

Materials List for:

Method for the Assessment of Effects of a Range of Wavelengths and Intensities of Red/near-infrared Light Therapy on Oxidative Stress *In Vitro*

Marcus K. Giacci¹, Nathan S. Hart², Richard V. Hartz¹, Alan R. Harvey³, Stuart I. Hodgetts³, Melinda Fitzgerald¹

¹Experimental and Regenerative Neurosciences, School of Animal Biology, The University of Western Australia

²School of Animal Biology and The Oceans Institute, The University of Western Australia

³Experimental and Regenerative Neurosciences, School of Anatomy, Physiology and Human Biology, The University of Western Australia

Correspondence to: Melinda Fitzgerald at lindy.fitzgerald@uwa.edu.au

URL: <https://www.jove.com/video/52221>

DOI: [doi:10.3791/52221](https://doi.org/10.3791/52221)

Materials

Name	Company	Catalog Number	Comments
OxiSelect Intracellular ROS Assay Kit (Green Fluorescence)	Cell Biolabs	STA-342	
Amplex UltraRed Reagent	Molecular Probes	A36006	
300 Watt Xenon Arc Lamp	Newport Corporation	6258	Very intense light source, do not look directly into the lamp. Ensure there is sufficient cooling to the lamp whilst it is switched on
USB4000-FL Fluorescence Spectrometer	Ocean Optics		
CC-3-UV Cosine Corrector for Emission Collection	Ocean Optics		
200µm diameter quartz fibre optic	Ocean Optics		
SpectraSuite Spectroscopy Platform	Ocean Optics		
2300 EnSpire Multimode Plate Reader	Perkin Elmer		
Pierce BCA Protein Assay Kit	Thermo Scientific	23225	
Triton X-100	Sigma-Aldrich	9002-93-1	Acute toxicity, wear gloves when handling.
L-Glutamic acid monosodium salt hydrate	Sigma-Aldrich	142-47-2 (anhydrous)	
Pheochromocytoma rat adrenal medulla (PC12) cells	American Type Culture Collection	CRL-2522	
Roswell Park Memorial Institute (RPMI1640) Media	Gibco	11875-119	
Fetal Bovine Serum, certified, heat inactivated, US origin	Gibco	10082-147	Warm to 37 °C in water bath before use
Horse Serum, New Zealand origin	Gibco	16050-122	Warm to 37 °C in water bath before use
GlutaMAX Supplement	Gibco	35050-061	Warm to 37 °C in water bath before use
100 mM Sodium Pyruvate	Gibco	11360-070	Warm to 37 °C in water bath before use
Penicillin-Streptomycin (10,000 U/mL)	Gibco	15140-122	Warm to 37 °C in water bath before use
100X MEM Non-Essential Amino Acids Solution	Gibco	11140-050	Warm to 37 °C in water bath before use
Retinal Muller (rMC1) cells	University of California, San Diego		

Dulbecco's Modified Eagle Medium (DMEM)	Gibco	11965-118	Warm to 37 °C in water bath before use
75 cm ² Flasks	BD Biosciences	B4-BE-353136	
Poly-L-lysine hydrobromide	Sigma-Aldrich	25988-63-0	Aliquot and store at -20 °C
Hank's Balanced Salt Solution (HBSS)	Gibco	14025-134	Warm to 37 °C in water bath before use
Phosphate-Buffered Saline (PBS)	Gibco	10010-049	Warm to 37 °C in water bath before use
Laminin Mouse Protein, Natural	Gibco	23017-015	Aliquot and store at -20 °C
1X Neurobasal Medium	Gibco	21103-049	Warm to 37 °C in water bath before use
Trypan Blue Solution, 0.4%	Gibco	15250-061	
165U Papain	Worthington		
L-Cysteine	Sigma-Aldrich	W326305	
Corning 96 well plates, clear bottom, black	Corning	CLS3603-48EA	
Costar Clear Polystyrene 96-Well Plates Untreated; Well shape: Round; Sterile.	Costar	07-200-103	
Seesaw Rocker	Standard lab equipment		
Centrifuge	Standard lab equipment		
Neutral Density Filter Paper (0.3)	THORLABS		
442 nm Bandpass Filter	THORLABS	FL441.6-10	
550 nm Bandpass Filter	THORLABS	FB550-10	
670 nm Bandpass Filter	THORLABS	FB670-10	
810 nm Bandpass Filter	THORLABS	FB810-10e	
Unmounted Ø25 mm Absorptive Neutral Density Filters (0.1)	THORLABS	NE01B	
Unmounted Ø25 mm Absorptive Neutral Density Filters (0.2)	THORLABS	NE02B	
Unmounted Ø25 mm Absorptive Neutral Density Filters (0.3)	THORLABS	NE03B	
Unmounted Ø25 mm Absorptive Neutral Density Filters (0.5)	THORLABS	NE05B	
Unmounted Ø25 mm Absorptive Neutral Density Filters (0.6)	THORLABS	NE06B	
Unmounted Ø25 mm Absorptive Neutral Density Filters (1.0)	THORLABS	NE10B	