EAGON 2® FUSION INSTRUMENT
Keeping ahead through expertise in sample preparation by fusion
SAFE, SIMPLE, HIGH PERFORMANCE

The Eagon 2 is a fully automatic fusion instrument that prepares glass disks for XRF analysis. Its innovative patented design ensures performance, operator safety and ease of use. The concept of the Eagon 2 instrument makes fusion and the consequent benefits of accurate XRF analysis easily reachable.

The Eagon 2’s value to sample preparation by fusion

- Ultimate safety
- Optional exhaust adapter for minimum infrastructure requirements
- Optimized method development

MINING / MINERALS

The Eagon 2 is a great quality control tool leading to very high analytical performance and allowing the obtention of precise and accurate results.

COSMETICS

The versatility of the Eagon 2 is convenient when it comes to analyzing cosmetics samples.

RESEARCH

With this simple and low maintenance instrument, you can quickly switch from producing glass beads for XRF to producing solutions for ICP analysis. It then facilitates your experiments.

FOOD

The safety door of the instrument prevents spills and allows a clean and safe preparation of food samples.

BUILDING MATERIALS

The Eagon 2 is a great quality control tool leading to very high analytical performance and allowing the obtention of precise and accurate results.

ACADEMIA

The Eagon 2 is a versatile fusion instrument that is easy to use and that requires low maintenance. It’s therefore a great choice for universities.

PHARMACEUTICALS

In addition to providing excellent reproducibility, the Eagon 2 instrument is very helpful in analyzing pharmaceutical samples.

ENVIRONMENTAL

The Eagon 2 instrument is useful for the preparation of soils and sediments since it leads to high-quality analytical results.
WHY INVEST IN THE EAGON 2 FUSION INSTRUMENT?

为什么要投资EAGON 2 Fusion仪器呢？

高分析性能
- 可重复性
- 完全自动操作，确保每次融合循环的完美重复
- 优质的氧化陶瓷坩埚和模具，确保最低的污染
- 优化了所有材料的融合条件。

可编程的融合参数
- 温度设置
- 持续时间
- 氧化步骤
- 非湿润剂注射
- 搅拌
- 冷却。

优化的方法开发
- 暂停和检查功能，可以在融合周期中可视化融合过程。

终极安全
- 从冷到冷操作
- 操作者在整个融合周期中受到保护，避免与热材料和表面接触。

易于使用
- 一键操作
- 预定义融合方法库
- 定制化融合方法定义。

快速投资回报（ROI）

低使用成本
- 铸造托盘传感器
- 确保安全可靠的运行 - 不可能损坏的仪器导致无铂金模具的倾倒
- 坩埚和模具保持器可以轻松拆卸进行清洁
- 铂器友好，没有损坏的温度梯度。

最小的基础设施要求
- 简单的电子连接
- 不需要氧气、压缩空气或水冷却系统
- 选配的排风适配器限制了基础设施要求。

快速投资回报（ROI）

为什么我应该在实验室使用融合？

这个通用技术在与其它样品制备方法（如压制压片或酸消化）比较时，具有众多优势。

<table>
<thead>
<tr>
<th></th>
<th>Fusion</th>
<th>Pressed pellets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affected by mineralogy</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Affected by particle size</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Desirable size of powder (microns)</td>
<td>50-100 (easy)</td>
<td>5-30 (difficult)</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±1%</td>
<td>±10%</td>
</tr>
<tr>
<td>Easy calibration with synthetic standards</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Application of matrix correction</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

***The Eagon 2 instrument can’t be used to make solutions for AA or ICP analysis.***

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Fusion is a sample preparation method developed in the mid 50s. It consists of dissolving at high temperatures a fully oxidized sample in a suitable solvent (a flux) in a platinum, zirconium or graphite crucible. The melted mixture is agitated and poured into a mold to create a glass disk for XRF analysis. It can be poured into a beaker to create a solution for AA or ICP analysis.
### TECHNICAL SPECIFICATIONS

#### Productivity
- Fully automatic fusion instrument that prepares glass disks for XRF analysis
- Two fusion positions with independent synchronous or asynchronous operation

#### Heating
- Temperature operation range: 300 – 1200°C
- Temperature monitored by a type R thermocouple inside the heating chamber
- Resistance-based heating system

#### Electrical
- **Voltage:** 220-230 V
- **Current:** 32 A
- **Frequency:** 50-60 Hz

#### Dimensions
- **Width:** 64.5 cm (25.4 in.)
- **Depth:** 68.5 cm (27.0 in.)
- **Height:** 56.5 cm (22.2 in.)
- **Weight:** 78 kg (172 lb.)

#### Programmable Fusion Parameters
- Ramp-dwell steps (temperature/time)
- Full temperature range solid phase oxidation
- Crucible angle and agitation speed
- Non-wetting agent injection
- Crucible pouring angle
- Passive or forced cooling (2 speeds)

#### Control and Operation
- One-touch operation
- Precise temperature control (± 5°C)
- Full microprocessor control
- Pause and inspection function to visualize the fusion process during the fusion cycle
- Alarm when the cycle is completed

#### Software and Communication
- Front panel operation
- Optional alpha/numeric programming via a PC for additional convenience
- Up to 32 user-defined methods

#### Safety
- Certified CE and machinery directive 98/37/EC compliant
- Outer doors are interlocked during fusion cycle to enhance safety
- Maximum external temperature of 70°C
- Casting dish sensors ensure safe and reliable operation
- User operation levels are protected by password

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Malvern Panalytical experts are the reference for all steps of the fusion process or development of new applications. Their personalised solutions allow customers to properly manage risks, reach a quick ROI, and benefit from a large database of preparation methods for a broad range of samples.
WHY CHOOSE MALVERN PANALYTICAL?

We are global leaders in materials characterization, creating superior, customer-focused solutions and services which supply tangible economic impact through chemical, physical and structural analysis.

Our aim is to help you develop better quality products and get them to market faster. Our solutions support excellence in research, and help maximize productivity and process efficiency.

Malvern Panalytical is part of Spectris, the productivity-enhancing instrumentation and controls company.

www.spectris.com

SERVICE & SUPPORT

Malvern Panalytical provides the global training, service and support you need to continuously drive your analytical processes at the highest level. We help you increase the return on your investment with us, and ensure that as your laboratory and analytical needs grow, we are there to support you.

Our worldwide team of specialists adds value to your business processes by ensuring applications expertise, rapid response and maximum instrument uptime.

- Local and remote support
- Full and flexible range of support agreements
- Compliance and validation support
- Onsite or classroom-based training courses
- e-Learning training courses and web seminars
- Sample and application consultancy

MALVERN PANALYTICAL

Grovewood Road, Malvern, Worcestershire, WR14 1XZ, United Kingdom
Tel. +44 1684 892456
Fax. +44 1684 892789

Lelyweg 1, 7602 EA Almelo, The Netherlands
Tel. +31 546 534 444
Fax. +31 546 534 598
info@malvernpanalytical.com
www.malvernpanalytical.com

www.malvernpanalytical.com/claisse