



A Nuclear Services and Waste Management Company



Technical Services

Instrumentation Rental and Calibration Services

Rental

Our instrumentation services include world-wide rental, calibration, and maintenance for radiological and industrial hygiene monitoring instruments to all market sectors. With more than 6,000 instruments in inventory, availability and fast delivery are guaranteed. We offer long-term and short-term lease options at affordable rates as well as professional consultation for custom instrumentation application and development.

Calibration & Repair

The Perma-Fix instrumentation facility, located in Knoxville, Tennessee, calibrates and repairs Radiation Detection and Industrial Hygiene instruments of all makes and models from a variety of manufacturers. Perma-Fix proudly staffs experienced full-service instrumentation technicians. Our team provides the highest quality calibrations and repair services for most major manufacturers' models. All calibrations are performed to the requirements of ANSI N323A, 1997 unless otherwise requested. Perma-Fix Instrumentation Services operates under Tennessee Department of Environment and Conservation, Division of Radiological Health, Radioactive Material License numbers R-47161 and R-47209.

Specialty Instrumentation

In addition, Perma-Fix also provides specialty instrumentation services that respond to today's nuclear industry, trending toward D&D and environmental remediation support. Examples include: ISOCS/LabSOCS; Gamma Spectroscopy; and, the Global Positioning Systems (GPSs).

Instrumentation rates are based on a quantity of one (1) each. Contact us for volume or long term discounts.

Perma-Fix Offers the Following:

- » \$1.2M Repair/Maintenance parts inventory to support expedited requests;
- » 18-year history in servicing government clients worldwide with radiological and industrial hygiene and advanced survey instrumentation and technologies;
- » State-of-the-art instrumentation center that has proven to provide a low risk, low cost, rapid, and highest quality option to all clients;
- » GPS Walkover survey instrumentation
- » Radiological Instrumentation for On-Site Laboratories



Perma-Fix Large Area Wall and Floor Scanning Survey System successfully used for several government clients.

Instrumentation Lab
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perma-fix.com



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Industrial Hygiene Instrumentation

2017 RATES	DAILY	WEEKLY	MONTHLY
Gas Monitors			
MultiRAE PGM-6228 (PID, CO, H ₂ S, LEL, O ₂)	\$124	\$310	\$775
MultiRAE PLUS PGM50-5P (PID, CO, H ₂ S, LEL, O ₂)	\$124	\$310	\$775
QRAE PGM50-4P (CO, H ₂ S, LEL, O ₂)	\$64	\$160	\$400
Jerome 431-X Mercury Vapor Analyzer	\$128	\$320	\$800
PID (Photoionization Detector)			
MiniRAE Lite PGM-7300 (10.6 eV Lamp)	\$112	\$280	\$700
MiniRAE 3000 PGM-7320 (10.6 eV Lamp)	\$120	\$300	\$750
Heat Stress Monitors (WBGT)			
QUESTemp 32 (QT-32)	\$56	\$140	\$350
QUESTemp 34 (QT-34)	\$56	\$140	\$350
QUESTemp 44 (QT-44)	\$56	\$140	\$350
RSS-214 (WBGT)	\$56	\$140	\$350
Metrosonics hs-32	\$56	\$140	\$350
Aerosol Monitors			
TSI 8530 DustTrak (0.001 - 400 mg/m ³)	\$128	\$320	\$800
Thermo Scientific DataRAM pDR-1000AN (0.001 - 400 mg/m ³)	\$92	\$230	\$575
HAZ-DUST IV Aerosol Monitor (.01 - 200 mg/m ³)	\$96	\$240	\$600
SKC Split2 w/AirChek52 Pump	\$96	\$240	\$600
Noise Monitors			
Quest NoisePro DLX Noise Dosimeter w/Calibrator	\$56	\$140	\$350
Quest 2200 Sound Level Meter w/Calibrator	\$48	\$120	\$300
Quest 2700 Sound Level Meter w/Calibrator and Octave Band	\$52	\$130	\$325
Quest SoundPro Sound Level Meter w/Calibrator	\$92	\$230	\$575
Sper Scientific 840015 Sound Level Meter w/Calibrator (Type 1)	\$15	\$36	\$90
Sper Scientific 840029 Sound Level Meter w/Calibrator (Type 2)	\$8	\$20	\$50



Industrial Hygiene Instrumentation

2017 RATES	DAILY	WEEKLY	MONTHLY
Air Sampling Pumps			
Gilian GilAir5 (5 mL-5 LPM)	\$29	\$72	\$180
SKC Universal 224-PCXR4 or PCXR8 (750 mL - 5 LPM)	\$29	\$72	\$180
SKC Leland Legacy (5-15 LPM)	\$32	\$80	\$200
Gast High Volume Pump (3 – 30 LPM)	\$24	\$60	\$150
Thomas High Volume Pump (2 – 30 LPM)	\$20	\$50	\$125
SKC QuickTake 30 Pump (10 – 30 LPM)	\$36	\$90	\$225
Pump Calibrators			
Bios DC Lite (DCL L = 1 mL - 500 mL / 10 mL - 500 mL)	\$32	\$80	\$200
Bios DC Lite (DCL ML = 5 mL - 5 LPM / 50 mL - 2 LPM)	\$32	\$80	\$200
Bios DC Lite (DCL M = 10 mL - 12 LPM / 100 mL - 7 LPM)	\$32	\$80	\$200
Bios DC Lite (DCL MH = 20 mL - 20 LPM / 200 mL - 20 LPM)	\$32	\$80	\$200
Bios DC Lite (DCL H = 50 mL - 30 LPM / 500 mL - 30 LPM)	\$32	\$80	\$200
Bios Defender 510 (M or H)	\$32	\$80	\$200
Sampling Accessories			
MSA Gemini Twin Port (Tube Sampling)	\$4	\$10	\$25
SKC Aluminum Cyclone (Respirable Dust Cyclones)	\$4	\$10	\$25
SKC Plastic Cyclone	\$3	\$8	\$20
Gas Detection Pumps			
Drager Accuro Bellows Pump	\$16	\$40	\$100
Gastec GV-100 Tube Pump	\$16	\$40	\$100
RAE Systems LP-1200 Tube Pump	\$16	\$40	\$100
Specialty Equipment			
Disto Pro 4 Distance Meter (650' distance range)	\$24	\$60	\$150
Dwyer 477 Digital Manometer	\$24	\$60	\$150
Dwyer VT-200 Anemometer (0.7 to 100 mph, 0.6 to 88 knots)	\$16	\$40	\$100
EXTECH 42505 IR Thermometer (-58 to 716 F)	\$4	\$10	\$25
Fisher Scientific 01-241 Anemometer (0.4 mps - 53.3 knots)	\$10	\$22	\$55



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Specialty Equipment			
Heron Oil / Water Interface Meter	\$52	\$130	\$325
Heron Water Level Meter	\$24	\$60	\$150
Kestrel 3000 Anemometer (0.4 - 40 m/s)	\$4	\$10	\$25
Protimeter Surveymaster Moisture Meter	\$20	\$50	\$125
Spectrum Thunderbolt Storm Activity Detection (0-70 miles)	\$16	\$40	\$100
Amprobe LM-200LED Light Meter (Lux/FC)	\$12	\$30	\$75
Sper Scientific Light Meter 840020 (Lux/FC)	\$12	\$30	\$75
Sper Scientific Light Meter 840021 (FC)	\$10	\$26	\$65
TSI 8020 Portacount Respirator Fit Tester	\$160	\$400	\$1000

RAD Instrumentation

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Survey Meters		
Ludlum Model 3 Ratemeter (Analog Only)	\$26	\$65
Ludlum Model 3 or 12 Scaler/Ratemeter	\$30	\$75
Ludlum Model 2221 Scaler/Ratemeter	\$76	\$190
Ludlum Model 2224 Alpha Beta Scaler/Ratemeter	\$50	\$125
Ludlum Model 2224-1 Alpha Beta Scaler/Ratemeter	\$50	\$125
Ludlum Model 2241 Digital Scaler/Ratemeter	\$40	\$100
Ludlum Model 2241-2 Digital Scaler/Ratemeter	\$40	\$100
Ludlum Model 2350-1 Digital Data Logger	\$76	\$190
Ludlum Model 2360 Alpha Beta Data Logger Scaler/Ratemeter	\$56	\$140
Ludlum Model 177 Alarm Ratemeter	\$30	\$75
Ludlum Model 177-61 Alarm Ratemeter	\$30	\$75
Ludlum Model 239-1F Floor Monitor w/Model 2221 Scaler/Ratemeter	\$210	\$525
Ludlum Model 239-1F Floor Monitor w/Model 2350-1 or 2360 Data Logger	\$210	\$525
Ludlum Model 2750 Gas Flow Control (Use with Model 43-68's)	\$20	\$50
P-10 Dual Stage Regulator for use with 239-1F Floor Monitor	\$20	\$50



RAD Instrumentation

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Dose Rate Meters		
Ludlum Model 14C Survey Meter w/ 44-38 Energy Compensated G-M Detector	\$40	\$100
Ludlum Model 12-4 w/42-31H Neutron Counter	\$100	\$250
Ludlum Model 15 w/42-9 Neutron Counter and 44-7 Gamma Detector	\$100	\$250
Ludlum Model 2241-4 w/42-31H Neutron Counter	\$100	\$250
Ludlum Model 9 Ion Chamber	\$40	\$100
Ludlum Model 19 Micro R Meter	\$40	\$100
Ludlum Model 195 High Range Meter w/43-132 Alpha Ion Chamber	\$60	\$150
Ludlum Model 375 Area Monitor w/133-4 or 133-6 Gamma Detector	\$66	\$165
Automess 6112B Extendable Dose Rate Meter (Teletector)	\$210	\$525
Bicron Micro Rem Tissue equivalent uR Meter	\$80	\$200
Bicron Micro Rem Tissue equivalent uR Meter Low Energy	\$90	\$225
Eberline RO-7 Digital Ion Chamber (Choice of Low, Med or High Range Detector)	\$210	\$525
Eberline RO-2 Ion Chamber	\$48	\$120
Eberline RO-20 Ion Chamber	\$58	\$145
MGP Instruments AMP-100 with High Range GM Detector	\$116	\$290
Alpha Detectors		
Ludlum Model 43-5 50 cm ² Open Area Alpha Scintillator	\$24	\$60
Ludlum Model 43-10 Alpha Sample Counter	\$30	\$75
Ludlum Model 43-65 50 cm ² Open Area Alpha Scintillator	\$24	\$60
Ludlum Model 43-90 100 cm ² Open Area Alpha Scintillator	\$30	\$75
Alpha/Beta Detectors		
Ludlum Model 43-10-1 Alpha Beta Smear Counter	\$40	\$100
Ludlum Model 43-37-1 609 cm ² Open Area Gas Proportional Detector	\$56	\$140
Ludlum Model 43-37 430 cm ² Open Area Gas Proportional Detector	\$50	\$125
Ludlum Model 43-68 100 cm ² Open Area Gas Proportional Detector	\$20	\$50
Ludlum Model 43-2-2 Dual Phosphor Scintillator	\$40	\$100
Ludlum Model 43-93 100 cm ² Active Area Alpha Beta Scintillator	\$40	\$100



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Gamma Detectors		
Ludlum Model 44-2 1"x1" NaI Gamma Scintillator	\$20	\$50
Ludlum Model 44-3 1"x1mm NaI Gamma Scintillator	\$20	\$50
Ludlum Model 44-10 2"x2" NaI Gamma Scintillator	\$40	\$100
Ludlum Model 44-17 2"x2mm Low Energy NaI Gamma Scintillator	\$40	\$100
Ludlum Model 44-20 (12/12SS/3B) 3"x3" NaI Integral Gamma Scintillator	\$180	\$450
Ludlum Model 44-62 1/2"x1" NaI Gamma Scintillator	\$30	\$75
FIDLER (20DT063QA2/5B) probes 5" Diameter NaI with Aluminum Window	\$240	\$600
Pb Shields: 1/4" thick x 2.5" or 6" high Pb shield for Model 44-10's	\$8	\$20
Alpha/Beta/Gamma Detectors		
Ludlum Model 44-7 Thin End Window G-M Detector	\$14	\$35
Ludlum Model 44-9 Pancake G-M Detector	\$12	\$30
Ludlum Model 44-40 Shielded Pancake G-M Detector	\$14	\$35
Eberline HP-210A Aluminum Shielded Pancake G-M Detector	\$12	\$30
Eberline HP-210L Lead Shielded Pancake G-M Detector	\$16	\$40
Eberline HP-210T Tungsten Shielded Pancake G-M Detector	\$20	\$50
Beta/Gamma Detectors		
Ludlum Model 44-6 Thin Wall G-M Detector	\$14	\$35
Ludlum Model 44-38 Energy Compensated G-M Detector	\$12	\$30
Beta Detectors		
Ludlum Model 44-116 100 cm ² Open Area Beta Scintillator	\$30	\$75
Sample Counters		
Ludlum Model 2000 Scaler w/Model 43-10 Sample Counter	\$60	\$150
Ludlum Model 2929 Scaler w/Model 43-10-1 Sample Counter	\$96	\$240
Ludlum Model 3030E Scaler w/Model 43-10-1 Sample Counter	\$120	\$300
Ludlum Model 3030 Scaler Sample Counter	\$120	\$300
Specialty Equipment		
Canberra Field ISOCs gamma spec unit with LabSOCS software	\$2,680	\$6,700
Canberra Gamma Spec	\$1,600	\$4,000
Canberra iCAM w/ F&J LV-1 Pump	\$700	\$1,750
Canberra iSolo Gas-less Manual Alpha / Beta Counting System	\$600	\$1,500



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Specialty Equipment		
Dosimeters DMC2000	\$16	\$40
Dosimeters SRD's (0-200mR, 0-500mR, 0-2R)	\$10	\$25
SRD Charger	\$10	\$25
Exploranium GR-135	\$400	\$1,000
Ludlum Model 180-15 Source Holder	\$8	\$20
Ludlum Model 180-7 Source Holder	\$8	\$20
Ludlum Model 500 Series Pulser	\$120	\$300
Ludlum Model 8045EKR2-1 Keypad for 2350-1's	\$20	\$50
Perkin Elmer 2910TR Tri-Carb Liquid Scintillation Counter	\$1,600	\$4,000
Tennelec LB 5100 Low Background Smear Counter	\$1,400	\$3,500
Trimble GPS System (TerraSync software included)*	\$720	\$1,800
Air Samplers		
F&J HV-1 High Volume (3-12 CFM) Pump	\$30	\$75
F&J LV-1 Low Volume (0-100 LPM) Pump	\$30	\$75
F&J LV-14M Low Volume (0-100 LPM) Goose Neck Pump	\$50	\$125
HI-Q CF-901 High Volume (0-12 CFM) Pump	\$64	\$160
HI-Q 1023CV Low Volume (0-200 LPM) Pump	\$80	\$200
HI-Q PSU Low Volume (0-200 LPM) Mobile Cart Pump	\$120	\$300
RADeCO H-809V High Volume (0-8 CFM) Pump	\$66	\$165
RADeCO H-810 High Volume (0-9 CFM) Pump	\$66	\$165
Environmental Housing for Air Sampler (5' Doghouse)	\$60	\$150
Air Samplers		
F&J D-550 Range is 5 to 50 CFM, 140 to 1400 LPM	\$80	\$200
F&J D-812 Range is 0.5 to 4 CFM, 14 to 115 LPM	\$80	\$200
F&J D-814 Range is 2 to 14 CFM, 56 to 400 LPM	\$80	\$200

*TerraSync software is pre-installed on the collectors. The Trimble data transfer software is available for free at WWW.Trimble.com. Rental includes 1 Ludlum model 2221 meter and 1 NaI probe (44-10 or 44-20). The following is NOT included: Trimble Pathfinder Office, GIS software, instructional time & data processing. Please call to schedule for GPS training and data processing.

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