



UNICLEAN-AMERICA

Clean ships - Clean sea

WATER Test Kits BOILER & COOLING WATER TEST ON BOARD

For use in a range of Water Systems

Delivering simplicity and affordability through innovation.

The UCA range of tablet & comparator test kits are designed for use on a wide range of water systems where routine site monitoring is required.

This new line of test kit used onboard made to test the cooling water such as nitrite, chloride & PH, and boiler water for testing alkalinity, chloride & PH also provide additional tests for boiler water like hardness, hydrazine, phosphate & sulphite, chlorine LR used to test drinking water, sewage water & swimming pool. to use.

The UCA kit should be used to monitor water conditions to ensure that the systems are under control and do not exhibit signs of corrosion, scaling or microbiological fouling. Many are designed to allow the simple determination of inhibitor or biocide levels.

Each test kit has all the components required to carry out site analysis. All are supplied in a robust carry case with all the equipment and reagents necessary to perform between 100 and 200 tests.

If you require more than one parameter in a kit we can accommodate this request and multiples can be included.

Replacement reagents and components are available which make this kit a lasting addition to any water treatment professional.

Simple to use

Our test instruction booklet is in full colour and has easy to follow step by step instructions making on site analysis simple.

The reagent labels and test booklet are printed on waterproof and chemical resistant paper making them more durable.



Test Kit Parameters

- > **COOLING WATER TEST KIT**
Nitrite tablet test.
Chloride tablet test.
PH test.
- > **BOILER WATER TEST KIT**
Alkalinity tablet test.
Chloride tablet test.
PH test.

Each kit includes :

Plastic case with pre-cut foam
Waterproof test booklet
250ml or 100 ml test bottle
10ml or 20ml syringe
Test reagents :-

Boiler water test kit

2 bottles of p alkalinity tablet 250/each.
2 bottles of chloride tablet 250/each.
1 PH kit 0-14 100pec/each.

Cooling water test kit

2 bottles of Nitrite n2 tablet 250/each.
1 bottles of Nitrite n1 tablet 100/each.
1 bottles of chloride tablet 250/each.
1 PH kit 0-14 100pec/each.

ALKALINITY (M) Tablet Count

Determination of Alkalinity (M) by tablet count



Step 1.

Take 100ml sample



Step 2.

Add Alkalinity M tablets one at a time



Step 3.

Continue till the yellow colour changes to red



Step 4.

Record number of tablets.

HEALTH & SAFETY

Refer to H & P phrases on individual bottles.

Wear protective gloves and safety goggles when performing any tests using corrosive, harmful or irritant reagents.

Do not ingest.

EQUIPMENT & REAGENTS

EDT018	65ml Plastic Test Bottle
EDT008	125ml Plastic Test Bottle
EDT167	10ml Syringe
SDT478	Alkalinity M tablet count

REFERENCE DATA

Step 5.

To calculate your results multiply the number of tablets added to sample by the factor.

$$\text{Alkalinity M as (CaCO}_3\text{) (mg/l) ppm} = (\text{Number of tablets} \times 40) - 20$$

ALKALINITY (p) TABLET COUNT

Determination of Alkalinity (p) by tablet count



Step 1.

Take a 100ml sample or 200ml sample



Step 2.

Add Alkalinity p tablets one at a time



Step 3.

Continue till the blue colour changes to yellow



Step 4.

Record number of tablets.

HEALTH & SAFETY

Refer to H & P phrases on individual bottles.

Wear protective gloves and safety goggles when performing any tests using corrosive, harmful or irritant reagents.

Do not ingest.

EQUIPMENT & REAGENTS

EDT008	125ml Plastic Test Bottle
EDT012	250ml Plastic Test Bottle
EDT168	20ml Syringe
SDT535	Alkalinity p tablet count

REFERENCE DATA

Step 5.


To calculate your results multiply the number of tablets added to sample by the factor.

$$\text{Alkalinity p as (CaCO}_3\text{) (mg/l) ppm (100 ml sample)} = (\text{Number of tablets} \times 40) - 20$$


$$\text{Alkalinity p as (CaCO}_3\text{) (mg/l) ppm (200 ml sample)} = (\text{Number of tablets} \times 20) - 10$$

CHLORIDE TABLET COUNT


Determination of Chloride by tablet count.




Step 1.
Take a 10ml, 25ml, 50ml or 100ml sample

Step 2.
Add Chloride tablets one at a time

Step 3.
Continue till the yellow colour changes to brown

Step 4.
Record number of tablets.

HEALTH & SAFETY

Refer to H & P phrases on individual bottles.
Wear protective gloves and safety goggles when performing any tests using corrosive, harmful or irritant reagents.
Do not ingest.

EQUIPMENT & REAGENTS

EDT018	65ml Plastic Test Bottle
EDT008	125ml Plastic Test Bottle
EDT168	20ml Syringe
SDT510	Chloride Tablet Count

REFERENCE DATA

Notes

To express the result as NaCl multiply the result by 1.6

Step 5.

To calculate your results multiply the number of tablets added to sample by the factor.

Chloride as Cl (mg/l) ppm (10ml sample) = (Number of tablets x 100) - 100


Chloride as Cl (mg/l) ppm (25ml sample) = (Number of tablets x 40) - 40

Chloride as Cl (mg/l) ppm (50ml sample) = (Number of tablets x 20) - 20


Chloride as Cl (mg/l) ppm (100ml sample) = (Number of tablets x 10) - 10

NITRITE TABLET COUNT


Determination of Nitrite by tablet count.




Step 1.
Take a 10ml sample of the water to be tested and dilute to 50ml with Nitrite free water.

Step 2.
Add 2 x Nitrite No1 test tablets, swirl to disintegrate.

Step 3.
Add Nitrite No2 tablets one at a time until the colour changes to Pink.

Step 4.
Record number of Nitrite No2 tablets used.

HEALTH & SAFETY

Refer to H & P phrases on individual bottles.
Wear protective gloves and safety goggles when performing any tests using corrosive, harmful or irritant reagents.
Do not ingest.

EQUIPMENT & REAGENTS

EDT018	65ml Plastic Test Bottle
EDT167	10ml Syringe
SDT536	Nitrite No1 tablet count
SDT537	Nitrite No2 tablet count

REFERENCE DATA

Step 5.

To calculate your results multiply the number of tablets used by the factor.

Nitrite as NaNO₂ (mg/l) ppm = Number of Nitrite No2 Tablets used x 140

TOTAL HARDNESS TABLET COUNT

Determination of Total Hardness by tablet count. Range 0 - 1200 ppm



Step 1.

Take 25ml, 50ml or 100ml sample depending on the range expected. (See notes)



Step 2.

Add Total Hardness Tablets one at a time



Step 3.

Continue adding till the red colour changes to blue



Step 4.

Record number of tablets and calculate result from reference data

HEALTH & SAFETY

Refer to H & P phrases on individual bottles.
Wear protective gloves and safety goggles when performing any tests using corrosive, harmful or irritant reagents.
Do not ingest.

EQUIPMENT & REAGENTS

EDT018	65ml Plastic Test Bottle
EDT008	125ml Plastic Test Bottle
EDT167	10ml Syringe
SDT530	Total Hardness Tablet Count

REFERENCE DATA

Notes :

For Low Range Hardness use 100ml
For Mid Range Hardness use 50ml
For High Range Hardness use 25ml

Range 0 - 250 ppm
Range 0 - 500 ppm
Range 0 - 1200 ppm

Step 5.

To calculate your results multiply the number of tablets added to sample by the factor.

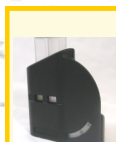
LR Total Hardness (100ml sample) as CaCO₃ (mg/l) ppm = (Number of tablets x 20) - 10

MR Total Hardness (50ml sample) as CaCO₃ (mg/l) ppm = (Number of tablets x 40) - 20

HR Total Hardness (25ml sample) as CaCO₃ (mg/l) ppm = (Number of tablets x 80) - 40

PHOSPHATE HR

Determination of Phosphate as PO₄ (0 - 80 mg/l)



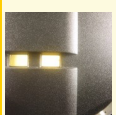
Step 1.

Fill both cells with 10ml of filtered sample. (See Note 1)
Place one cell in the left side of the comparator as the blank.



Step 2.

Add 1 x Phosphate HR tablet and fully crush to dissolve.



Step 3.

Stand for 10 minutes

Place in right side of comparator and rotate the disc until colour match is obtained.

HEALTH & SAFETY

Refer to H & P phrases on individual bottles.
Wear protective gloves and safety goggles when performing any tests using corrosive, harmful or irritant reagents.
Do not ingest.

EQUIPMENT & REAGENTS

146250	Phosphate HR disk (0 - 80 ppm)
EDT085	Comparator
EDT006	10ml Square Plastic Cell
SDT163	Phosphate HR Tablets

REFERENCE DATA

Notes:

1) Samples should be filter through a GF/C filter paper prior to testing to remove any suspended insoluble phosphate.

25mm filter holder code EDT044.

25mm GF/C filter papers code EDT048.

2) The presence of Silica in the sample will contribute to the result. To inhibit this interference from Silica, add 5 drops of 50% sulphuric acid and mix before the addition of the tablet in step 2.

Dilution Information :

If the colour obtained on a 10 ml sample of treated water exceeds the highest colour standard on the disc, repeat the test on a diluted sample multiplying the result by the dilution factor.

When diluting you **must add untreated water** (Phosphate free) to the sample to ensure that the sample size is 10 ml before adding Phosphate HR tablet. You must also dilute the blank cell to get a true result.

0 to 80 ppm	- Take 10 ml of treated water	- direct read
0 to 160 ppm	- Take 5 ml of treated water and 5 ml Phosphate Free water	- reading x 2

Phosphate as PO₄ mg/l (ppm) = Disk Reading

HYDRAZINE

Determination of Hydrazine (0 - 0.5 mg/l)

Step 1.



Fill one cell with **10ml** of filtered sample. (See Note)

Fill the other cell with untreated (Hydrazine free) water. This cell will be the blank



Step 2.



Add 10 drops of **Hydrazine Concentrate Reagent** to both cells. Cap and shake
Let stand for **2 mins**.

Place the blank into the left side of the comparator



Step 3.



Place the other cell in right side of comparator and rotate the disc until colour match is obtained.

HEALTH & SAFETY

Refer to H & P phrases on individual bottles.

Wear protective gloves and safety goggles when performing any tests using corrosive, harmful or irritant reagents.

Do not ingest.

EQUIPMENT & REAGENTS

245070	Hydrazine disk (0 - 0.5 ppm)
EDT085	Comparator
EDT006	10ml Square Plastic Cell
SdT468	Hydrazine Concentrate Reagent

REFERENCE DATA

Dilution Information :

If the colour obtained on a 10 ml sample of treated water exceeds the highest colour standard on the disc, repeat the test on a diluted sample multiplying the result by the dilution factor. When diluting you **must add untreated water** (Hydrazine free) to the sample to ensure that the sample size is 10 ml before adding Hydrazine Concentrate Reagent.

You must also dilute the blank cell to get a true result.

0 to 0.5 ppm	- Take 10 ml of treated water	- direct read
0 to 2.0 ppm	- Take 2.5 ml of treated water and 7.5 ml Hydrazine Free water	- reading x 4

$$\text{Hydrazine mg/l (ppm)} = \text{Disk Reading}$$

CHLORINE LR

Determination of Free, Total & Combined Chlorine (0 - 4.0 mg/l)

Step 1.



Rinse both cells with sample and empty. Fill one cell with sample and place in the left side of the comparator to act as the blank.



Step 2. (Using liquids)



To the second cell add **3 drops of DPD No1 Solution A** and **3 drops DPD No1 Solution B** and then fill with 10ml sample. Place in right side of the comparator. **See Note 1 & 2.**



Step 2. (Using tablets)



To the second cell add **1 x DPD No1 tablet**, crush tablet and then fill with 10ml sample. Place in right side of the comparator. **See note 1 & 2.**



Step 3.



Rotate the disc until colour match is obtained and record reading. **See Note 5.**

HEALTH & SAFETY

Refer to H & P phrases on individual bottles.

Wear protective gloves and safety goggles when performing any tests using corrosive, harmful or irritant reagents.

Do not ingest.

EQUIPMENT & REAGENTS

146020	Chlorine disk (0 - 4 ppm)
SdT505	DPD No1 Solution A
SdT506	DPD No1 Solution B
SdT507	DPD No3 Solution C
SdT106	DPD No1 Tablets
SdT107	DPD No3 Tablets

REFERENCE DATA

Notes:

- 1) With the addition of only DPD A & DPD B or a DPD No1 tablet, the method determines the level of Free Chlorine.
- 2) To determine Total Chlorine : After completing the Free Chlorine test, record the result and then add 3 drops DPD C or 1 x DPD No3 tablet to the same cell. Allow 2 MINUTES reaction time and then place in right hand side of comparator and then read the result. **This is now TOTAL CHLORINE.**
- 3) To determine Combined Chlorine : Deduct the level of Free Chlorine from the Total Chlorine.
- 4) For Monochloramine : After completing the Free Chlorine (Reading A), add 1 x DPD No2 tablet to the same cell and read again (Reading B).

$$\text{Monochloramine} = \text{Reading B} - \text{Reading A}$$

- 5) Levels above 10 ppm can cause bleaching of the sample, if this happens you must dilute the sample prior to adding the DPD solutions or tablet.

$$\text{Chlorine Free as Cl}_2 \text{ mg/l (ppm)} = \text{Disk Reading}$$