

Materials List for:

Method and Instrumented Fixture for Femoral Fracture Testing in a Sideways Fall-on-the-Hip Position

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Materials

Name	Company	Catalog Number	Comments
CT scanner	Siemens	Somatom Definition scanner (Siemens, Malvern, PA)	CT scanning equipment
Quantitative CT Phantom	Midways Inc, San Francisco, CA	Model 3 CT calibration Phantom	Used for obtaining BMD values from Hounsfield units in the CT image
Hygienic Orthodontic Resin (PMMA)	Patterson Dental Supply	H02252	Controlled substance and can be purchased with proper approval
Freezer	Kenmore	N/A	This is a -20°C storage for bones
X-ray scanner	General Electric	46-270615P1	X-ray imaging equipment.
X-ray films	Kodak	N/A	Used to display x-ray images
X-ray developer	Kodak X-Omatic	M35A X-OMAT	Used for developing X-ray images
X-ray Cassette	Kodak X-Omatic	N/A	Used for holding x-ray films
Physiologic Saline (0.9% Sodium Chloride)	Baxter	NDC 0338-0048-04	Used for keeping samples hydrated
Scalpels and scrapers	Bard-Parker	N/A	Used to clean the bone from soft tissue
Fume Hood	Hamilton	70532	Used for ventilation when preparing PMMA for potting of specimens
Single axis load cell	Transducer Techniques, Temecula, CA, USA	LPU-3K; S/N 219627	Capacity 3000 LBS
Six channel load cell	JR3, Woodland, CA	45E15A4	Mechanical load rating 1000N
Linear potentiometer	Novotechnik, Southborough, MA, USA		Used to acquire linear displacements during testing
Slide ball bearing	Schneeberger	Type NK	Part of the testing fixture
Mechanical testing machine	MTS, Minneapolis, MN	858 Mini Bionix II	Used for compression of femur
Lighting unit	ARRI		Needed for high speed video recordings
high-speed video camera	Photron Inc., San Diego, CA, USA	Photron Fastcam APX-RS	Used to capture the high speed video recordings of the fracture events
Photron FASTCAM Viewer	Photron Inc., San Diego, CA, USA	Ver.3392(x64)	Used to view the high speed video recordings
Camera lens	Zeiss	Zeiss Planar L4/50 ZF Lens	Needed to high image resolution
Signal conditioner board (DAQ)	National Instruments		Input/output signal connector

Signal Express	National Instruments	N/A	Data acquisition software
Laptop Computer	Dell	N/A	Used to monitor and acquire all signals from the testing procedure