

Materials List for

# A High-Throughput Comet Assay Approach for Assessing Cellular DNA Damage

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## Materials

Name	Company	Catalog Number	Comments
22 x 22 mm glass coverslips	Fisher Scientific, Hampton, NH, USA	631-0124	
A2780	ECACC, Louis, MO, USA	93112519	
Concentrated nitric acid (Optima™ grade)	Fisher Scientific Fair Lawn, NJ, USA	A467-250	
Fluorescence microscope equipped with a camera	Zeiss, Jena, Germany		
Fresh human whole blood	Zen Bio Inc	SER-WB10ML	Commercial human whole blood sample
GraphPad Prism	GraphPad Software, San Diego, California		Data analysis software
HTP Comet Assay system	Cleaver Scientific	COMPAC- 50	
Human Keratinocyte (HaCaTs)	American Type Culture Collection (ATCC), Manassas, VA, USA	Discontinued	Can be purchased from another company ADDEXBIO TECHNOLOGIES Cat# T0020001
Hydrogen peroxide (H <sub>2</sub> O <sub>2</sub> ) 30% in water	Fisher Scientific, Hampton, NH, USA	BP2633-500	
ICP-MS iCAP RQ ICP-MS system	Thermo Scientific, Waltham, MA, USA	IQLAAGGAAQFAQKMBIT	
Image and Data Analysis software	Perceptive Instrument, Bury St Edmunds, England, UK	125525	Free image analysis software is available e.g., ImageJ
Internal Standard Mix	SPEX Certiprep, Metuchen, NJ, USA	CL-ISM1-500	Bismuth (isotope monitored 209 Bi)-concentration of 10 µg/mL in 5% HNO <sub>3</sub>
Low melting point Agarose	Invitrogen Waltham, MA, USA	P4864	

Na <sub>2</sub> EDTA (disodium ethylenediaminetetraacetic acid)	Sigma Aldrich, St. Louis, MO, USA	E5134	
NaCl (Sodium chloride)	Sigma Aldrich, St. Louis, MO, USA	S7653	
NanoDrop One	Thermo Scientific, Waltham, MA, USA	701-058108	Nanodrop for measuring DNA concentration
Nanopure Infinity Ultrapure Water System (Barnstead Nanopure)	Thermo Scientific, Waltham, MA, USA	D11901	Ultrapure water (16 MΩ cm <sup>-1</sup> )
NaOH (sodium Hydroxide)	Sigma Aldrich, St. Louis, MO, USA	E5134	
Normal melting point Agarose	Fisher Scientific, Hampton, NH, USA	16520100	For pre-coating slides
OCI-P5X	University of Miami, Miami, FL, USA	N/A	Live Tumor Culture Core facility provided the cells
Platinum (Pt) reference standard	SPEX Certiprep, Metuchen, NJ, USA	PLPT3-2Y	(1000 µg/mL in 10% HCl) containing Bismuch
Propidium Iodide (1.0 mg/mL in water)	Sigma Aldrich, St. Louis, MO, USA	12-541BP486410ML	
QIAamp DNA Mini Kit	Qiagen, Valencia, CA, USA	51304	DNA extraction Kit
Single-frosted glass microscope slides	Fisher Scientific, Hampton, NH, USA	12-541B	
SKOV3	ECACC, Louis, MO, USA	91091004	
Slide box	Fisher Scientific, Hampton, NH, USA	03-448-2	Light proof, to protect cells from the formation adventitious damage (according to the widely held view) and prevent fading of the fluorescent dye
Slide Chilling plate	Cleaver Scientific, Rugby, England, UK	CSL-CHILLPLATE	
Treatment dish	Cleaver Scientific, Rugby, England, UK	STAINDISH4X	
Tris-base	Sigma Aldrich, St. Louis, MO, USA	93362	
Triton X-100	Fisher Scientific, Hampton, NH, USA	BP151-500	
Trypsin EDTA (0.5%)	Invitrogen Gibco, Waltham, MA, USA	15400054	
Vertical Slide Carrier	Cleaver Scientific, Rugby, England, UK	COMPAC-25	