

NAPCO PRECISION INSTRUMENTS

Focused | Professional | Innovative

Mark-600 Handheld Soil Analyzer



Napco Technology Is Safety Guard for Soil – Mark-600 Handheld Soil Analyzer

Heavy metal pollutants remaining in the soil will still cause harm to the human body after many years. Some production activities in the manufacturing and mining industries, the use of fertilizers and pesticides in the agricultural sector, and improper landfill disposal all have the risk of soil pollution, which may lead to heavy metal pollutants such as cadmium, mercury, lead, and chromium hazards.

Therefore screening and remediation of soil contamination is a major challenge. In situ soils analysis, contaminated soil testing and sediments screen with XRF is an effective solution to address such challenges. The handheld XRF analysis method is an internationally recognized method for soil heavy metal screening.

Mark-600 Series Handheld Soil Analyzer is an important tool for soil and sediment screening. It can detect hazardous heavy metals within seconds. Using our Mark-600 for on-site rapid soil screening significantly reduces the number of samples that need to send to laboratory for analysis, reducing analysis costs and analysis time. And soil treatment and remediation costs can be minimized by rapidly screening and delineating contaminated areas and identifying remediation areas on-site.



Typical Applications

Beside soil and sediment screening, Mark-600 series analyzers are also widely used in the test of river slough pollution projects, environmental testing near pollution sources, landscaping projects, geological surveys etc. Heavy metal pollutants contained in dust, filters, film layers, lead paint and air filters etc., to conduct a comprehensive inspection and evaluation of the environment.



Napco Soil Heavy Metal Screen Solution is Your Ideal Choice

In-situ Measure and Screen

Using the Mark-600 for rapid on-site screening of heavy metals and other contaminants in soil greatly reduces the number of samples that need to send to laboratory for analysis, greatly reducing analysis costs and analysis time. The light weight only 1.5kg including the battery, enable it to test anywhere anytime. Ergonomic design makes the operation more comfortable.

Fast Results in Seconds

Point and shoot and you can get stable and accurate results in about 10s, covering over 40 elements simultaneously with minimal sample preparation.

Minimal Training Required

Easy to use with user friendly software. Work immediately out of the box and requires minimal operator training.

Superior Analysis Performance

High-performance miniature X-ray tube, with intelligent multi-position filters, specially optimization for key elements ensure analyzer achieve superior performance.

Low Cost of Maintenance

Rugged design with IP54 standard dustproof and waterproof.

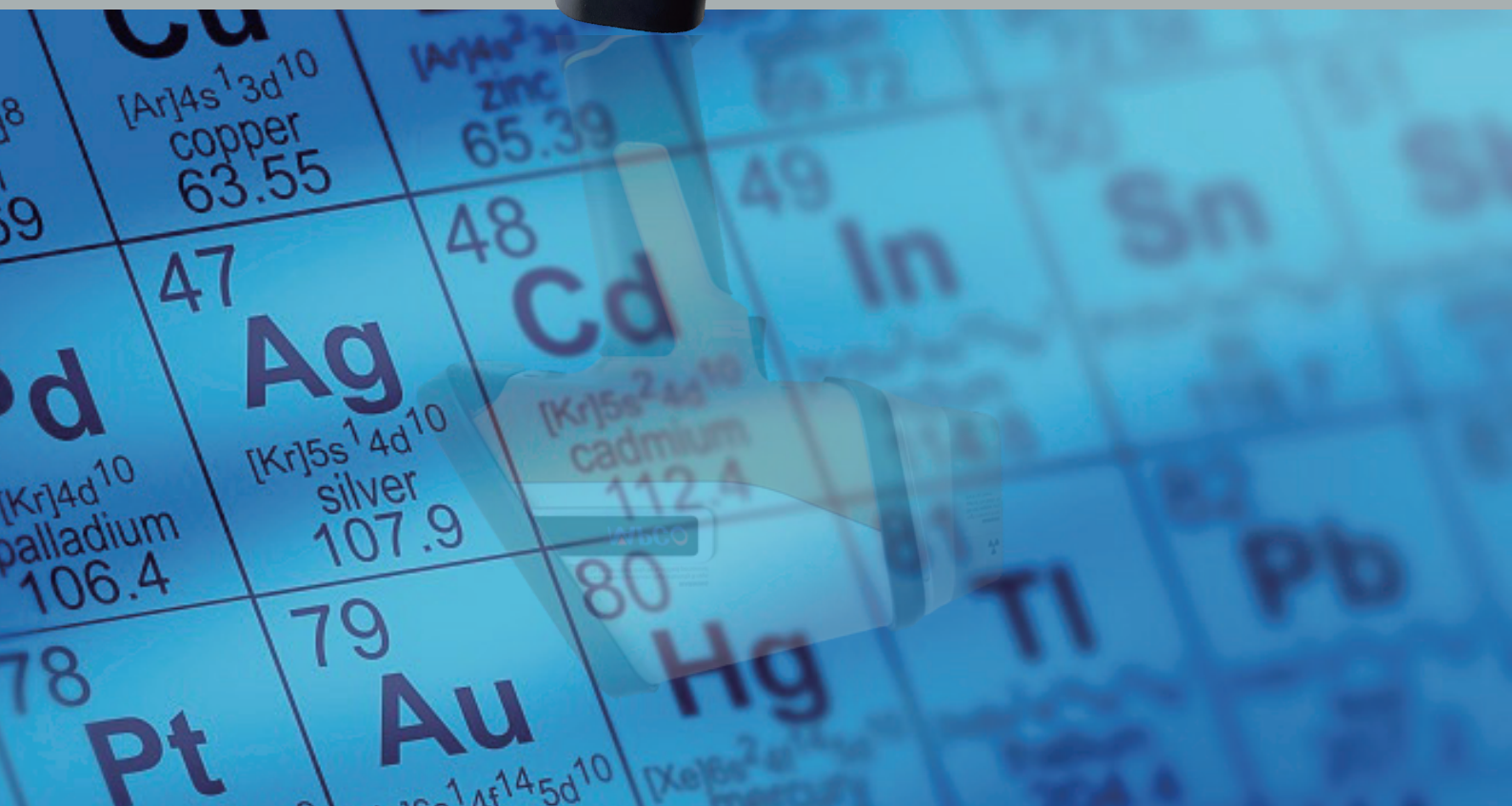
Working continuously and normally in the temperature of -10°C to 50°C, solid enough to address environmental challenges on site.

User Friendly Software

Software will alert when elements concentration exceeding set limits, convenient for users to judge the pollution status intuitively.

Innovative Function Design

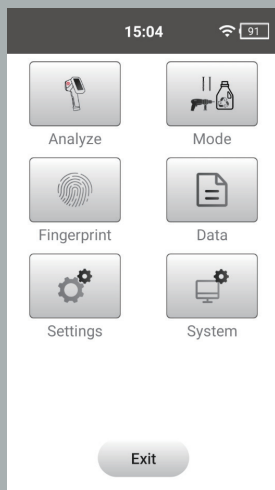
With innovative soil moisture correction function, analysis can automatically correct according to the soil moisture, which significantly reduces the influence of soil moisture to ensure accurate testing results.



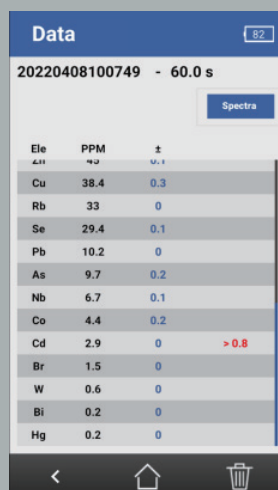
Models of Mark-600 Series



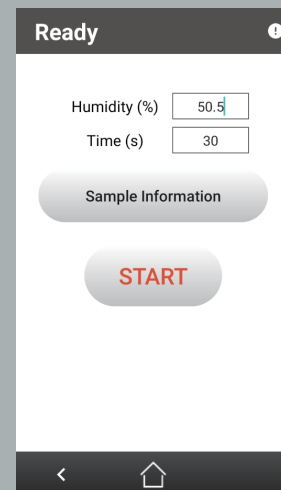
Model	600	600P	600S
Excitation	Ceramic packaged microfocus X-ray tube, Ag Anode 50kV		
Detector	High performance Si-Pin detector	Optimized SDD detector (with Graphene window)	Optimized SDD detector (with Graphene window)
Resolution	140eV FWHM	129eV FWHM	129eV FWHM
Filter	Multi position automatic filter changer		
Window	Kapton with anti-puncture window design optional		
Battery	7.2V Li-ion battery, 6800mAh		
Display	Capacitive touch screen (5 inch 720P)		
CPU	i.MX 8M Mini quad core 1.8GHz		
Signal Processor	4096-pixel multi-channel detector/80 MHz ADC digital signal processor		
Data Storage	Over 100,000 data storage		
Data transfer	WiFi、USB		
Structure design	Unique structure design, effectively increase the heat dissipation of the X ray tube		
Radiation safety	Safety Guard induction device, when there is no sample in the test area, the source will shut, providing maximum safety protection. Password-protected user security		
Camera (optional)	Integrated CCD camera with autofocus lens for positioning and recording measuring point positions		
Elements	Mo、Nb、Zr、Bi、Pb、Se、W、Zn、Cu、Ni、Co、Fe、Mn、Cr、V、Ti、As、Rb、Sr、K、Ca、Ba、Cd、Hg、Br、Sb、Sn、Cs、Te、Ag、Y、U、Th、Sc、Pd、Re、Ta、Hf	Mo、Nb、Zr、Bi、Pb、Se、W、Zn、Cu、Ni、Co、Fe、Mn、Cr、V、Ti、As、Rb、Sr、K、Ca、Ba、Cd、Hg、Br、Sb、Sn、Cs、Te、Ag、Y、U、Th、Sc、Pd、Re、Ta、Hf	Mo、Nb、Zr、Bi、Pb、Se、W、Zn、Cu、Ni、Co、Fe、Mn、Cr、V、Ti、As、Rb、Sr、K、Ca、Ba、Cd、Hg、Br、Sb、Sn、Cs、Te、Ag、Y、U、Th、Sc、Pd、Re、Ta、Hf、Mg、Al、Si、P、S
Environment	Temp: -10°C~50°C Humidity 0%~80%		
Weight	Approx. 1.5kg (3.3lbs) including battery		
Dimensions	L x W x H: 220mm*91mm*276mm		
Optional	With the innovatively designed mobile application, data can be viewed, shared, and printed in real time, and functions such as sample photo, GPS positioning, barcode scanning, and data archiving can be supported. Optional data cloud service function support uploading the test results to a secure and encrypted cloud server, and perform efficient statistics, query and analysis of large-scale analysis data.		
Special Accessories	In addition to conventional accessories, optional: welding mask, hot surface adapter. It can detect high temperature surfaces and vibrating surfaces without contact.		



Simple and easy to use



Elements exceeding alert



Soil moisture correction

Useful Accessories Options

Mark-600 series handheld soil analyzers can be equipped with uniquely designed bench-top test stand, portable test stand, etc., which can greatly simplify the customer's test work. And carbon fiber puncture-proof windows can be quickly replaced to avoid detector damage.



Bench-top Test Stand

Allows hands-free measurement of samples. Completely shielded to protect the operator from any scattered radiation.



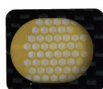
Portable Test Stand

Folds up for easy transport and portability. Allows hands-free measurement of samples. Completely shielded to protect the operator from any scattered radiation.



Backscatter Shield

A flexible and robust shield attaches to the analyzer's cone, protecting the operator from any backscattered x ray during analysis.



Carbon Fiber Anti-Puncture Window

Carbon fiber anti-puncture windows can be used to effectively protect the window film from damage by irregular samples testing.



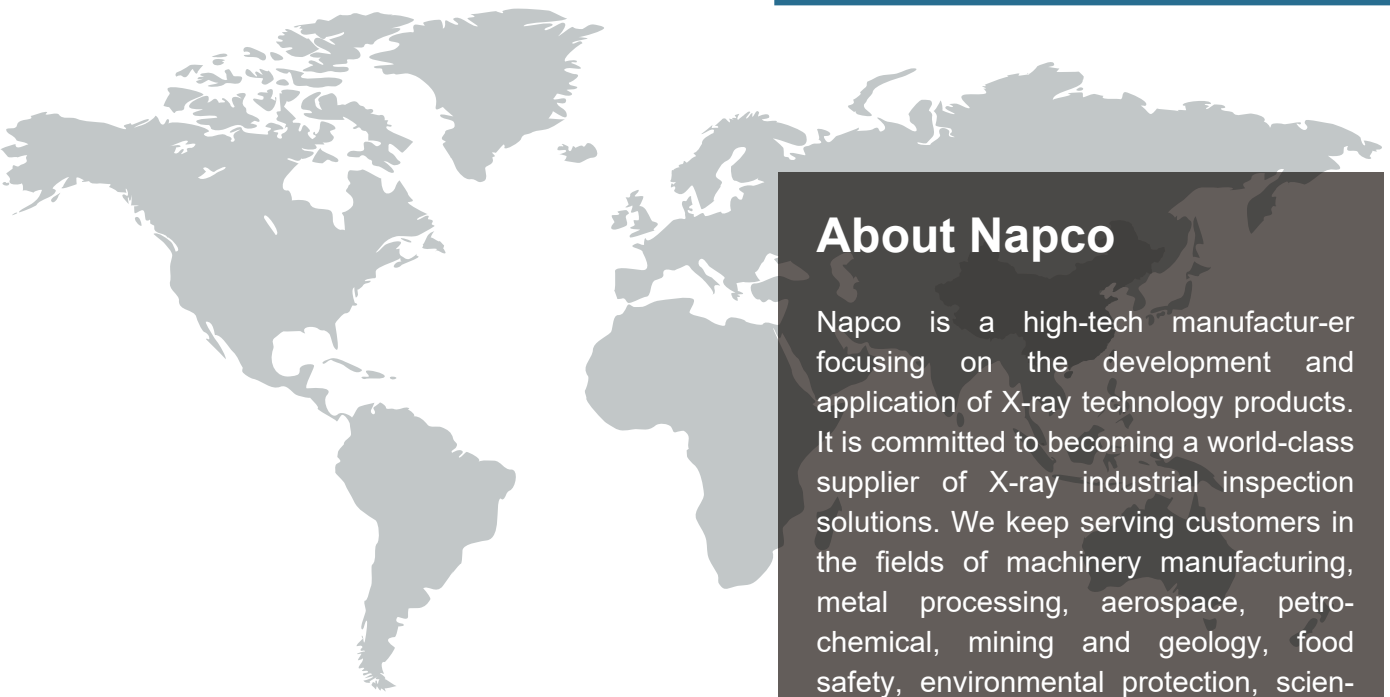
Sample tube



Sample cup



Film



About Napco

Napco is a high-tech manufacturer focusing on the development and application of X-ray technology products. It is committed to becoming a world-class supplier of X-ray industrial inspection solutions. We keep serving customers in the fields of machinery manufacturing, metal processing, aerospace, petrochemical, mining and geology, food safety, environmental protection, scientific research and etc.

Napco keeps improving product performance and user experience with R&D advantages and innovative designs, and continues to provide global users with reliable X-ray measure solutions to solve various challenges from routine testing tasks to complex customized measure requirements.

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