

# MINIKIT

## Highlights

- Easy operation and exact reagent dosing
- High accuracy
- Foil-wrapped Lovibond® tablet reagents with a minimum guaranteed shelf life of 5 years
- Unrestricted shipment
- Safe storage



Analysis	Type	Range	Methods				Order code
			Tablet Count	Speed Test	Yes/No Test	Turbidity	
<b>Alkalinity-M</b>	AF 444	20 - 800 mg/l CaCO <sub>3</sub> ≅ 0.4 - 16 mmol/l		■			41 44 40
<b>Alkalinity Caustic/P</b>	AF 415	20 - 500 mg/l CaCO <sub>3</sub>	■				41 41 50
<b>Alkalinity-M</b>	AF 413	10 - 500 mg/l CaCO <sub>3</sub> ≅ 0.2 - 10 mmol/l	■				41 41 30
<b>Alkalinity-P</b>	AF 414	20 - 500 mg/l CaCO <sub>3</sub>	■				41 41 40
<b>Calcium Hardness</b>	AF 446	20- 800 mg/l CaCO <sub>3</sub> ≅ 0.4 - 16 mmol/l		■			41 44 60
<b>Calcium Hardness</b>	AF 416	10- 500 mg/l CaCO <sub>3</sub> ≅ 0.1 - 5 mmol/l	■				41 41 60
<b>Chloride</b>	AF 418	5 - 5000 mg/l Cl	■				41 41 80
<b>Cleaning Acid Strength</b>	AF 410	0.75-10% acid	■				41 41 00
<b>Cyanuric Acid</b>	AF 422	20 - 200 mg/l Cyanuric Acid				■	41 42 20
<b>Hardness Total</b> (very low range)	AF 426	1 - 10 mg/l CaCO <sub>3</sub> ≅ 0.01 - 0.1 mmol/l	■				41 42 60
<b>Hardness Total</b> (low range)	AF 425	1 - 50 mg/l CaCO <sub>3</sub> ≅ 0.01 - 0.5 mmol/l	■				41 42 50
<b>Hardness Total</b> (Yes/No)	AF 423	Limit 4 mg/l, 8 mg/l or 20 mg/l CaCO <sub>3</sub> ≅ 0.04 or 0.08 or 0.2 mmol/l			■		41 42 30
<b>Hardness Total</b>	AF 445	20 - 800 mg/l CaCO <sub>3</sub> ≅ 0.4 - 16 mmol/l		■			41 44 50
<b>Hardness Total</b>	AF 424	5 - 500 mg/l CaCO <sub>3</sub> ≅ 0.05 - 5 mmol/l	■				41 42 40
<b>Nitrite</b>	AF 427	70 -1500 mg/l NaNO <sub>2</sub>	■				41 42 70
<b>Organo-Phosphonate</b>	AF 411	1 - 20 mg/l active O-P	■				41 41 10
<b>QAC (Quaternary Ammonium Comp.)</b>	AF 417	0 - 500 mg/l active QAC Limit 200 mg/l (Yes/No)	■		■		41 41 70
<b>Sulphate</b> (low range)	AF 432	20 - 200 mg/l Na <sub>2</sub> SO <sub>4</sub>	■				41 43 20
<b>Sulphate</b>	AF 431	40 - 200 mg/l SO <sub>4</sub> (40 - 4000 mg/l by dilution)				■	41 43 10
<b>Sulphite</b> (low range)	AF 434	2 - 50 mg/l Na <sub>2</sub> SO <sub>3</sub>	■				41 43 40
<b>Sulphite</b> (high range)	AF 435	20 - 500 mg/l Na <sub>2</sub> SO <sub>3</sub>	■				41 43 50
<b>Tannin Index</b>	AF 436	2 - 20 units	■				41 43 60

\*BW: Boiler Water

## The methods

The MINIKITS are designed for rapid water testing. Most MINIKITS are based on titrimetric methods.

### Tablet count method

In the tablet count method, the liquid titration solution and indicator are replaced by Lovibond® tablet reagents. A specific number of tablets is added to a defined sample volume until a chemically induced colour change takes place. The concentration of the parameter being measured is calculated from the number of tablets required. The measuring range can be expanded by varying the sample volume.

### Speed test

The speed test is based on reverse titration. After adding a reagent tablet to a calibrated test tube, the water sample is added slowly until the colour of the solution changes (e.g. from red to blue). The user can then obtain the result from the liquid level.

### Yes/No test

A Yes/No test tells the user whether a specific ingredient is present in the water and/or if its concentration is higher or lower than a defined level.

### Turbidity method

A two-section calibrated test tube is filled with the water sample and a reagent tablet added. The reagent creates a level of turbidity that is proportional to the concentration of the parameter being measured. The inner tube, which has a black dot on its base, is lowered until the dot is obscured by the turbidity. The result is read off from the water level in the inner tube.

## Arsenic Test Kit (highly sensitive)

The arsenic test is due to its high sensitivity suitable for the determination of arsenic in drinking water.

### The advantages at one view

- Sensitivity is according to the requirements of the WHO for drinking water quality. This test detects 0.005 mg/l Arsenic.
- The removal of the interfering sulfide ions is integrated in the test procedure. To minimize the potential danger for the user of the test kit it doesn't use the highly toxic lead acetate for the sulfide removal.
- A solid acid substance is used in order to avoid any irritation by a corrosive acid on the user's hands.
- The unbreakable plastic reaction vessel is more convenient and safe for on-site testing.
- During the test procedure the reaction vessel is tightly closed. The developing arsine gas cannot escape and therefore does not harm the user.
- The test kit contains a water-proof colour chart which also includes the brief instruction for use in pictograms. Even if there is a lack of knowledge in foreign languages everybody can now handle the test kit.

Resolution:

0 - 0.005 - 0.01 - 0.025 - 0.05 - 0.1 - 0.25 - 0.5 mg As<sup>3+/5+/</sup>l

Kit for 100 measurements in case.

**Order code:** 40 07 00



Arsenic Test Kit, ready to use

Reagent	Order code	Quantity
ALK-TEST	51 55 70 BT	100
ALKALINITY-P-tablets	51 51 01	250
ALKALINITY-P (BaCl <sub>2</sub> )-tablets	51 51 10 BT	100
TOTAL ALKALINITY-tablets	51 53 21 BT	250
ALKALINITY-P-Tablets	51 51 01	250
CAL-TEST	51 55 80 BT	100
CALCIUM HARDNESS	51 51 91 BT	250
CHLORIDE	51 51 31	250
ACID CONCENTRATION	50 54 20	100
CyA-TEST	51 13 70 BT	100
HARDNESS VLR	51 53 51 BT	250
HARDNESS LR (BW)*	51 51 71 BT	250
HARDNESS YES / NO	51 53 61 BT	250
T HARDNESS-TEST	51 55 90 BT	100
TOTAL HARDNESS	51 51 61 BT	250
NITRITE No. 1	51 52 01 BT	250
NITRITE No. 2	51 52 11 BT	250
ORGANO-PHOSPHONATE No. 2	46 53 51	100 ml
ORGANO-PHOSPHONATE No. 1	51 29 61 BT	250
QAC-Test	51 54 10	100
	51 54 11	250
SULFATE No. 1	51 52 21	250
SULFATE No. 2	51 52 31	250
SULFATE T	51 54 51 BT	250
SULFITE No. 1	51 52 71 BT	250
SULFITE No. 2 HR	51 52 81 BT	250
SULFITE No. 2 LR (BW)*	51 53 31 BT	250
TANNIN No. 1	50 35 00	100
TANNIN No. 2	50 35 11	250