

Palintest

Water Analysis Technologies

Chlorine, Free

Photometric test for Free Chlorine in drinking water and pools and spas

COLOUR CHANGE

Colourless to Pink

RANGE:

0 - 5 mg/L Cl_2

TECHNICAL RESOURCE:

[Chlorine Test Method, Technical Information](#)

NOTES:

High levels of chlorine can cause bleaching and invalidate the result. If the colour becomes uneven or fades completely, check for bleaching by diluting the sample and repeating the test

01



Fill to the 10 mL line with sample.

02



Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Pour out sample leaving a few drops.

04



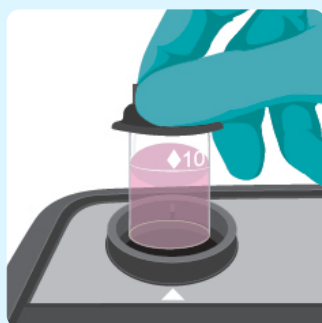
Add a DPD 1 tablet to those drops. Then, crush to form a paste.

05



Fill to the 10 mL line with further sample and stir.

06



Place the prepared sample in the cell holder and press Measure to obtain the concentration of Free Chlorine.

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Water Analysis Technologies

Chlorine, Total

Photometric test for Chlorine, Total (DPD 4) drinking water and pool or spas

COLOUR CHANGE

Colourless to Pink

RANGE:

0 - 5 mg/L Cl_2

TECHNICAL RESOURCE:

[Chlorine Test Method, Technical Information](#)

NOTES:

High levels of chlorine can cause bleaching and invalidate the result. If the colour becomes uneven or fades completely, check for bleaching by diluting the sample and repeating the test

01



Fill to the 10 mL line with sample.

02



Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Pour out sample leaving a few drops.

04



Add a DPD 4 tablet to those drops. Then, crush to form a paste.

05



Fill to the 10 mL line with further sample and stir.

06



Place in the cell holder and press Measure.

07



Allow timer to count down 2 minutes. The concentration of Total Chlorine will then be displayed.

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Water Analysis Technologies

pH-Phenol Red

Photometric test for pH in water at room temperature (20°C to 25°C) using Phenol Red

COLOUR CHANGE

Yellow to Red

RANGE:

6.5 - 8.4 pH units

TECHNICAL RESOURCE:

[pH-Phenol Red Test Method, Technical Information](#)

NOTES:

High levels of chlorine or other disinfectants will cause an intense purple coloration. This will mean the result is not valid
Ionic strength, temperature and other water factors may have an effect on pH readings. This test has been calibrated for drinking and natural waters in the range 20°C to 25°C

01



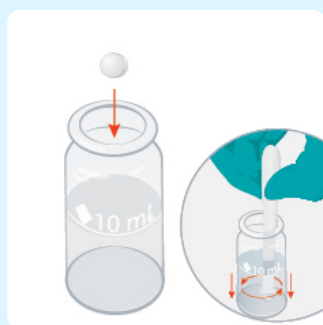
Fill to the 10 mL line with sample.

02



Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Prepare sample by adding a Phenol Red tablet and crush and stir.

04



Place the tube in the cell holder and press Measure to obtain the pH value.

Palintest

Water Analysis Technologies

Turbidity

Photometric test for Turbidity in natural and treated water

COLOUR CHANGE

Clear to Cloudy

RANGE:

0 - 1000 FTU

TECHNICAL RESOURCE:

Turbidity Test Method, Technical Information

NOTES:

For lower level turbidity and nephelometric measurement in accordance with ISO 7027, use a Palintest Turbimeter Plus instrument

01



Filter 10 mL of sample through a GF/B filter .

02



Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Fill a second tube to the 10mL line with unfiltered sample.

04



Place in cell holder and press Measure to obtain value for Turbidity. Please note: This not a nephelometric measurement.

Palintest

Water Analysis Technologies

Colour

Photometric test for the Colour produced by natural organic materials in water

COLOUR CHANGE

Colourless to Yellow to Brown

RANGE:

0 - 500 mg/L Pt Co

TECHNICAL RESOURCE:

Colour Test Method, Technical Information

NOTES:

This test is only for colour in water from naturally occurring organic material. The presence of metallic impurities, dyestuffs, or industrial pollutants will invalidate the result.

01



Fill to the 10 mL line with deionised water.

02



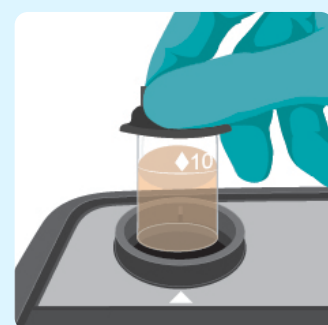
Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Filter 10 mL of sample through a GF/B filter .

04



Place in cell holder and press Measure to obtain value for Colour on Pt/Co Scale.

Palintest

Water Analysis Technologies

Fluoride

Photometric test for Fluoride in drinking water, natural water and treated water

COLOUR CHANGE

Red to Yellow

RANGE:

0 - 15 mg/L F

TECHNICAL RESOURCE:

Fluoride Test Method, Technical Information

01



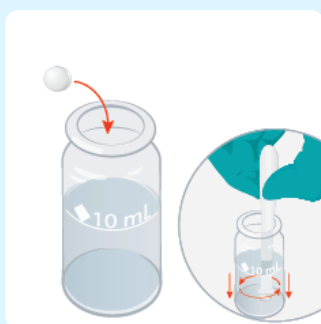
Fill to the 10 mL line with sample.

02



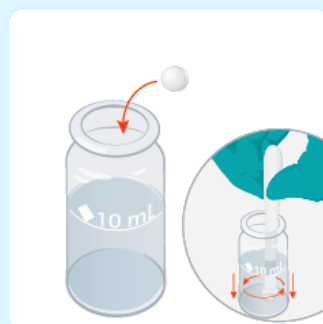
Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Prepare sample by adding a Fluoride No1 tablet and crush and stir.

04



Then, add a Fluoride No2 tablet and crush and stir.

05



Place in the cell holder and press Measure.

06



Allow timer to count down 5 minutes. The concentration of Fluoride will then be displayed.

Palintest

Water Analysis Technologies

Nitrate LR

Photometric test for Nitrate (low range) in natural, drinking and waste water

COLOUR CHANGE

Colourless to Red

RANGE:

0 - 1 mg/L N

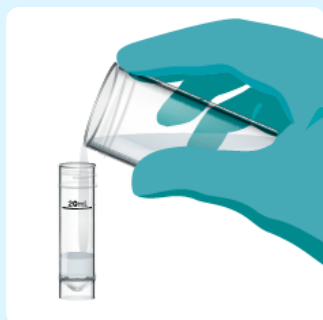
TECHNICAL RESOURCE:

Nitrate Test Method, Technical Information

NOTES:

The test will also respond to nitrite but in normal situations nitrite levels will be very low compared to nitrate. To correct any effect a nitrite test can be carried out and the result as N subtracted from the nitrate result as N

01



Fill a nitrate test tube to the 20 mL line with sample.

02



Add a level spoonful of Nitrate Powder.

03



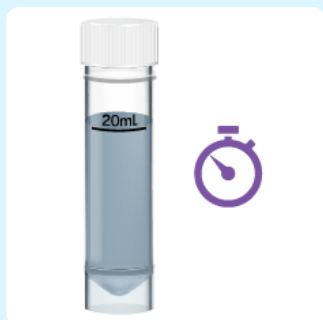
Add a Nitrate test Tablet. But, do not crush.

04



Replace screw cap and shake well for 1 minute.

05



Allow tube to stand for 1 minute.

06



Gently invert tube, three times.

07



Stand tube for 3 minutes or until complete settlement.

08



Remove cap and wipe rim to remove all traces of Nitrate powder.

Test continued on page 2



Nitrate LR

Photometric test for Nitrate (low range) in natural, drinking and waste water

COLOUR CHANGE

Colourless to Red

RANGE:

0 - 1 mg/L N

TECHNICAL RESOURCE:

[Nitrate Test Method, Technical Information](#)

NOTES:

The test will also respond to nitrite but in normal situations nitrite levels will be very low compared to nitrate. To correct any effect a nitrite test can be carried out and the result as N subtracted from the nitrate result as N

09



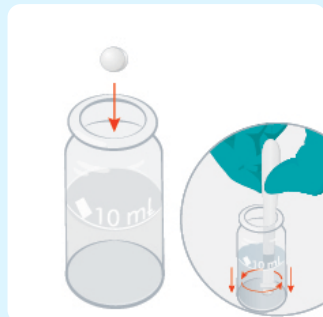
Carefully decant 10 mL of clear liquid in to a photometer tube.

10



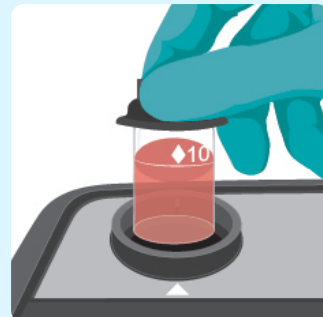
Use this to "blank" the instrument. Place in cell holder and press Blank.

11



Then, add a Nitricol tablet and crush and stir.

12



Place in the cell holder and press Measure.

13



Allow timer to count down 10 minutes. Concentration of Nitrate will then be displayed.

Palintest

Water Analysis Technologies

Nitrate MR

Photometric test for Nitrate (medium range) in natural, drinking and waste water

COLOUR CHANGE

Colourless to Red

RANGE:

0 - 20 mg/L N

TECHNICAL RESOURCE:

[Nitrate Test Method, Technical Information](#)

NOTES:

The test will also respond to nitrite but in normal situations nitrite levels will be very low compared to nitrate. To correct any effect a nitrite test can be carried out and the result as N subtracted from the nitrate result as N

01



Add 1 mL of sample to a Nitratetest tube.

02



Fill to the 20 mL line with deionised water.

03



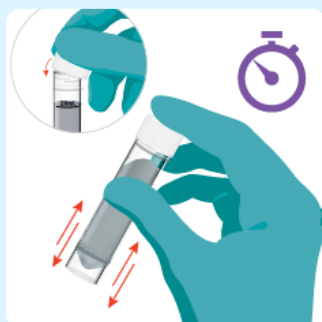
Add a level spoonful of Nitratetest Powder.

04



Add a Nitratetest Tablet. But, do not crush.

05



Replace screw cap and shake well for 1 minute.

06



Allow tube to stand for 1 minute.

07



Gently invert tube, three times.

08



Stand tube for 3 minutes or until complete settlement.

Test continued on page 2



Nitrate MR

Photometric test for Nitrate (medium range) in natural, drinking and waste water

COLOUR CHANGE

Colourless to Red

RANGE:

0 - 20 mg/L N

TECHNICAL RESOURCE:

[Nitrate Test Method, Technical Information](#)

NOTES:

The test will also respond to nitrite but in normal situations nitrite levels will be very low compared to nitrate. To correct any effect a nitrite test can be carried out and the result as N subtracted from the nitrate result as N

09



Remove cap and wipe rim to remove all traces of Nitrate test powder.

10



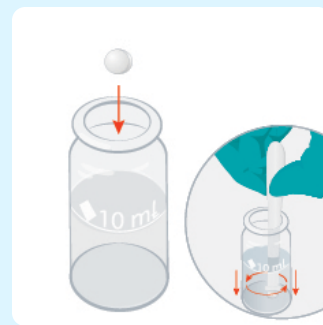
Carefully decant 10 mL of clear liquid into a photometer tube.

11



Use this to "blank" the instrument. Place in cell holder and press Blank.

12



Then, add a Nitricol tablet and crush and stir.

13



Place in the cell holder and press Measure.

14



Allow timer to count down 10 minutes. Concentration of Nitrate will then be displayed.

Palintest

Water Analysis Technologies

Nitrite LR

Photometric test for Nitrite (low range) in natural, drinking and wastewater

COLOUR CHANGE

Colourless to Red

RANGE:

0 - 0.5 mg/L N

TECHNICAL RESOURCE:

Nitrite (Nitricol) Test Method, Technical Information

01



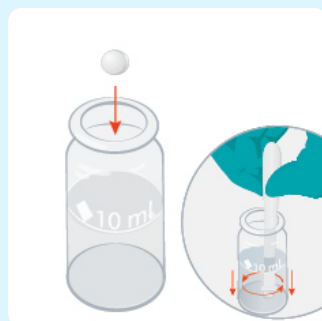
Fill to the 10 mL line with sample.

02



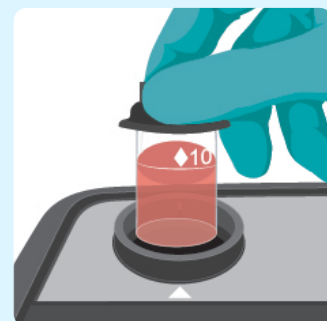
Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Then, add a Nitricol tablet and crush and stir.

04



Place in the cell holder and press Measure.

05



Allow timer to count down 10 minutes. The concentration of Nitrite will then be displayed.

Palintest

Water Analysis Technologies

Ammonia/1N Tablet

Photometric test for Ammonia in groundwater, drinking water, seawater, and wastewater

COLOUR CHANGE

Colourless to Yellow to Green

RANGE:

0 - 1 mg/L N

TECHNICAL RESOURCE:

Ammonia 1N Indophenol Test Method, Technical Information

NOTES:

Brackish samples may only require a single spoonful of conditioning reagent to prevent turbidity forming
Low temperatures will slow the rate of colour development. Therefore, if the sample temperature is below 20°C, allow 15 minutes for the colour to develop

01



Fill to the 10 mL line with sample.

02



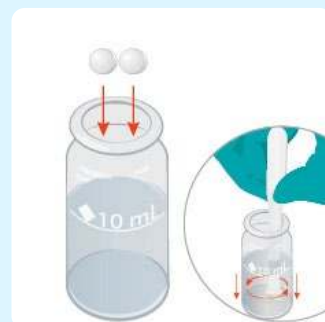
Use this to "blank" the instrument. Place in cell holder and press Blank.

03



For seawater samples only, add two spoonfuls of Ammonia Conditioning reagent and mix well. Otherwise skip this step.

04



Prepare sample by adding an Ammonia No1 tablet and an Ammonia No2 tablet. Crush both tablets and stir.

05



Place in the cell holder and press Measure.

06



Allow timer to count down 10 minutes. The concentration of Ammonia will then be displayed. Note: Check full test instructions if sample is below 20°C.

Palintest

Water Analysis Technologies

Iron LR

Photometric test for Iron (low range) in natural, process, treated and drinking water

COLOUR CHANGE

Colourless to Pink

RANGE:

0 - 1 mg/L Fe

TECHNICAL RESOURCE:

[Iron LR Test Method, Technical Information](#)

NOTES:

Colour development is normally complete within 1 minute. If colour development continues after that time, it is likely that iron complexes are present. Wait further time for colour to stabilize, allowing up to 15 minutes

01



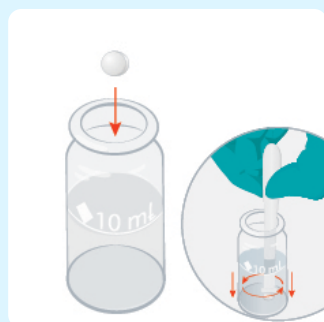
Fill to the 10 mL line with sample.

02



Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Then, prepare sample by adding an Iron LR tablet and crush and stir.

04



Place in the cell holder and press Measure.

05



Allow timer to count down 1 minute. The concentration of Iron will then be displayed.

Palintest

Water Analysis Technologies

Iron MR

Photometric test for Iron (medium range) in natural, treated and drinking water

COLOUR CHANGE

Colourless to Orange

RANGE:

0 - 5 mg/L Fe

TECHNICAL RESOURCE:

Iron MR Test Method, Technical Information

01



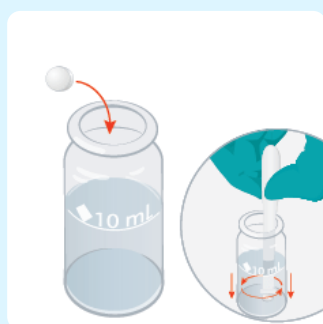
Fill to the 10 mL line with sample.

02



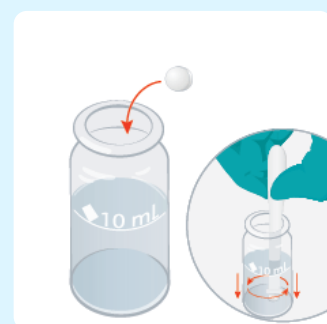
Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Prepare sample by adding an Iron MR No1 tablet and crush and stir.

04



Then, add an Iron MR No2 tablet and crush and stir.

05



Place in the cell holder and press Measure.

06



Allow timer to count down 10 minutes. The concentration of Iron will then be displayed.

Palintest

Water Analysis Technologies

Manganese LR

Photometric test for Manganese (low range) in natural water

COLOUR CHANGE

Colourless to Turquoise

RANGE:

0 - 0.03 mg/L Mn

TECHNICAL RESOURCE:

[Manganese LR Test Method, Technical Information](#)

NOTES:

Because manganese is adsorbed on to surfaces of sample containers. Test as soon as possible after collection
Ensure that all glassware is scrupulously clean. Acid rinsing is highly recommended

01



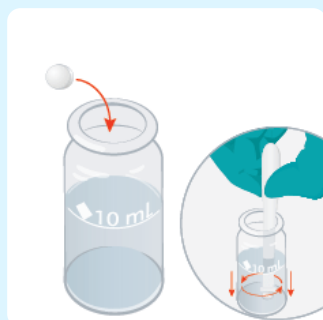
Fill to the 10 mL line with sample.

02



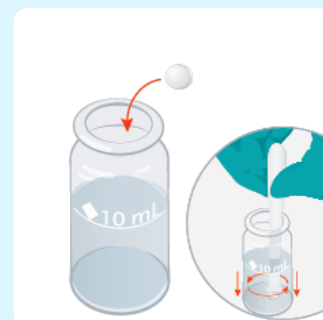
Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Prepare sample by adding a Manganese No1 tablet and crush and stir. Note: Sample temperature needs to be between 19°C and 21°C.

04



Then, add a Manganese No2 tablet and crush and stir.

05



Place in the cell holder and press Measure.

06



Allow timer to count down 20 minutes. The concentration of Manganese will then be displayed.

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Water Analysis Technologies

Aluminium

Photometric test for Aluminium in treated and natural water

COLOUR CHANGE

Colourless to Pink to Red

RANGE:

0 - 0.5 mg/L Al

TECHNICAL RESOURCE:

Aluminium Test Method, Technical Information

NOTES:

Ensure that all glassware is scrupulously clean. Acid rinsing is highly recommended.

01



Fill to the 10 mL line with sample.

02



Use this to "blank" the instrument. Place in cell holder and press Blank.

03



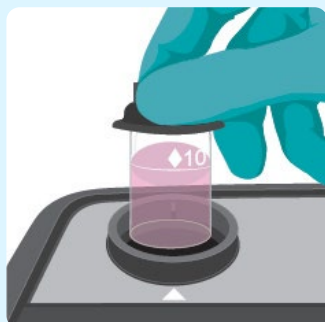
Prepare sample by adding an Aluminium No1 tablet and crush and stir.

04



Then, add an Aluminium No2 tablet. Vigorously crush and stir.

05



Place in the cell holder and press Measure.

06



Allow timer to count down 5 minutes. The concentration of Aluminium will then be displayed.

Palintest

Water Analysis Technologies

Hardness, Total

Photometric test for Total Hardness in natural water, treated water and drinking water

COLOUR CHANGE

Colourless to Purple

RANGE:

0 - 500 mg/L CaCO₃

TECHNICAL RESOURCE:

Total Hardness Test Method, Technical Information

NOTES:

Strongly acidic or alkaline samples should be adjusted to within pH 4 to pH 10 prior to starting the test

01



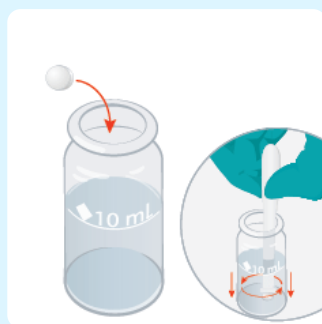
Fill to the 10 mL line with sample.

02



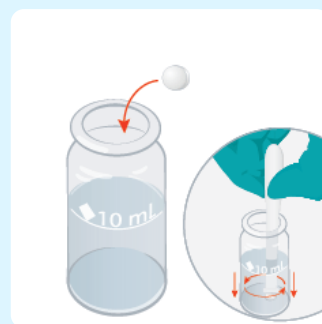
Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Prepare sample by adding a Hardicol No1 tablet and crush and stir.

04



Then, add a Hardicol No2 tablet. Thoroughly crush and stir, until fully dissolved.

05



Place in the cell holder and press Measure.

06



Allow timer to count down 2 minutes. The result for Total Hardness will be displayed.

Palintest

Water Analysis Technologies

Calcium Hardness

Photometric test for Calcium Hardness in pool, spa, treated and natural water

COLOUR CHANGE

Violet to Orange

RANGE:

0 - 500 mg/L CaCO_3

TECHNICAL RESOURCE:

[Calcium Hardness Test Method, Technical Information](#)

NOTES:

Strongly acidic or alkaline samples should be adjusted to within pH 4 to pH 10 prior to starting the test

01



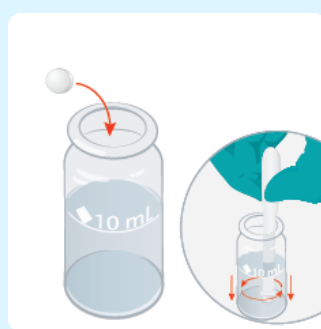
Fill to the 10 mL line with sample.

02



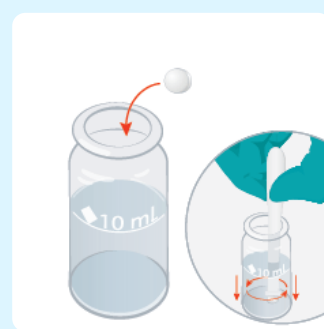
Use this to "blank" the instrument. Place in cell holder and press Blank.

03



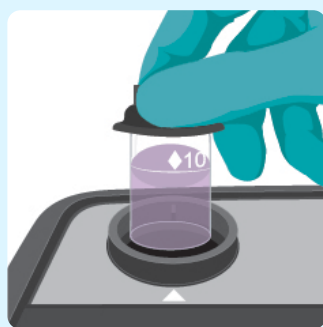
Prepare sample by adding a Calcicol No1 tablet. Crush and stir.

04



Then, add a Calcicol No2 tablet. Crush and stir.

05



Place in the cell holder and press Measure.

06



Allow timer to count down 2 minutes. The concentration of Calcium will then be displayed.

Palintest

Water Analysis Technologies

Alkalinity, Total

Photometric test for Total Alkalinity in pool, spa, treated and natural water

COLOUR CHANGE

Yellow through Green to Blue

RANGE:

0 - 500 mg/L CaCO₃

TECHNICAL RESOURCE:

Alkalinity Test Method, Technical Information

01



Fill to the 10 mL line with sample.

02



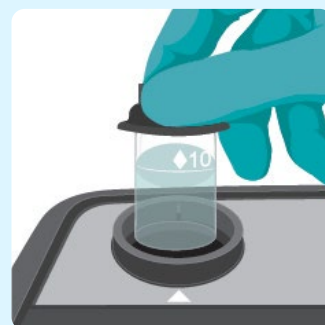
Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Prepare sample by adding an Alkalinity tablet. Thoroughly crush and stir, until fully dissolved.

04



Place in the cell holder and press Measure.

05



Allow timer to count down 1 minute. The concentration of Total Alkalinity will then be displayed.

Palintest

Water Analysis Technologies

Sulfate

Photometric test for Sulfate natural, treated and swimming pool water

COLOUR CHANGE

Clear to Cloudy

RANGE:

0 - 200 mg/L SO₄

TECHNICAL RESOURCE:

[Sulfate Test Method, Technical Information](#)

NOTES:

Sulfate tablets contain barium chloride which is extremely harmful if ingested. Avoid handling tablets and wash hands after use

01



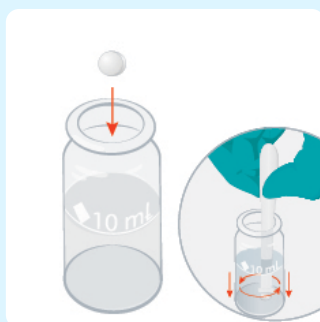
Fill to the 10 mL line with sample.

02



Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Prepare sample by adding a Sulfate Turb tablet and crush and stir.

04



Wait 1 minute. Then, stir again.

05



Place in the cell holder and press Measure to display the concentration of Sulfate.

Palintest

Water Analysis Technologies

Phosphate LR

Photometric test for Phosphate (low range) in natural and drinking water

COLOUR CHANGE

Colourless to Blue

RANGE:

0 - 4 mg/L PO₄

TECHNICAL RESOURCE:

Phosphate LR Test Method, Technical Information

01



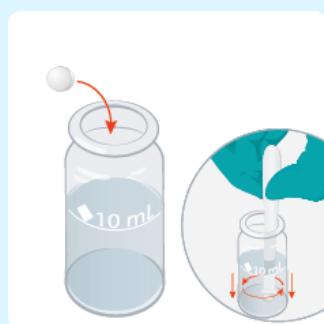
Fill to the 10 mL line with sample.

02



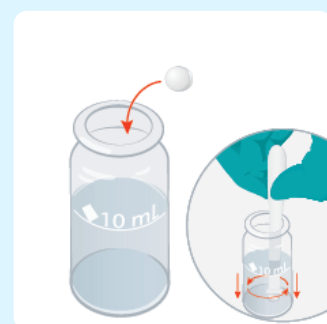
Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Prepare sample by adding a Phosphate LR No1 tablet and crush and stir.

04



Then, add a Phosphate LR No2 Tablet and crush and stir.

05



Place in the cell holder and press Measure.

06



Allow timer to count down 10 minutes. The concentration of Phosphate will then be displayed.

Palintest

Water Analysis Technologies

Chloride LR

Photometric test for Chloride (low range) in freshwater, drinking water and treated (softened) water

COLOUR CHANGE

Clear to Cloudy

RANGE:

0 - 50 mg/L Cl

TECHNICAL RESOURCE:

Chloride & Salt (Chloridol) Test Method, Technical Information

01



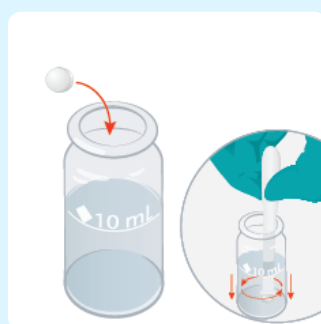
Fill to the 10 mL line with sample.

02



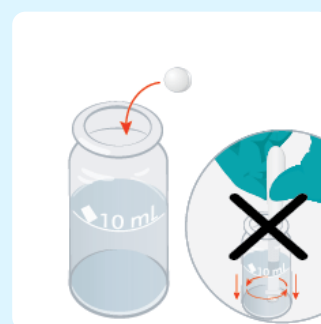
Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Prepare sample by adding an Acidifying CD tablet and crush and stir.

04



Then, add a Chloridol tablet. But, do not crush.

05



Allow 2 minutes for tablet to disintegrate.

06



Crush any remaining particles and stir.

07



Place in cell holder and press Measure to obtain concentration of Chloride.

Palintest

Water Analysis Technologies

Copper, Free

Photometric test for Free Copper in ground water and treated water

COLOUR CHANGE

Colourless to Purple

RANGE:

0 - 5 mg/L Cu

TECHNICAL RESOURCE:

Copper (Coppercol) Test Method, Technical Information

01



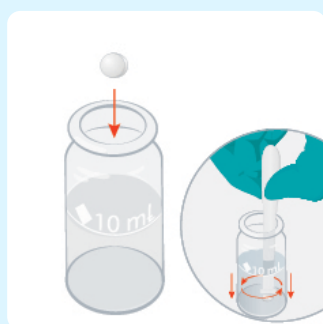
Fill to the 10 mL line with sample.

02



Use this to "blank" the instrument. Place in cell holder and press Blank.

03



Prepare sample by adding a Coppercol No1 tablet and crush and stir.

04



Place the tube in the cell holder and press Measure to obtain the concentration of Free Copper.

Palintest

Water Analysis Technologies

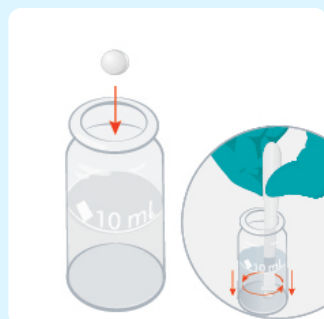
Zinc	
Photometric test for Zinc in natural and treated water	
COLOUR CHANGE	Orange to Purple to Blue
RANGE:	0 - 2 mg/L Zn
TECHNICAL RESOURCE:	Zinc Test Method, Technical Information

01



Fill to the 10 mL line with sample.

02



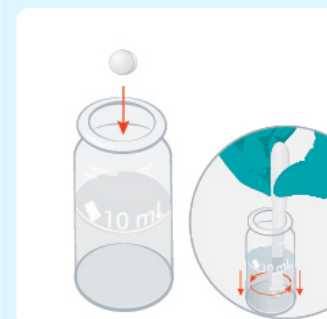
If chlorine is present, add a Zinc-Dechlor tablet and crush and stir. Otherwise, skip this step.

03



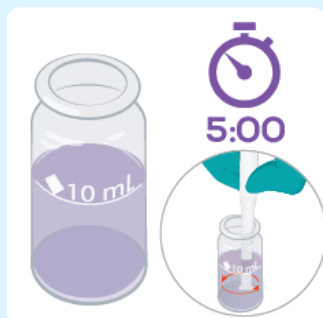
Use this to "blank" the instrument. Place in cell holder and press Blank.

04



Then, add a Zinc tablet and crush and stir.

05



Wait 5 minutes. Then, stir again.

06



Place the tube in the cell holder and press Measure to obtain the concentration of Zinc.