



ELEMENTRAC H-R

氢分析仪

ELEMENTRAC H-r 采用热萃取法，可以可靠精准地测定钢、铁等小尺寸金属样品中的氢含量。该设备配置电阻加热石英管炉，最高工作温度达1100°C，并配备高性能宽量程热导检测器（TCD）。仪器操作简便，仅需基础维护，且可通过简洁易用的ELTRA ELEMENTS软件进行全流程控制。



优点

- | 配备13毫米内径电阻炉，适用于中小型样品分析
- | 可检测钢样中扩散氢、残留氢及总氢含量
- | 最高工作温度达1100°C
- | 坚固耐用适用于生产监控与实验室环境
- | 支持标准物质或内置气体定量装置进行快速校准
- | 即使在低至ppm级浓度范围仍能实现精确测量

应用实例

| 合金, 铜, 钢铁



作用原理

ELEMENTRAC H-r 的操作快捷、安全且简便。样品经联用天平称重后，重量数据可直接传输至用户友好的 ELEMENTS 软件，当然也支持手动输入样品重量。登录系统后，将样品置于炉体冷区。启动分析程序后，炉体向上旋转使样品落入热区，样品中包裹的氢随之释放，随后由宽量程热导池完成检测。通过选择特定温度，还可实现不同形态氢（如扩散氢）的测定。根据样品质量及应用设置，检测耗时约1至15分钟。分析完成后，软件自动计算释放氢元素含量，结果可导出为PDF、CSV、TXT格式文件或通过LIMS系统传输。仪器支持气体标定、有证标准物质或氢化钛等基准物质进行校准。

ELEMENTRAC H-R

技术参数

分析元素	氢
样品	钢铁, 金属
炉子校准	水平 / 倾斜功能
炉子	resistance furnace with quartz tube, adjustable up to 1100 °C (operating temperature 900 - 1000 °C)
检测方式	热导系数
Combustion tube diameter	ø 13
最大样品尺寸	ø 11 x 60 mm
典型分析时间	3 - 15 min (depending on sample mass and analysis settings)
化学品	高氯酸镁, Schuetze试剂, 氢氧化钠
载气	Optional for the integrated gas calibration unit: Helium 99.995 % (2 - 4 bar / 30 - 60 psi)/ nitrogen 99.995 % pure (2 - 4 bar / 30 - 60 psi)
功率要求	230 V, 50/60 Hz, 2 A, 最大功率 450 W
所需设备	电脑,显示器,天平(精度0.0001克)
选配件	carrier gas purification furnace

www.eltrachina.cn/hr

ORDER DATA

ELEMENTRAC[®] H-R

(Please order PC, monitor, balance and consumables (starter-kit, anhydrone, sodium hydroxide, schuetze reagent) separately)

Measuring ranges at 1,000 mg sample weight 2)

88200-4501		H-r (ID tube: 13 mm)	0.01 – 1,000 ppm H
88200-4500		H-r XXL (ID tube: 34 mm)	

REQUIRED ACCESSORIES

PC, MONITOR, BALANCE

71015-1000	Computer with Intel Core i5-8400 Processor, 256 GB SSD; 8 GB RAM; Windows 10 operating system; keyboard; mouse
88400-0584	Monitor, TFT (23.8")
88400-0645	Balance (resolution 0.0001 g)

REQUIRED CONSUMABLES / CHEMICALS FOR FIRST OPERATIONS

90200		Anhydrone (magnesium perchlorate), 454 g 1)
90210		Sodium hydroxide, 500 g 1)
90270		Schuetze reagent, 100 g 1)

FURTHER OPTIONS AND CONSUMABLES

ACCESSORIES (HARDWARE)

88200-9000	Carrier gas purification furnace, without filling (please order filling and quartz wool separately)
88400-0610	Barcode scanner
72080	Nitrogen regulator, 1 piece

CHEMICALS (FILLINGS FOR GLASS AND QUARTZ TUBES)

90200		Anhydron (magnesium perchlorate), 454 g 1)
90210		Sodium hydroxide, 500 g 1)
90270		Schuetze reagent, 100 g 1)
90426-1001		Filling for carrier gas purification furnace (suitable for one filling)
90332		Glass wool, 50 g
92610		Tube of high vacuum grease, 35 g

SPATULAS, TWEEZERS, SPOONS AND TONGS

88400-0229		Tweezers (160 mm), curved, 1 piece
88400-0472		Tweezers (145 mm), straight, 1 piece
88400-0475		Set with 6 spatula and 1 tweezers, for multiple weighing procedures

TOOLS FOR STORAGE, TRANSPORTING AND WEIGHING

36121		Quartz boat, 74 x 22 x 10 mm, 1 piece, for weighing pins
88400-0477		Weighing boat, 1 piece, for weighing and usage of granulates

TOOLS FOR MAINTENANCE

71010		Brush, 16 mm, 1 piece, for cleaning balance from dust
-------	---	---

88400-0473		Powder funnel (plastics), 1 piece, for easy filling of chemical tubes
88400-0489		Rubber plug 14 x 20 x 24 mm, 1 piece, for sealing small glass tubes like 88400-0006
88400-0490		Rubber plug 29 x 35 x 30 mm, 1 piece, for sealing big glass tubes like 09090
88600-0027		Sodium hydroxide, Anhydrone filter tube

CALIBRATION MATERIALS

**Calibration materials may show slight variations depending on the current lot.
To see the current certification please visit www.ELTRA.com.**

91110		Steel, 100 balls, gold plated, 1 g each, >1.9 ppm H
-------	---	---