

Materials List for:

Sample Extraction and Simultaneous Chromatographic Quantitation of Doxorubicin and Mitomycin C Following Drug Combination Delivery in Nanoparticles to Tumor-bearing Mice

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Materials

Name	Company	Catalog Number	Comments
Doxorubicin	Polymed Therapeutics	111023	Anticancer drug
Mitomycin C	Polymed Therapeutics	060814	Anticancer drug
Doxorubicinol (DOXol)	Toronto Research Chemicals	D558020	Metabolite of DOX
4-Methylumbelliferone sodium salt	Sigma-Aldrich	M1508	Internal standard
Myristic Acid	Sigma-Aldrich	544-63-8	Materials for poly-lipid hybrid nanoparticles
Polyoxyethylene (100) Stearate	Spectrum	M1402	Materials for poly-lipid hybrid nanoparticles
Polyoxyethylene (40) Stearate	Sigma-Aldrich	P3440	Materials for poly-lipid hybrid nanoparticles
Pluronic F68 (PF68)	BASF Corp.	9003-11-6	Materials for poly-lipid hybrid nanoparticles
Ultrasonication (UP100H)	Hielscher, Ultrasound Technology	NA	Nanoparticle preparation
Water Bath (ISOTEMP 3016HS)	Fisher Scientific	NA	Nanoparticle preparation
Liposomal Doxorubicin (Caelyx)	Janssen	Purchased from the pharmacy Princess Margaret Hospital	Clinically-approved nanoparticle formulation
HPLC-graded Methanol	Caledon Chemicals	6701-7-40	HPLC mobile phase composition
HPLC-graded H ₂ O	Caledon Chemicals	8801-7-40	HPLC mobile phase composition
HPLC-graded Acetonitrile	Caledon Chemicals	1401-7-40	HPLC mobile phase composition
Trifluoroacetic Acid	Sigma-Aldrich	302031	HPLC mobile phase composition
0.45 µm Nylon Membrane Filter Paper	Whatman	WHA7404004	HPLC mobile phase preparation
1cc Plastic Syringes	Becton, Dickinson and Company	2606-309659	Treatment injection
5cc Plastic Syringes	Becton, Dickinson and Company	2608-309646	Tissue collections
30G 1/2 Needles	Becton, Dickinson and Company	305106	Treatment injection
25G 5/8 Needles	Becton, Dickinson and Company	305122	Tissue collections
Sterile 0.9% Saline	Univeristy of Toronto House Brand	1011	Tissue perfusion
13 ml Rounded-bottom conical tube	SARSTEDT	62.515.006	Propylene, tissue homogenization
Alpha Minimum Essential Medium (MEM)	Gibco	12571063	Cell medium
1 x Phosphate Buffer Saline	Gibco	10010023	Tissue homogenization
Triton X-100	Sigma-Aldrich	X100-100 ML	Tissue homogenization
Formic acid	Caledon Chemicals	1/5/3840	Adjust pH for extraction solvent

Sodium heparin sprayed plastic tubes	Becton, Dickinson and Company	367878	Blood collection
Analytical Weigh Balance	Sartorius	CPA225D	NA
pH meters	Fisher Scientific	13-637-671	accumet BASIC
Vortex Mixer	Fisher Scientific	02-215-365	Vortexing samples at desired speed
1.5 ml Microcentrifuge Tube	Fisherbrand	2043-05408129	Polypropylene
Model 1000 homogenizer	Fisher Scientific	08-451-672	Tissue homogenization
Centrifuge 5702R	Eppendorf	5702R	Extraction preparation
Heated Evaporator System	Glas-Col	NA	Sample reconstitution
HPLC Screw Thread Vials	DIKMA	5320	HPLC sample injection
HPLC Screw Caps with PTFE White Silicone Septa	DIKMA	5325	HPLC sample injection
HPLC Polypropylene Insert	Agilent Technologies	5182-0549	Maximum volume 250 μ l, HPLC sample injection
Xbridge C ₁₈ Column	Waters Corporation	186003117	Drug analysis
Gradient pump	Waters Corporation	W600	Drug analysis
Auto-sampler	Waters Corporation	W2707	Drug analysis
Photodiode array detector	Waters Corporation	W2998	Drug analysis
Multi λ fluorescence detector	Waters Corporation	W2475	Drug analysis
EMPOWER 2	Waters Corporation	NA	Data analysis software
Scientist	Micromath	NA	Pharmacokinetic analysis
Female Balb/c Mice	Jackson Laboratory	001026	In vivo
EMT6/WT Breast Cancer Cells	Provided by Dr. Ian Tannock; Ontario Cancer Institute	NA	In vivo