Sigma-Aldrich	D8537-500ML	
Trypsin from porcine pancreas	Sigma-Aldrich	T4799-25G	
Ethylenediaminetetraacetic acid (EDTA)	Sigma-Aldrich	ED-100G	
Human VEGF Quantikine ELISA Kit	R&D System	DVE00	
Oxiselect Total Glutathione Assay Kit	Cell Biolabs, Inc	STA-312	
Apoptotic/Necrotic/Healthy Cells Detection Kit	PromoKine	PK-CA707-30018	
Equipments			
Thulium laser	Starmedtec GmbH	Prototype	0-20 W
365 mm core diameter fiber	LASER COMPONENTS Germany	CF01493-52	
Thermocouple	Omega Engineering Inc	HYP-0- 33-1-T-G-60-SMPW-M	
Heating plate	MEDAX		
Microplate reader (spectrofluorometer)	Molecular Device	Spectramax M4	
cell homogenizer	QIAGEN	TissueLyser LT	
Fluorescence microscope	Nikon	ECLIPSE Ti	
mathematical software program	The Mathworks. Inc	MATLAB Release 2015b	
system-design platform	National Instrument	Labview	Laboratory Virtual Instrument Engineering Workbench