iCheck Iron
Product Information

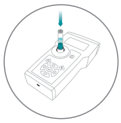
iCheck **Iron** is a portable photometer for the quantitative determination of iron in foods.

HOW DOES IT WORK?

iCheck consists of 2 parts: a ready-to-use reagent vial and a device. The sample is injected into the reagent vial where a reaction with iron takes place. The vial is inserted into the device that measures concentration of Iron in the vial.

1. Injection

2. Reaction



3. Measurement

PRODUCT DETAILS

iCheck Iron measures quantitatively the iron specific colour reaction between the iron in the food and the reagents in the vials. The device displays the results of the iron content in mg/L. iCheck devices come in a portable case with all necessary accessories.

iCheck reagent vials contain a patented mixture of reagents. They come in a box (**Test Kit**) sufficient for 100 analyses. The reagent's shelf-life is 12 months at room temperature.

BENEFITS

- **Speed:** result in 60 minutes
- **Economy:** cost is only 10% of conventional lab. methods
- **Easy implementation:** only 1 day training required
- **Scalability:** no set up calibration required

OUR SERVICES

Free-of-charge customer tech support:

- Online demos and trainings (i.e. Zoom)
- Instant support via WhatsApp: +49 3328 35150034
- Support with analysis, calculations, interpretation of standards, sampling protocols, technical consultations about the micronutrients

On-site Training

Feasibility testing for new matrices

iChecks are manufactured in Germany, used in over 80 countries and validated against standard laboratory methods. Learn more at www.bioanalyt.com/products

measure for life

For orders, technical assistance or any other inquiries contact BioAnalyt at:
contact@bioanalyt.com • +(49) 33 28 35 15 000 • www.bioanalyt.com

BioAnalyt

iCheck Iron
Technical Data

Quality assurance

iCheck and iCheck Iron reagent vials are produced according to quality management system (DIN EN ISO 9001:2015) certified by TÜV Nord in Germany.

TECHNICAL DATA	
Sample	
Analyte:	Iron as NaFeEDTA, ferrous fumarate, ferrous sulfate or ferrous nitrate
Sample:	Premix, flour, soy and fish sauces, corn soy blend (CSB), lipid-based nutrient supplement (LNS)
Sample preparation:	For solid samples: dilution and homogenization in distilled or bottled water, optionally in 0.2-0.4M hydrochloric acid solution.
Sample volume per analysis:	0.4 mL (400 µL)
Concentration range:	>1.5 ppm (mg/L), samples above 12 ppm must be diluted in water or 0.2M HCl
Device	
Analytical method:	Photometric determination of iron concentration using colorimetric reaction with bathophenantrolin
Units displayed:	mg/L
Linear range:	1.5 - 12.0 mg/L
Calibration:	Factory set (standards included for control)
Time per analysis:	10 - 60 min
Environment:	20 –30°C, no direct sunlight
Accuracy:	Coefficient of variation is 3 - 16%; extended measurement uncertainty at 95% confidence at 25°C is 7 - 34% depending on sample type.
Method comparison:	Atomic Absorption Spectroscopy (AAS)
User training:	1 day training
Use:	Laboratory and field
Data output:	Sample #, Batch #, Result, Date, Time (in transferred data)
Connectivity and data:	Results are stored in the device and transferred to a PC via USB
Power source:	NiMH rechargeable batteries included; 1.2V or 1.5V
Warranty:	2 years
Device weight:	0.45 kg
Device dimensions:	11 x 4 x 20 cm (W x H x L)
Test Kit	
Content:	100 reagent vials and 10 additive vials; 110 syringes - 1.0 mL; 100 needles - 1.6mm x 25mm; 10 needles - 0.8mm x 16mm; 1 syringe - 10 mL
Chemical composition:	Bathophenantrolin in organic solvent, reducing and chelating agents
Volume per reagent vial:	1.5 mL
Shelf life:	12 months at 20 –30°C, no direct sunlight, upright
Dimension of test kit:	26 x 14.5 x 16.5 cm
Disposal instructions:	Hazardous waste
Optional equipment:	Manual centrifuge, 50 mL falcons, weighing dishes, reference samples