



*High-quality Creates Better Life*

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# Energy Dispersive X-ray Fluorescence Handheld Spectrometer

## PORT- X500

Designed for your work Perform accurate element analysis  
whenever and wherever you are >>>>>>>>





## About Us

NCS Testing Technology CO., Ltd. (hereinafter referred to as NCS) is the wholly owned subsidiary of China Iron & Steel Research Institute Group (CISRI). It is the New and High-tech Enterprise and found by the business integration of National Analysis Center for Iron and Steel, China National Center for Quality Supervision and Testing of Iron and Steel, Analysis and Testing Institute of Central Iron & Steel Research Institute, National Nondestructive Testing Center for Steel Products, Analysis and Testing Training Center of Central Iron & Steel Research Institute, Qingdao Marine Corrosion Institute of Central Iron & Steel Research Institute and Beijing NCS Analytical Instruments CO., Ltd.

The main businesses of NCS involve third-party testing services (including the chemical composition testing, mechanical property testing, material failure analysis, nondestructive testing and measurement calibration), development and sales of analysis and testing instruments, nondestructive testing equipments, anti-corrosion products and related engineering, certified reference materials, proficiency testing and other fields. It possesses many qualifications such as ISO9001, NADCAP, Rolls-Royce, RMP, ISO/IEC 17025 accreditation, CMA, CAL, CMC and PTP. Meanwhile, it is also the “State-Level Testing Organization for Appraisal of Science and Technology Achievements of the People’s Republic of China” and “Personnel Training Centre for Analysis Technology Research and Arbitration Analysis ” authorized by Ministry of Science and Technology; the Testing Laboratory accredited by China Quality Certification Mark; the location of production license examination department of bearing steel products of the National Industrial Product Production License Office of State General Administration of the People’s Republic of China for Quality Supervision and Inspection and Quarantine (AQSIQ); the open laboratory authorized by Zhongguancun High-Tech Park. NCS also provides technical support for commercial aircraft, China emergency analysis and production safety accident investigation in Beijing.

NCS owns two wholly owned subsidiaries including Beijing China NIL Research CO., Ltd. for Proficiency Testing and Qingdao NCS Testing and Protection Technology CO., Ltd. It also has two solely-owned companies in Beijing and Shanghai.

NCS is the pioneer and the leader of metallurgical analysis, material testing and related product development in China. It is also the location of secretariat of International Committee of Analysis for Steel and Iron Industry, and the secretariat of Chemical Composition Testing Technical Committee Member for Steel and Alloy of National Steel Standardization Committee. NCS has undertaken many projects of National Development and Reform Committee and The Ministry of Science and Technology of the People’s Republic of China. There are more than 300 persons, who are led by Wang Haizhou, academician of the Chinese Academy of Engineering (CAE), in scientific research team, including 18 professors, 101 senior engineers and 36 doctors. They wholeheartedly engage in the exploration and development of industry leading technologies and products. In addition, NCS has undertaken some key projects in rapid transit railway, commercial aircraft and Beijing Olympic Games. The headquarter of NCS is located in Haidian District, Beijing. There are several R&D and production bases in Beijing, Shanghai, Hebei and Shandong. Moreover, it owns 23 directly subordinated marketing and after-sales service sites covering the whole country to supply most perfect and convenient service for users.

NCS is constantly aiming to completely and constantly promote products and services quality, realize the maximization of all-round values, and become a guild and impeller in metal material testing fields.

Looking ahead, NCS will build on current success to make further progress and work with all the stakeholders for a more splendid future!

Based on the latest technical development achievements of foreign countries and market demands, NCS Testing Technology Co., Ltd. (NCS) added some brand-new elements on the existing desktop X-ray fluorescence spectrometer and rare earth fast identification technology and developed an intelligent and portable product, the Generation III handheld X-ray fluorescence spectrometer, which is of independent intellectual property right and satisfies the market demands.

The Generation III handheld X-ray fluorescence spectrometer, PORT-X500 can save a lot of time for people to make qualitative and quantitative analysis on geological samples, alloy samples and rare earth samples during production, manufacturing, transportation and going through customs. With no demands for sample preparation or special requirements on size and shape of samples, the product can detect the elements (simple substance and compound) contents in solid materials and finish the test in short 5-20 seconds.

For different samples, the analysis programs are different.

## Product Features

### ◎ X-Ray Tube

The excitation source of the product in an end window-type micro X-ray tube imported from America, which is specially designed for handheld X-ray fluorescence spectrometer, small, light, safe and easy to control.

### ◎ Detector

The product uses the most sensitive commercial detector in the world presently, the SDD detector, which is applied to the Mars exploration rover of America. It refrigerates through Peltier device. According to the demands for outdoor analysis, the entire probe of the device is designed into a "gun" to be safer and more reliable.

### ◎ Body Design

In the interior part, there is an embedded software and hardware control system which can help people save the trouble to connecting a PDA from outside, a GPS module which can easily get the specific location, a Bluetooth which can achieve wireless data transmission as well as an HD camera and a laser alignment module which can realize precise measuring of samples.

### ◎ Software Functions

The software with a large geological database is able to upgrade the analysis program according to the features of samples. According to the fluorescence features of measured element, the software is set into two modes, qualitative analysis mode and quantitative detection mode. The results can be printed out for easy statistical analysis.

### ◎ Fast Response and Easy to Control

It can detect the contents of more than 30 elements in the mineral within several seconds and display the analysis data and spectrogram at real time. It is easy to control, people does not receive professional training can control it easily.

## Description of configuration

Model:PORT-X500                      Dimension: length × width × height(255mm×87mm×312mm)  
Weight:1.8KG                          Excitation Source: X-ray tube, Rh target, 0 ~ 50kV, 4W  
Detector:High-Performance Silicon Drift Detector (SDD)  
Resolution:125eV~150eV  
Special embedded system: quad-core processors, faster 1.6 GHz, memory 1 GB, Android4.4  
Built-in function module: Bluetooth  
Storage Function: disk space 8G, support long-time mass data storage  
Battery: Dual Li-ion Battery, each supports continuous work for more than 10 hours  
Environmental Conditions: ◎ Temperature Range:-20℃ ~ 50℃      ◎ Humidity Range:0 ~ 80%  
Measuring Mode: ◎ Identifying      ◎ Quantitative analysis      ◎ Displaying the spectra lines  
Data Transmission: Serial port, Internet access and Bluetooth  
Content Range:0.1% ~ 99.9%                      Detection time:5s ~ 20s