# Kemio

Protecting public health

**Palintest** 



# **Introducing Kemio**

Kemio uses a sophisticated electrochemical technique, powered by Palintest's patented single-use sensor technology, to test for chemicals and heavy metals in water.

It is widely used by public authorities, water utilities and water management organisations, and the food and beverage industry to protect the public and the environment and ensure compliance with regulations.

Kemio's single-use sensors generate an electrical current by reacting with the chemical or metal in the water sample. Kemio measures this electrical signal to determine the concentration of contaminants within the sample.

### How does it work?

A user-friendly testing method, Kemio minimises the potential for human error to ensure accurate results.



Scan the sensor



Insert the sensor



Fill the sample vessel



Close the lid - the measurement begins automatically

Find out more about Kemio www.palintest.com/kemio



## The many benefits of Kemio technology...



#### Highly accurate

A reliable, proven testing method



#### No calculations required

Clear pass/fail results are shown



#### Simple operation

No training or chemistry knowledge is required



#### Full traceability

Integrated data log summarises 10,000 results



#### **Removes administrative** and process errors

Test results are logged automatically



#### Rapid and reliable on-site testing

Kemio combines portability with quick test speeds



#### Suitable for all sample types

Unaffected by colour, light quality, turbidity or floating particles



#### Health and safety

No glassware or harsh chemicals

## How can Kemio help you?

# Protect public health by rapidly identifying contamination



Testing with Kemio delivers reliable results within minutes at the point of use... and no laboratory testing is needed.

This means that dangerous levels of chemicals or heavy metals can be quickly identified, leading to appropriate contamination control action by businesses or authorities.

#### **Comply with regulations**



All test results are automatically stored in a Kemio product, providing users and authorities with the traceable and auditable data they need to demonstrate compliance.

Kemio offers US Environmental Protection Agency (EPA) approved testing methods which can help organisations comply with regulations such as the EPA Lead and Copper Rule.

# Test water at source – wherever you need to



Kemio is a lightweight, fully portable digital test kit which uses no glassware and is certified IP67 waterproof.

It therefore enables water testing to be carried out in multiple locations and in challenging or remote environments.

# Save on resources and training time



Kemio provides users with a simple test method. No training is required, as on-screen visual instructions guide users through the test.

Kemio test kits can be deployed quickly, straight out of the box. They can be easily used by single operators and no resources are required for laboratory work.

# Provide peace of mind to authorities and the public



Kemio uses a highly accurate electrochemical technique and measurements aren't affected by ambient light, colour, turbidity or floating particles.

Combine this with automatic result logging and data traceability, and users, authorities and the public can have confidence in Kemio's reliability.

# Ensure safe and compliant practices



No glassware or harsh chemicals are used with the Kemio digital test kit. This ensures that no broken or smashed glass can contaminate your product lines and water sources.

No glassware also means that users can conduct tests safely, whether they are using the product in the field or in a laboratory... and there is less waste too.

"The unit is easy to use, easy to train on and is intuitive."

Compliance and Innovation Manager,
Major Fresh Produce Supplier

"I like the simplicity of the Kemio meter, as well as the lack of waste."

Chemist, Utilities Authority

### **Kemio Disinfection**

# Accurate testing for critical disinfection parameters

#### Results in 60 seconds

A user-friendly test method, Kemio Disinfection makes light work of disinfection monitoring. Kemio Disinfection delivers reliable results within minutes at the point of use and what's more no training is required, as on-screen visual instructions guide users through the test.

#### **Guaranteed Accuracy**

Kemio Disinfection can be used with all water samples including those which are coloured, turbid, and those with floating particles.



#### **TESTING FOR**

Bromine, Chlorine, Chlorine Dioxide, Chlorite and Peracetic Acid



Contains instrument, protective carry case, check standards, micro USB, international adaptor, stylus and quick start instructions.

Product code: KEMS15DIS

#### **Kemio Disinfection Hard Case Kit**

Contains instrument, check standards, micro USB, international adaptor, stylus and quick start instructions.

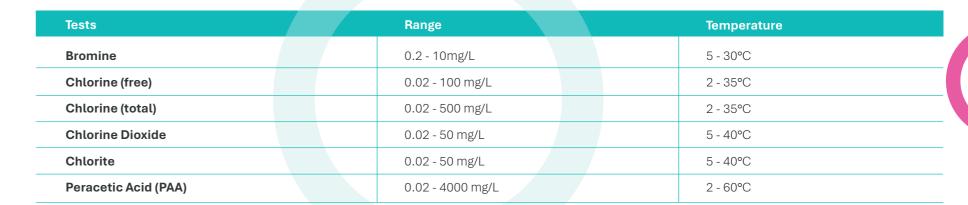
Product code: KEMH15DIS

#### **Kemio Disinfection Benchtop Kit**

Contains instrument, check standards, micro USB, international adaptor and quick start instructions.

Product code: KEMR15DIS





Measuring System	Chronoamperometry
Temperature Range	Ambient range: 0°C - 50°C
Display	High clarity LCD screen
User Interface	Touchscreen
Language Options	English, French, Spanish and Chinese (Simplified)
Connectivity	USB-C
Information Input	Barcode scanner, on-screen keyboard, on-screen keypad
Data Storage	10,000 test results with all test information
Size (W x L x H) & Weight	156 mm x 180 mm x 95 mm, 1012g
Battery	2300mAh NiMH Rechargeable Battery Pack. Only battery packs supplied by Palintest can be used with Kemio
Power Supply	USB power and external charger
Rating	IP67

# Kemio Heavy Metals

# **Expert testing for heavy** metal contaminants

#### **EPA** approved method for lead testing

Protect against Lead, Copper, Arsenic and Cadmium contamination with Kemio Heavy Metals. The only portable EPA approved method for lead testing. The US Environmental Protection Agency (EPA) has approved Palintest Method 1001, Rev. 1.1. for the determination of total recoverable lead in drinking water using differential pulse anodic stripping voltammetry using pre-calibrated disposable sensors in a Palintest Kemio device.

#### Results in 3 minutes

Kemio Heavy Metals is lightweight and durable. In as little as three minutes, Kemio Heavy Metals provides a measurement in the field, allowing you to rapidly respond to contamination without the delays of laboratory test results.



#### **TESTING FOR**

Lead, Copper, Arsenic and Cadmium

#### Kemio Heavy Metals Soft Case Kit

Contains instrument, protective carry case, check standards, micro USB, international adaptor, stylus and quick start instructions.

Product code: KEMS15HM

# **Technical specifications**



Tests	Range	Temperature
Lead	1 - 100 µg/L	5 - 35°C
Cadmium	0.2 - 10 μg/L	5 - 35°C
Copper	100 – 2000 μg/L	5 - 35°C
Arsenic	2 – 250 μg/L	5 - 35°C

Measuring System	Anodic Stripping Voltammetry (ASV)				
Temperature Range	Ambient range: 0°C - 50°C				
Display	High clarity LCD screen				
User Interface	Touchscreen				
Language Options	English, French, Spanish and Chinese (Simplified)				
Connectivity	USB-C				
Information Input	Barcode scanner, on-screen keyboard, on-screen keypad				
Data Storage	10,000 test results with all test information				
Size (W x L x H) & Weight	156 mm x 180 mm x 95 mm, 1012g				
Battery	2300mAh NiMH Rechargeable Battery Pack. Only battery packs supplied by Palintest can be used with Kemio				
Power Supply	USB power and external charger				
Rating	IP67				

## Kemio Multi

### An 'all in one' system

# Combining the best in Kemio technology

Combining the capabilities of Kemio Heavy Metals with Kemio Disinfection. Kemio Multi is our next generation, multi-parameter measurement platform. It provides laboratory quality results, whether in the lab or in the field, allowing you to swiftly address and protect from water contamination.

### **Training Needs Minimised**

Kemio Multi boasts the many benefits of our Kemio range including a user-friendly interface, digital data log, clear pass or fail results, electronic measurement and accurate results.



#### **TESTING FOR**

Lead, Cadmium, Copper, Bromine, Chlorine, Chlorine Dioxide, Chlorite, Arsenic and Peracetic Acid

#### Kemio Multi Soft Case Kit

Contains instrument, 2 x sample vessels, protective carry case, check standards, micro USB, international adaptor, stylus and quick start instructions.

Product code: KEMS15MUL





# **Technical specifications**

Tests	Range	Temperature
Lead	1 - 100 μg/L	5 - 35°C
Cadmium	0.2 - 10 μg/L	5 - 35°C
Copper	100 – 2000 μg/L	5 – 35°C
Bromine	0.2 - 10mg/L	5 - 30°C
Chlorine (free)	0.02 - 100 mg/L	2 - 35°C
Chlorine (total)	0.02 - 500 mg/L	2 - 35°C
Chlorine Dioxide	0.02 - 50 mg/L	5 - 40°C
Chlorite	0.02 - 50 mg/L	5 - 40°C
Peracetic Acid (PAA)	0.02 - 4000 mg/L	2 - 60°C
Arsenic	2 - 250 μg/L	5 - 35 °C

Measuring System	Anodic Stripping Voltammetry (ASV) / Chronoamperometry				
Temperature Range	Ambient range: 0°C - 50°C				
Display	High clarity LCD screen				
User Interface	Touchscreen				
Language Options	English, French, Spanish and Chinese (Simplified)				
Connectivity	USB-C				
Information Input	Barcode scanner, on-screen keyboard, on-screen keypad				
Data Storage	10,000 test results with all test information				
Size (W x L x H) & Weight	156 mm x 180 mm x 95 mm, 1012g				
Battery	2300mAh NiMH Rechargeable Battery Pack. Only battery packs supplied by Palintest can be used with Kemio				
Power Supply	USB power and external charger				
Rating	IP67				



# Kemio

# Order your Kemio now

https://www.palintest.com/get-in-touch/



# Ordering information

Items in kit	Kemio Disinfection Benchtop Kit KEMR15DIS	Kemio Disinfection Soft Case Kit KEMS15DIS	Kemio Disinfection Hard Case Kit KEMH15DIS	Kemio Heavy Metals Soft Case KEMS15HM	Kemio Multi Soft Case Kit KEMS15MUL
Kemio Disinfection					
Check Standards					
Protective Case					
USB Cable					
International Power Adaptor					
Kemio Sensors					
Soft Case					
Hard Case					
Additional Information	Sensors ordered separately	Sensors ordered separately	Includes 200 Chlorine Dioxide/Chlorite sensors and 100 Chlorine sensors. *Kit required for Chlorite measurement.	Sensors ordered separately	Sensors ordered separately

## **Kemio Sensors**

Kemio Sensors help you to understand your chemical concentration and to reduce the risks and costs associated with overdosing and underdosing. Please note, both the Kemio Disinfection Sensors and Kemio Heavy Metal Sensors are suitable for Kemio Multi.



### Consumables

Consumables	Part Code
CR-1 Reagent (Chlorite test)	PT546
CR-2 Reagent (Chlorite test)	PT547
Glycine Reagent (Chlorine Dioxide and Chlorite test)	PT549

Please see page 16 for more Kemio accessories.

## **Kemio Heavy Metal Sensors**

	Range	Temperature	Part Code
Lead	1 - 100 µg/L	5 - 35°C	10 pack: KEM22MPB
			Includes tablets, crushing rods and disposable vessels
Cadmium	0.2 - 10 μg/L	5 - 35°C	10 pack: KEM22MCD
			Includes tablets, crushing rods and disposable vessels
Copper	100 - 2000µg/L	5 - 35°C	KEM22MCU
Arsenic	2 - 250 µg/L	5 -35 °C	Total Arsenic: KEM100M-TAS - Pack of 100 sensors.
			Speciated Arsenic (Arsenic III, Arsenic V, and Total Arsenic): KEM100M-SAS - Pack of 100 sensors (50 tests for total arsenic and 50 tests for arsenic (III)).
			Both packs include tablets, crushing rods, disposable vessels, 2x syringes and 2x pre-packed reusable cation exchange columns.

### **Kemio Disinfection Sensors**

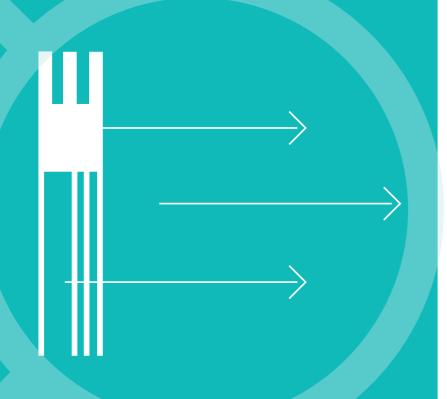
		Part Code	
Free Chlorine: 0.02 - 10mg/L Total Chlorine: 0.02 - 75mg/L	2 - 35°C	100 pack: KEM21CLO 500 pack: KEM25CLO	0
Free Chlorine: 0.1 - 25mg/L	5 - 25°C	100 pack: KEM21CHR	
Free Chlorine: 0.1 - 25mg/L	2 - 15°C	100 pack: KEM21CLT	
	Total Chlorine: 0.02 - 75mg/L  Free Chlorine: 0.1 - 25mg/L  Total Chlorine: 1 - 500mg/L	Total Chlorine: 0.02 - 75mg/L  Free Chlorine: 0.1 - 25mg/L  Total Chlorine: 1 - 500mg/L  Free Chlorine: 0.1 - 25mg/L  2 - 15°C	Total Chlorine: 0.02 - 75mg/L       500 pack: KEM25CLO         Free Chlorine: 0.1 - 25mg/L       5 - 25°C       100 pack: KEM21CHR         Total Chlorine: 1 - 500mg/L       5 - 30°C       500 pack: KEM25CHR         Free Chlorine: 0.1 - 25mg/L       2 - 15°C       100 pack: KEM21CLT

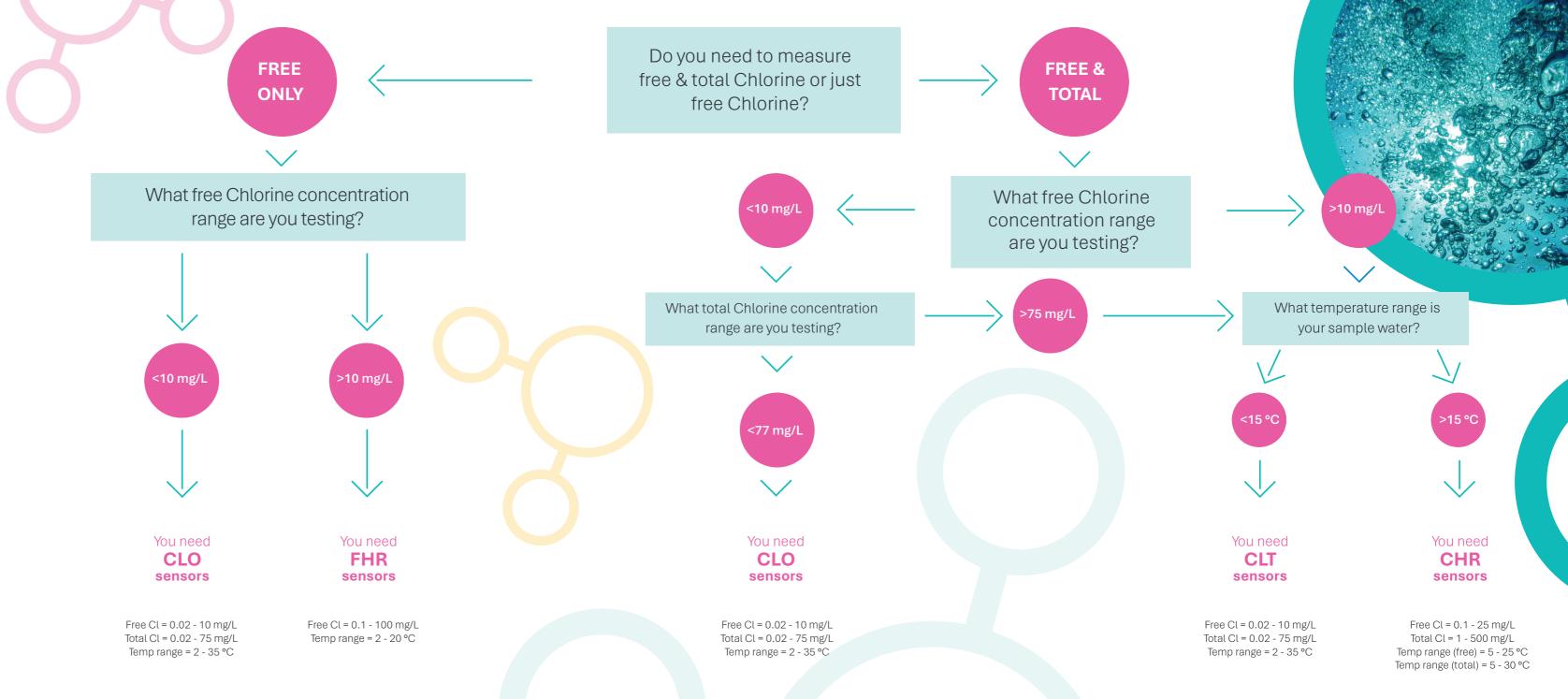
Free Chlorine	Range	Temperature	Part Code Part Code
FHR	0.1 - 100mg/L	2 - 20°C	100 pack: KEM21FHR
			500 pack: KEM25FHR

Other Disinfection Sensors	Range	Temperature	Part Code
Bromine	0.2 - 10mg/L	5 - 30°C	100 pack: KEM21BRS
Chlorine Dioxide and Chlorite	Chlorine Dioxide: 0.02 - 50mg/L Chlorite: 0.02 -50mg/L	5 - 40°C	Starter pack (100 sensors and glycine reagent): KEM20CDX 100 pack: KEM21CDX 500 pack: KEM25CDX
Peracetic Acid	5 - 2000mg/L	5 - 30°C	100 pack: KEM21PAA 500 pack: KEM25PAA
Peracetic Acid (low range)	0.02 – 10 mg/L	2 - 30°C	100 pack: KEM21PAL 500 pack: KEM25PAL
Peracetic Acid (high range)	400 - 4000mg/L	10 - 60°C	100 pack: KEM21PAH 500 pack: KEM25PAH

# **Chlorine Sensor Selection**

Use our Chlorine sensor selection diagram to select the most suitable sensor for your testing needs.





### Accessories

Palintest is committed to supporting all your water testing requirements. We offer a range of accessories and check standards to help support your testing procedures.

Accessories	Code	Compatibility		
		Kemio Disinfection	Kemio Heavy Metals	Kemio Multi
Kemio Check Standards	KEMC10			•
Kemio Stylus	KEM306		•	
Kemio Protective Case	KEM307	-		
USB-C Cable	KEM309	•		
Replacement Sample Vessel (Disinfection)	KEM308	•		
Replacement Sample Vessel (Heavy Metals)	KEM313		•	
Degassing Equipment	PT553			
Degassing Replacement Filter	PT556			
Degassing Pump	PT554			

### **Introducing Palintest**

#### **Our Expertise in Safeguarding Water**

Palintest supports water utilities providers, industrial clients, and water management and wastewater personnel in meeting regulatory requirements and ensuring water safety. We collaborate with a diverse range of customers, including local authorities, humanitarian organisations, and various industrial sectors. Our commitment is to deliver innovative solutions and reliable support, ensuring the highest standards of water quality and safety.

Established in the UK in 1989, but with a history dating back to the 1800s, Palintest has pioneered techniques and technology used in drinking and wastewater, recreational water, industrial and humanitarian water. Our technology is manufactured in the UK and used globally in a variety of applications to protect lives and the environment.

Palintest is part of Halma, a global group of life-saving technology companies.







Innovation



Championing water safety



**UK** manufacturing



Tech leaders

### **Palintest Connect**

#### Do you have Palintest technology? If so, don't forget to register for Palintest Connect!

Monitoring water in critical applications requires full confidence in field quality data. Palintest Connect is a cloud-based data management software which allows you to upload, view and manage water quality data swiftly and seamlessly – saving you time and money, and improving efficiencies.



## Demonstrate compliance

Automatically generates auditable data log for regulatory reporting. Data is recorded and maintained in a secure database for 8 years.



## Data at your fingertips

Access data anywhere, anytime from your secure cloud platform to make informed decisions.



## Remote supervision

Share and monitor data across multiple sites. What's more, trigger alert notifications to take immediate action and avoid exceedances.



## Data storage and management

Automatic data upload, eliminating the need for manual data entry on paper logs.



# Remote technical and product support

Enables superior troubleshooting support from our technical team to help keep your operations running.



# Optimum performance

Ensure your instrument is always up to date with the latest firmware through automatic updates.

# Register for Palintest Connect:

www.palintestconnect.com



# Kemio



Register your product



Download the latest software



View new sensors



**Technical support** 

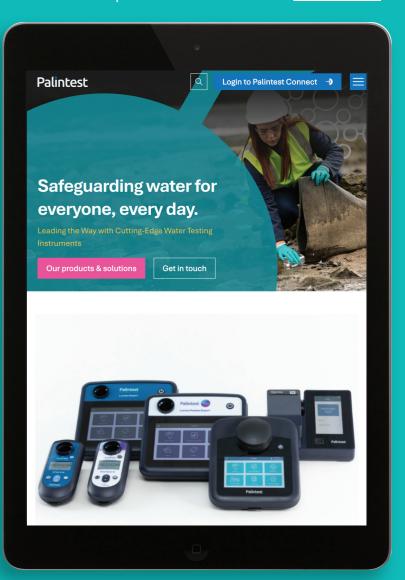


Product FAQs

# For the latest information about Kemio



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