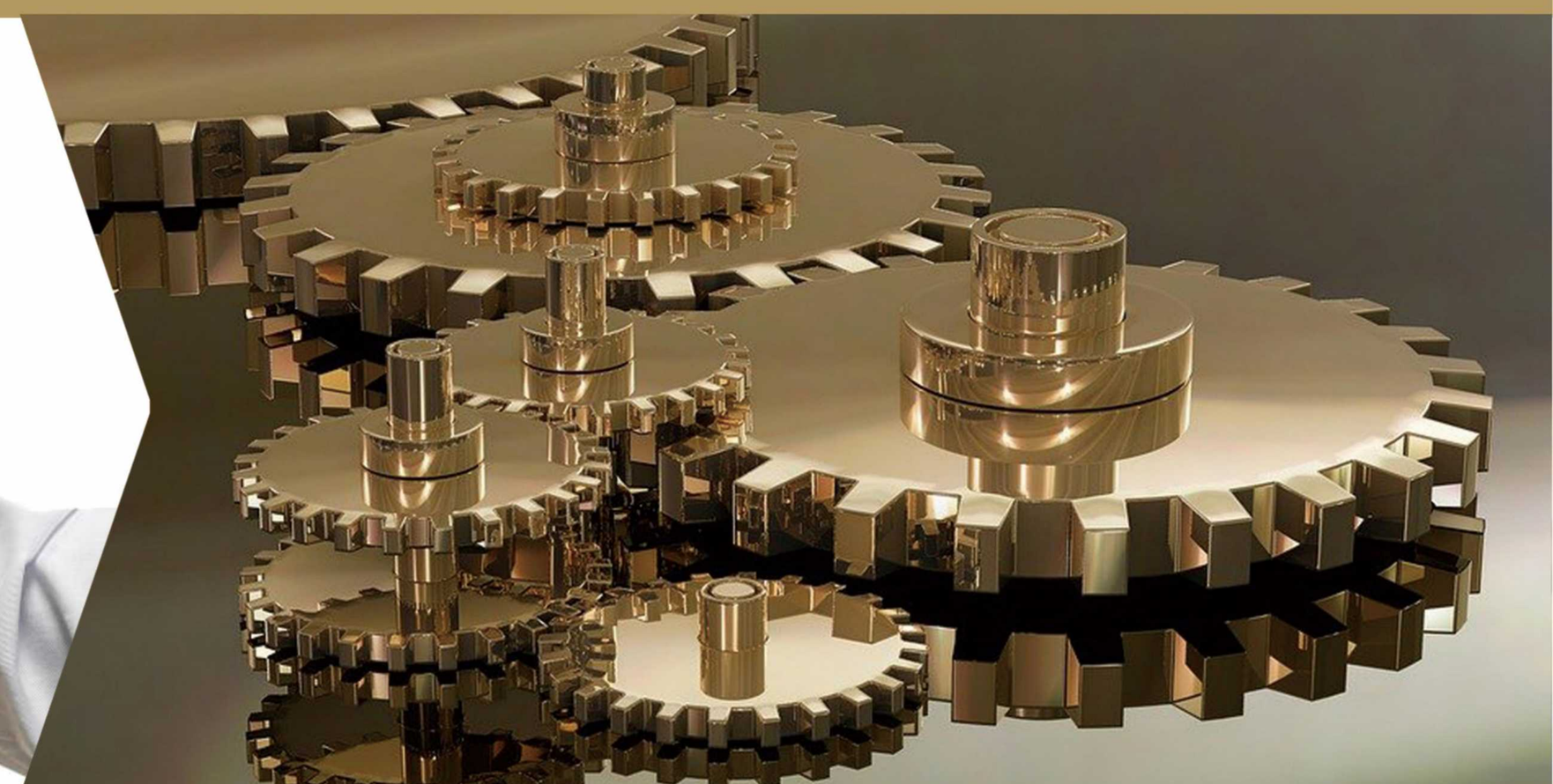
Efficiency Scientific Instrument Co.,Ltd

# H500-Handheld XRF Alloy Metal Analyzer

## Positive Material Identification (PMI) with a ESI PMI Gun

## Efficiency Meets Accuracy

- Your handheld Alloy Metal Analyzer that goes anywhere
- Instant results for Metal ID Scanner & Alloy Grade Verify
- Non-destructive element analysis with fast, simple reporting and certificate generation
- Robust industrial design for nearly any weather condition, field environment
- Real-time and precise alloy identification for all classes of metals including Titanium alloys、Stainless steels、Low alloy steels、Tool steels、Cobalt alloys Nickel alloys、Copper alloys, brasses and bronzes、Zinc alloys、Tin Alloys Precious Metals

Tel:86+512-68635865　Website:www.esi-xrf.com

# H500-Handheld XRF Alloy Metal Analyzer


## Features

> Strong software with standard-less fundamental parameters (FP) algorithm, or use its empirical calibrations when results traceability and superior accuracy are needed

> Extremely easy to use with Point-and-Shoot for sample analysis

> Minimal sample preparation required

> Light weight and compact design that can work at harsh environment

> Extensive, Editable grade library for accurate alloy identification

## Introduction

Every year, there are over 400 million tonnes of scrap processed and recycled. Sorting scrap metal through testing adds value at all stages of the metal recycling process, from sorting mixed scrap into low value and high value materials, to determining the composition of the scrap that goes into the melts and the quality of the output. The H-500 metal analyzer with it’ s special PMI(Positive material Identification) function allow factory operators to analyze critical process components before and after they are put in use to ensure assets’ integrity and prevent any catastrophic failures. To prevent potential product failures and the expensive consequences, quality control and assurance material analysis at every stage of the manufacturing process is essentially important.

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## Typical Applications

Fast Non-destructive Positive Material Identification (PMI)
Scrap Metal Sorting and Verifying
Alloy Grade Verification
Gold Testing: Purity, Carat (Karat), Gold in Alloys
Aerospace Alloys QA/QC
Dental Alloys Composition

## Extended application include

Chlorine & RoHS: Cr, Hg, Pb, Br and Cd compliance
Analysis of Pt, Pd and Rh in catalytic converters
Analysis of lube oils
Ore and minerals
Heavy Metals in soil

## Test Performance of the SS-316

| **Instrument model: H-500 Handheld XRF Analyzer** | | | | | **Sample:** | Stainless Steel 316 | |
|---|---|---|---|---|---|---|---|
| **Test Time:** | **30 seconds** | | | | | | |
| **No. of Reading** | **Calibration Curve** | **Cr %** | **Mn %** | **Fe %** | **Ni %** | **Cu %** | **Mo %** |
| **1** | **High Alloy steel** | 16.648 | 0.878 | 69.346 | 10.121 | 0.309 | 1.987 |
| **2** | **High Alloy steel** | 16.688 | 0.849 | 69.356 | 10.100 | 0.325 | 1.983 |
| **3** | **High Alloy steel** | 16.642 | 0.872 | 69.435 | 10.061 | 0.315 | 1.991 |
| **4** | **High Alloy steel** | 16.679 | 0.918 | 69.276 | 10.102 | 0.311 | 1.975 |
| **5** | **High Alloy steel** | 16.611 | 0.899 | 69.266 | 10.196 | 0.305 | 1.984 |
| **6** | **High Alloy steel** | 16.652 | 0.888 | 69.422 | 10.021 | 0.304 | 1.996 |
| **7** | **High Alloy steel** | 16.722 | 0.865 | 69.305 | 10.098 | 0.318 | 1.975 |
| **8** | **High Alloy steel** | 16.702 | 0.836 | 69.438 | 10.037 | 0.313 | 1.988 |
| **9** | **High Alloy steel** | 16.629 | 0.876 | 69.382 | 10.076 | 0.312 | 1.963 |
| **10** | **High Alloy steel** | 16.642 | 0.864 | 69.388 | 10.117 | 0.302 | 1.974 |
| **Ranges** | | 0.111 | 0.082 | 0.172 | 0.175 | 0.023 | 0.032 |
| **Average** | | 16.662 | 0.874 | 69.361 | 10.093 | 0.311 | 1.982 |
| Standard Deviation Sn | | 0.0349 | 0.0236 | 0.0633 | 0.0492 | 0.0071 | 0.0096 |
| RSD | | 0.209% | 2.694% | 0.091% | 0.488% | 2.276% | 0.486% |

# Technical specifications

| | |
|---|---|
| Analytical Method | Energy Dispersive X-ray fluorescence |
| PDA with Touch screen | CPU: 2G, System memory: 8G |
| Intelligent Analysis | Automatic select test mode based on sample matrix |
| Excitation Source | 50KV/200μA – Ag/Rh/W end window integrated miniature X-ray tube and high voltage power supply |
| Collimator & Filter | Multiple Collimator and filters with automatic switching functions |
| Detector | High Resolution Silicon Detector |
| Sample States | Solids, liquids, powders |
| Detection Limit | 5– 500ppm, depending on element and sample matrix |
| Analysis Time | 3-60 seconds |
| Simultaneous Analysis | Displays up to 40 elements at a time |
| Display Range | ppm – 99.99% |
| Safety | Automatic shutdown of X-ray tube, Pb-lined instrument frame,radiation levels within international safety standards |
| Power Supply | Rechargeable Li battery, standard 6800mAh, provides up to 12 hours operation on a single charge; 110/220V universal adapter for charging |
| Temperature | -20ºC to +50ºC |
| Size | 235 mm x 82 mm x 260 mm |
| Weight | Instrument without battery : 1 . 35 kg， Instrument with battery: 1 . 49 kg |

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