

Materials List for:

Measuring DNA Damage and Repair in Mouse Splenocytes After Chronic *In Vivo* Exposure to Very Low Doses of Beta- and Gamma-Radiation

Matthew Flegal¹, Melinda S. Blimkie¹, Heather Wyatt¹, Michelle Bugden¹, Joel Surette¹, Dmitry Klokov¹

¹Radiological Protection Research and Instrumentation, Canadian Nuclear Laboratories

Correspondence to: Dmitry Klokov at Dmitry.Klokov@cnl.ca

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Materials

Name	Company	Catalog Number	Comments
HTO: tritiated water, [3H]	locally obtained from a nuclear reactor		stock activity 3.7 GBq/mL; can be substituted with HTO from Perkin Elmer
OBT: Alanine, L-[3-3H]: organically bound tritium (OBT)	Perkin Elmer	NET348005MC	1 mCi/ml (185 MBq)
OBT: Glycine, [2-3H]: organically bound tritium	Perkin Elmer	NET004005MC	1 mCi/ml (185 MBq)
OBT: Proline, L-[2,3-3H]: organically bound tritium (OBT)	Perkin Elmer	NET323005MC	1 mCi/ml (185 MBq)
tritiated water, [3H] (HTO)	Perkin Elmer	NET001B005MC	substitute for HTO of local origin
GammaBeam 150 irradiator	Atomic Energy of Canada Limited	locally manufactured	can be substituted with another g-radiation source of sufficiently low activity
Tween-20	Sigma Aldrich	P1379-500ML	
RPMI	Fisher Scientific	SH3025501	Hyclone RPMI 1640 with L-Glutamine and HEPES 500mL
fetal bovine serum	Sigma Aldrich	F1051-100ML	
anti-gH2AX antibody, clone JBW301	Millipore	05-636	
Alexa fluor-488 goat anti-mouse antibody	Life Technologies (formerly Invitrogen)	A21121	
propidium iodine	Sigma Aldrich	P4864-10ML	1 mg/ml
ethanol	Commercial Alcohols	P006-EAAN	500 ml bottles Absolute Ethanol
1.5 ml tubes	Fisher Scientific	2682550	microcentrifuge tubes
15 ml tubes	Fisher Scientific	05-539-5	sterile polypropylene centrifuge tubes
liquid nitrogen	Linde	P110403	
12 x 75 mm uncapped glass tubes	Fisher Scientific	K60B1496126	disposable borosilicate glass tubes with plain end
T25 flasks	VWR	CA15708-120	nunc tissue culture 25ml flask (supplier no. 156340)
scissors	Fine Science Tools	14068-12	Wagner scissors 12 cm sharp/ sharp
forceps, straight	Fine Science Tools	11008-13	Semken forceps 13 cm, straight
forceps, curved	Fine Science Tools	11003-12	Narrow Pattern forceps 12 cm, curved
60 mm petri dishes	VWR	CA25382-100	BD Falcon tissue culture dish 60 x 15 mm
cell strainers, 70 mm	Fisher Scientific	08-771-2	Falcon cell strainers 50/case

PBS recipe: 1 tablet dissolved in 200 ml of deionized water, adjust pH to 7.4 if needed.	Sigma Aldrich	P4417-100TAB	Phosphate Buffered Saline Tablets
TBS recipe: to make 10x stock			
30 g TRIS HCl	Sigma Aldrich	T3253-1KG	Trizma hydrochloride
88 g NaCl	Fisher Scientific	S271-500	Sodium Chloride
2 g KCl	Fisher Scientific	P217-500	Potassium Chloride
Dissolve in 1 L of deionized water, adjust pH to 7.4			