Fire Assay Equipment

Mining Analysis | Laboratory Handling Solutions

Modular equipment for loading, pouring, cooling and sample handling.



19 **EQUIPMENT CODES**

LT-M0257 - LT-M0275

Fire Assay

MODULAR WORKFLOW

ASTM E1335 • ISO 10308 • ISO 4367

FIRE ASSAY

System Overview and Laboratory Workflow

From fire assay preparation to sample handling after analysis

Liya Test Fire Assay equipment supports handling, loading, pouring and cooling in fire assay processes for gold and other precious metals. Individual hand tools, work benches and batch handling systems can be combined within one laboratory arrangement.



1. Fusion furnace: example system layout
2. Crucible handling and cooling arrangement
3. Batch pouring trolley
4. Mould separation / working bench
5. Hand-tool storage rack
6. Workstation
7. Example electric crucible loader

General layout illustration. The furnace and tool rack are not assigned separate codes in the 19-item equipment list on this product page.

WORKFLOW SUPPORTED BY THE EQUIPMENT

01 Preparation → 02 Crucible Loading → 03 Pouring → 04 Cooling → 05 Sample Handling

FIRE ASSAY

Preparation, Loading and Handling

Workstation, bench grid, loader, tray and hot crucible trolley

The arrangement between the preparation area and furnace loading point supports batch crucible handling. A workstation and bench grid organise equipment placement. The loader, crucible tray and hot crucible trolley complete the transfer stages.

CRUCIBLE ARRANGEMENT

Crucibles from one working batch are positioned together in the handling arrangement.

SUPPORT FRAME

Crucible placement and handling arrangements can be designed around the crucible type.



HANDLING POINT

The handle shown supports guiding the trolley within the laboratory.

WHEELED DESIGN

Handling trolleys help transfer batches between laboratory work areas.

Equipment Used at This Stage

Product Code	Equipment	Workflow Role
LT-M0257	**Workstation**	Organises equipment and sample handling in a dedicated work area.
LT-M0258	**Bench Grid**	Supports the arrangement of hot crucibles and equipment on the bench.
LT-M0259	**Crucible Loader**	Helps transfer a batch of crucibles to the furnace together.
LT-M0263	**Crucible Tray**	Organises crucible placement and transfer between work areas.
LT-M0264	**Hot Crucible Trolley**	Helps move groups of crucibles within the laboratory.

Hydraulic height adjustment and large-diameter wheel options for loading trolleys are listed in the product description. Crucible arrangement and furnace access are defined for the project.

FIRE ASSAY

Pouring and Crucible Cooling

Pouring trolley, tongs, moulds and cooling racks

The pouring trolley supports transferring hot crucibles to the pouring area. Crucible tongs provide controlled handling; the mould and its cover complete this arrangement. The crucible cooling rack provides a separate holding area for hot equipment after pouring.

BATCH ARRANGEMENT

The pouring arrangement supports managing several crucibles within one working batch.

GUIDING HANDLE

The handle shown supports guiding the trolley to the pouring area.



POURING SYSTEM

The range includes batch pouring systems and crucible pouring tongs.

MOBILE TROLLEY

The wheeled frame helps transfer hot crucibles between work areas.

Equipment Used at This Stage

Product Code	Equipment	Workflow Role
LT-M0260	**Pouring Trolley**	Transfers hot crucibles to the pouring area and supports a batch pouring arrangement.
LT-M0261	**Crucible Pouring Tongs**	Helps hold hot crucibles in a controlled manner during pouring.
LT-M0262	**Crucible Cooling Rack**	Provides an organised, designated holding area for hot crucibles.
LT-M0265	**Pouring Mould**	Receives molten material and supports its shaping during pouring.
LT-M0266	**Mould Cover**	A cover option that complements the pouring mould arrangement.

Crucible, tong and mould compatibility are considered together. The transfer arrangement between pouring and cooling areas follows the laboratory layout.

FIRE ASSAY

Cupel Equipment and Work Benches

Cupel fork, cupel cooling rack and work areas after analysis

The cupel fork and cooling rack support handling and cooling around cupellation. Working and prill benches organise sample handling after analysis. Bench placement is planned around the equipment in use and the laboratory workflow.



Example mould separation / working bench



Example workstation

Equipment Used at This Stage

Product Code	Equipment	Workflow Role
LT-M0267	**Cupel Fork**	Supports cupel handling and positioning around the furnace.
LT-M0268	**Cupel Cooling Rack**	Provides an organised cooling area for cupels after cupellation.
LT-M0269	**Working Bench**	Organises mould separation and sample handling after analysis.
LT-M0273	**Prill Bench**	Provides a work area for prill and sample handling after analysis.

Cupel dimensions, bench type and sample handling layout are considered together. The working arrangement follows the laboratory workflow after analysis.

FIRE ASSAY

Furnace Tools and Complementary Parts

Brush, rake, shovel, furnace chamber and furnace tile

Furnace hand tools support cleaning, moving residues and organising the working area. The furnace chamber and tile are complementary options for the high-temperature section. Selection depends on the existing furnace design and equipment compatibility.



Furnace and sample hand tools in the product range

Equipment Used at This Stage

Product Code	Equipment	Workflow Role
LT-M0270	**Furnace Brush**	Supports cleaning the furnace interior and removing residues.
LT-M0271	**Furnace Rake**	Helps move residues and material within the furnace.
LT-M0272	**Furnace Shovel**	Supports handling material and residues around the furnace.
LT-M0274	**Furnace Chamber**	A furnace component that forms part of the high-temperature working section.
LT-M0275	**Furnace Tile**	A tile option that completes the furnace working section.

Furnace chamber and tile dimensions and compatibility are defined for the furnace in use. Hand tools and complementary parts are selected alongside the furnace layout.

FIRE ASSAY

Product Codes and Configuration Selection

19 equipment codes • Complete product list by function

Product Code	Equipment	Function Group
LT-M0257	Workstation	Preparation
LT-M0258	Bench Grid	Preparation
LT-M0259	Crucible Loader	Loading
LT-M0260	Pouring Trolley	Pouring
LT-M0261	Crucible Pouring Tongs	Pouring
LT-M0262	Crucible Cooling Rack	Cooling
LT-M0263	Crucible Tray	Handling
LT-M0264	Hot Crucible Trolley	Handling
LT-M0265	Pouring Mould	Pouring
LT-M0266	Mould Cover	Pouring
LT-M0267	Cupel Fork	Cupellation
LT-M0268	Cupel Cooling Rack	Cooling
LT-M0269	Working Bench	Bench
LT-M0270	Furnace Brush	Furnace Tool
LT-M0271	Furnace Rake	Furnace Tool
LT-M0272	Furnace Shovel	Furnace Tool
LT-M0273	Prill Bench	Bench
LT-M0274	Furnace Chamber	Furnace Part
LT-M0275	Furnace Tile	Furnace Part

Information Needed for Configuration

Crucibles and Cupels

Type, dimensions and quantity per working batch.

Furnace Layout

Furnace access, loading point and working height.

Laboratory Workflow

Positions of preparation, pouring and cooling areas.

Selected Equipment

Product codes, bench type and handling arrangement.

Method references listed on the product page: ASTM E1335 • ISO 10308 • ISO 4367

Equipment dimensions, capacity, weight, temperature limits and delivery scope are defined in the project specification. Crucible, cupel and furnace compatibility follow the selected configuration.