

## Silver Engine Carbon Cleaning Machine for Quick and Easy Cleaning

### Our Product Introduction

for more products please visit us on [melt-furnaces.com](http://melt-furnaces.com)

#### Basic Information

- Place of Origin: China
- Brand Name: Huarui
- Model Number: AF2501



#### Product Specification

- Durability: High
- Manufacturer: Carbon Analysis Inc.
- Color: Silver
- Shape: Cylindrical
- Ease Of Use: Easy
- Portability: Portable
- Accuracy: High
- Size: 50ml
- Highlight: silver engine carbon cleaning machine,  
carbon cleaning machine for engines,  
quick cleaning carbon sampling cup

## Product Description

### Product Description:

In the dynamic, high-stakes environment of a modern foundry or steel mill, the margin for error is infinitesimally small. The quality of a final casting or a batch of steel is irrevocably determined by the chemical composition of the molten metal. While sophisticated spectrometers and thermal analysis units provide the critical data, their accuracy is entirely dependent on one crucial, yet often underestimated, component: the sampling cup.

The Huarui Carbon Analysis Sampling Cup is not merely a container; it is the first and most critical step in your quality assurance protocol. Engineered with scientific rigor and an intimate understanding of foundry challenges, this cup transforms a scoop of molten iron into a perfect specimen, ensuring the data you base your multi-million dollar decisions on is unequivocally reliable. It is the indispensable partner to your Huarui furnace, extending our commitment to quality from the melting process to the analytical stage.

### Features:

Why does a seemingly simple cup matter so much? The answer lies in metallography.

**The White Iron Imperative:** Accurate carbon and silicon equivalent (CE, C, Si) analysis via fast cooling methods requires the sample to solidify as white iron—a hard, brittle structure where carbon is trapped in chemical combination. If the sample cools too slowly and forms gray iron (with free graphite flakes), the analysis readings will be inaccurate and unreliable, leading to catastrophic miscalculations in inoculant or carbide additions.

**A Miniature Foundry:** A premium sampling cup is a miniaturized, controlled casting environment. Its design, material composition, and cooling geometry are meticulously calculated to dictate the thermal dynamics of the solidifying sample, forcing the formation of the required white iron structure consistently, every single time.

**A substandard cup introduces variability, the nemesis of quality control. The Huarui Sampling Cup eliminates this variable.**

### Technical Parameters:

#### 3. Huarui Design Philosophy & Core Technological Advantages

Our sampling cups are the product of a philosophy centered on precision, safety, and consistency.

##### 3.1. Advanced Material Science for Uncompromised Sample Integrity

**High-Purity Base Materials:** We use only selected, high-purity quartz sands with low levels of trace elements that could contaminate the sample or interfere with the analysis.

**Proprietary White-Out Agent Formulation:** The inner surface of the HR-CSC cup is coated with our proprietary blend of white-out agents (typically tellurium or bismuth-based). This formulation is optimized to rapidly promote chill formation without creating excessive internal stresses that could cause cracking.

**Thermal Shock Resistance:** The binder system and material composition are engineered to withstand the immense thermal shock of receiving 1350-1500°C molten metal without cracking, spalling, or eroding. This ensures operator safety and sample integrity.

##### 3.2. Optimized Geometric & Structural Design

**Controlled Solidification Pathway:** The cup's geometry is not arbitrary. It is designed to promote directional solidification from the bottom up and from the outside in, minimizing shrinkage porosity and ensuring a dense, homogeneous sample with a uniform white iron structure throughout the critical analysis zone.

**Ergonomic and Safe Handling:** The cup features a robust, extended-length handle made from reinforced cardboard or composite material. This provides a secure, heat-shielded grip, allowing operators to sample quickly and confidently, significantly reducing the risk of burns and handling errors.

**Identification Ready:** A flat, smooth surface is incorporated into the design for easy marking with a heat-resistant pen or stamp, allowing for seamless sample traceability back to a specific heat, ladle, or time stamp.

##### 3.3. Unparalleled Manufacturing Consistency

**Automated Production Lines:** Consistency is king. Our fully automated production process ensures that every single Huarui Sampling Cup, from batch to batch, has identical weight, dimensions, density, and thermal properties. This repeatability is fundamental for building a long-term, trustworthy historical database of your metal quality.

### Applications:

**Application Scenarios:** Where Huarui Sampling Cups Excel

The HR-CSC Series is versatile and reliable across numerous industrial applications:

**Frontline Foundry Analysis:** Ideal for fast-paced cupola, electric arc, and induction furnace (like Huarui furnaces) environments for immediate, pre-pour chemistry verification.

**Ductile Iron Production:** Critical for ensuring the correct base chemistry before magnesium treatment and subsequent inoculation.

**Steel Manufacturing:** Used for quick-check carbon analysis in steel melts, providing vital data for end-point control.

**In-Plant Quality Laboratories & Third-Party Inspection Agencies:** The gold standard for reliable and repeatable sample acquisition for certification and quality audits.

### Customization:

Product Customization Services for the Carbon Analysis Sampling Cup:

Brand Name: Huarui

Model Number: AF2501  
Place of Origin: China  
Accuracy: High  
Usage: Used For Sampling Carbon In Various Substances  
Compatibility: Compatible With Various Carbon Analysis Machines  
Durability: High  
Color: Silver  
Customization Options Available for the Carbon Analysis Sampling Cup to meet specific requirements:  
- Compatible with Carbon Black Packing Machine  
- Suitable for Engine Carbon Cleaning Machine  
- Customized for Car Carbon Cleaning Machine

## Support and Services:

---

Our Product Technical Support and Services for the Carbon Analysis Sampling Cup include:

- Assistance with product setup and use
- Troubleshooting any issues or errors
- Providing guidance on proper sample preparation and handling
- Offering training on instrument operation and maintenance
- Continuous product updates and improvements

## Packing and Shipping:

---

Product Packaging:

The Carbon Analysis Sampling Cup is carefully packaged in a sturdy cardboard box to ensure safe delivery. The cup is wrapped in protective bubble wrap to prevent any damage during transit.

Shipping:

We offer fast and reliable shipping options for the Carbon Analysis Sampling Cup. Orders are typically processed within 1-2 business days and shipped via standard or expedited shipping, depending on your preference. Tracking information will be provided so you can monitor the status of your delivery.

## FAQ:

---

**Q: What is the brand name of the Carbon Analysis Sampling Cup?**

**A: The brand name of the Carbon Analysis Sampling Cup is Huarui.**

**Q: What is the model number of the Carbon Analysis Sampling Cup?**

**A: The model number of the Carbon Analysis Sampling Cup is AF2501.**

**Q: Where is the Carbon Analysis Sampling Cup manufactured?**

**A: The Carbon Analysis Sampling Cup is manufactured in China.**

**Q: What is the material used in making the Carbon Analysis Sampling Cup?**

**A: The Carbon Analysis Sampling Cup is made of high-quality stainless steel.**

**Q: Can the Carbon Analysis Sampling Cup be reused?**

**A: Yes, the Carbon Analysis Sampling Cup is designed for multiple uses.**



**Shandong Huarui Electric Furnace Co., Ltd.**



+86 13235363441



sales@huarui-furnace.com



melt-furnaces.com

Mount Taishan Street, Anqiu Economic Development Zone, Weifang, Shandong, China