The TQC Bresle Kit - Chloride Test Kit complies with the ISO 8502-6 and ISO 8502-9 standards that describe the Bresle Method to assess the level of soluble salts using a patch, distilled water and a conductivity gauge. The conductivity is mainly directly proportional to the concentration of dissolved chloride ions in the solution. The kit includes all the necessary equipment to execute a bresle test that will indicate the contamination of soluble salts on blast-cleaned surfaces prior to coating. Inside the TQC Bresle Kit - Chloride Test Kit is a conductivity gauge used for the assessment of soluble salt ions as chlorides, sulphates and nitrates.

Contamination of blast-media

The TQC Bresle Kit - Chloride Test Kit is also suitable to determine the contamination of blast-media in use. This important test described in the ISO 11127-6 and ISO 11127-7 standards helps to prevent that the dissolved salts in the recycled abrasive media or water will not re-contaminate the surface being cleaned.

SP7310

TQC Bresle KIT- Chloride Test KIT

Supplied with: **digital conductivity meter**, 25x **bresle patch**, 6x 25ml beaker, 200ml distilled water, 20ml syringe with needle, calibration and rinse solution, magnetic bresle test spot marker.

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NEURTEK instruments

TQC Bresle Chloride test 2008
SP7310

MANUAL

See also : ISO8502-6
ISO8502-9

1 DETERMINATION OF SOLUBLE CONTAMINANTS ON SURFACES IN CONFORMITY WITH ISO

1.1 PREPARATION

With this system very low concentrations of contaminants are being determined. It is therefore of most importance to keep all the material used for this test as clean as possible.

Never touch any part that will be in contact with the water with your bare hands!

RIGHT

WRONG

Pay special attention to the following parts: inside of beakers, inside of Bresle Sampler, lower part of conductivity meters (which will be immersed), the needle of the syringe, the test surface and the distilled water itself.

Determine the electrical conductivity of the water being used before each test.

- Take a clean (new) plastic beaker (25ml), draw with the syringe 15 ml. distilled water from the large (500ml) bottle and eject it in the small (25ml) beaker.
- Switch on the conductivity-meter (make sure it is proper calibrated) and insert the instrument in the small beaker. Move it a little and wait some moments in order to allow the instrument to carry out the automatic temperature compensation. Once the reading stabilises push the hold-button and read the measurement.
- *This is the **Zero-Reference** value of the conductivity of the water!*

Note this value immediately on the "BRESLEKIT NOTEPAD"

- The 15ml. in the beaker is the water to be used for the test as described hereunder.

This method is the most secure way to perform the Bresle-test. All parts that can affect the measurements are included in determining the ***zero- reference.***

1.2 OPERATION

A. Select the section on the steel surface to be used as the test area for assessment of the total surface density of salts. It should preferably be dry and with no loosely adherent rust, dirt or moisture (dampness), so that the patch frame can properly adhere to the surface. The Bresle Sampler can be placed in almost every position, vertical, horizontal, slanting or on surfaces that are not completely flat.

It is recommended to test more than one spot to catch the variations of the contamination level!

B. Remove the square protective backing of the Bresle Sampler with its inner protective paper and dispose. Place the Bresle Sampler with the adhesive side to the test surface and press firmly in order to create a tight seal.

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C. Take 3 to 5 ml. of the water with the known zero-reference from the small beaker and inject into the Bresle Sampler. Make sure the needle is inserted through the foam frame of the Sampler from the topside.

(Inserting through the transparent part of the Sampler or from the bottom side will cause leakage!)

It might be necessary to remove air from the TQC Bresle Sampler before injecting the water. Use an empty syringe to suck the air out of the Sampler. Insert the needle through the foam just like when injecting the water.

D. Dissolve the salts on the test surface by carefully using the syringe and the patch compartment back and forth between them. This operation should go on for about 3 to 5 minutes with 2-4 pumping strokes per minute. Rubbing the cell area of the Sampler between pumping is increasing the dissolution speed of the water.

E. When finished, suck up the entire volume of water into the syringe, remove the syringe from the TQC Bresle Sampler and eject the water back into the small (25ml) beaker with the remaining water. If necessary take the last drops out the Sampler by creating a negative pressure in the patch with the syringe.

F. The total amount of water in the beaker should be 15 ml. again.

G. Measure the conductivity of the solution in the small beaker and note down the value on the notepad. This is the "**Measured Value**".

H. Calculate the difference between the measured value (measured at "G") and the Zero-Reference which has been determined earlier
(µS **MeasuredValue** - µS **Zero Reference**).

The total surface density of soluble salts/contaminants (S) in mg/m² is

S= 6 x (Sample Value – Zero-Reference)

(all salts are considered as NaCl or Sodium Chloride)

"Sample Value" and "**Zero Reference**" are in microsiemens (µS) per centimeter.

If an indication of just the Chlorides or Cl are required the multiplier will be 3,6 instead of 6 !

I. Dispose all the contaminated water in the supplied bottle and clean all critical parts by rinsing with clean distilled water.

CLEAN COMPONENTS ARE OF MOST IMPORTANCE FOR A RELIABLE TESTRESULT!

J. Make sure the Bresle Sampler is removed from the surface after the test has been performed.

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2 DETERMINATION OF SOLUBLE CONTAMINANTS ON SURFACES; TQC HIGH ACCURACY METHOD

2.1 PREPARATIONS

Testr11+ Measuring Cell

The TQC method is a special slightly adjusted method, based on the ISO method,, but with full use of the capacities of the new conductivity meter. This increases the accuracy significantly. Just like with the ISO method, it's very important to keep all the material used for this test as clean as possible. NEVER touch the measuring cell, or the needle with bare hands.

- Determine the electrical conductivity of the water before use, of each test.
- Use the syringe to draw 3ml distiiled water out of the large (500ml) bottle and spray this in the measuring cell of the Testr11+
- Turn on the Conductivity meter (check if it's calibrated), and wait a moment in order to allow the instrument to carry out the automatic temperature compensation. Once the reading stabilises, push the hold-button and read the measurement
- This is the Zero-Reference value of the conductivity of the water

  Note this value immediately on the 'BRESLEKIT NOTEPAD'

- Empty the Measuring Cell

This method is the safest way to perform the Bresle test. All parts that may affect the measurements are included in determinimg the Zero-reference,

2.2 OPERATION

A. Select the section on the steel surface to be used as the test area for assessment of the total surface density of salts. It should preferably be dry and with no loosely adherent rust, dirt or moisture (dampness), so that the patch frame can properly adhere to the surface. The Bresle Sampler can be placed in almost every position, vertical, horizontal, slanting or on surfaces that are not completely flat.

It is recommended to test more than one spot to catch the variations of the contamination level!

B. Remove the square protective backing of the Bresle Sampler with its inner protective paper and dispose. Place the Bresle Sampler with the adhesive side to the test surface and press firmly in order to create a tight seal.

C. Use the syringe to draw 5 ml out of the large (500ml) bottle and inject into the Bresle Sampler. Make sure the needle is inserted through the foam frame of the Sampler from the topside, and that all the water is injected into the patch.

(Inserting through the transparent part of the Sampler or from the bottom side will cause leakage!)

It might be necessary to remove air from the TQC Bresle Sampler before injecting the water. Use an empty syringe to suck the air out of the Sampler. Insert the needle through the foam just like when injecting the water.

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D. Dissolve the salts on the test surface by carefully using the syringe and the patch compartment back and forth between them. This operation should go on for about 3 to 5 minutes with 2-4 pumping strokes per minute. Rubbing the cell area of the Sampler between pumping is increasing the dissolution speed of the water.

E. When finished, suck up the entire volume of water into the syringe, remove the syringe from the TQC Bresle Sampler. Spray some water onto the measuring cell of the conductivity meter. The rest of the water should remain in the syringe.

F. Measure the conductivity of the solution in the measuring cell and note down the value on the notepad. This is the "**Measured Value**".

G. Calculate the difference between the measured value (measured at "F") and the Zero-Reference which has been determined earlier
(µS **MeasuredValue** - µS **Zero Reference**).

The total surface density of soluble salts/contaminants (S) in mg/m² is

S= 6 x (Sample Value – Zero-Reference)

(all salts are considered as NaCl or Sodium Chloride)
"Sample Value" and "**Zero Reference**" are in microsiemens (µS) per centimeter.
If an indication of just the Chlorides or Cl are required the multiplier will be 1.2 instead of 2 !

H. Dispose all the contaminated water in the supplied bottle and clean all critical parts by rinsing with clean distilled water.

CLEAN COMPONENTS ARE OF MOST IMPORTANCE FOR A RELIABLE TESTRESULT!

I. Make sure the Bresle Sampler is removed from the surface after the test has been performed.

3 DETERMINATION OF THE WATER SOLUBLE SALTS IN MINERAL ABRASIVES

- Collect a number of samples , minimum 5, of the abrasive at random at different places.
- Mix them well and take 50 ml. from this mix into the 50 ml. Beaker.
- Pour 100 ml. distilled water into the large 250 ml. beaker which has been cleaned before with distilled water.
- Take a reading of this water with the conductivity gauge and note the value. This is the "***Zero Reference***"
- Add the 50 ml. of abrasives to the 100 ml. distilled water in the large beaker.
- Shake the mixture well for about 5 minutes and leave it for one hour.
- Shake again for 5 minutes.
- Decant some of the water into a clean beaker and measure the conductivity.

Contact the paint-manufacturer, abrasive supplier or project-manager for the maximum acceptable conductivity level.

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4 THE CONDUCTIVITY METER

1) Battery compartiment and calibration buttons

2) Batterry indicator

3) Indication of Automatic Temperature Compensation

4) Stability indication

5) Main Display: EC- or Conductivity Value

6) Indication of unit (µS of mS)

7) Second Display: Temperature

8) Set / hold button

9) °C / °F button

10) On / Off button and MODE button

11) Temperature electrode

12) EC / Conductivity Electrode

13) Synthetic protective cover

The waterproof testers are warranted to be free from manufacturing defects for 1 year and electrode module for 6 months, unless otherwise specified. If repair, adjustment or replacement is necessary and has not been the result of abuse or misuse within the time period specified, please return the tester - freight prepaid - and correction will be made without charge. Out of warranty products will be repaired on a charge basis.

4.1 How to use

- Remove the grey protective cover (13) and turn on the meter (10)
- Calibrate the instrument (See Calibrations for more info)
- The instrument is now ready to use: Submerge the probe (11 / 12) in the solution to be tested.

The instrument is waterproof, but it's not meant to be left in the solution for a longer period than necessary.

- The left upper corner of the display (5) shows a timer (just under the battery indicator (2) Keep on stirring slowly until the 'timer'disappears.
- The shown value is the correct conductivity value. Push the hold button (8) once to freeze the display.

To save batteries the instrument turns off automatically after about 8 minutes

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4.2 CALIBRATE AND TEST

- Before calibration place the meter with the probe for about half an hour in rinsing solution hi0808 and rinse with demiwater
- Make sure the meter is in measuring mode. Remove the battery cover (1)
- Place the gauge into the calibration standard solution
- Push one of the two white buttons (1)
- Place the instrument in the supplied calibration liquid. The instruments automatically recognizes the calibration standard
- Wait until the measurement is stabilized and the instruments indicates OK. The instruments now returns to the measuring mode automatically

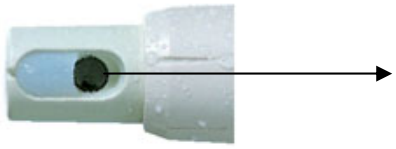
4.3 MAINTENANCE

- Maintenance of the ECTestr11+ is minimal, because it's quite easy to perform a measurement. Nevertheless the technology inside the instrument is very advanced.
- Depending on the frequency of use, a thin film may occur on the probe. Use a damp cloth to remove this.
- After each use the instrument should be rinsed with tap water and demineralized liquid. Make sure the probe stays clean.
- As long as the instrument is being maintained as described above, calibration is necessary each six months.
- A blinking battery indicator (2) indicates the batteries need to be replaced. Open the battery compartment cover. Note polarity facing upand remove the old batteries by pulling plastic ribbon. Replace with fresh ones with the same polarity. facing up as the old ones..

4.4 WHEN SOMETHING GOES WRONG

When the instruments doesn't perform the way you expected, usually you can solve it yourself easily. Therefore read this part thoroughly before claiming warranty.

Problem	Possible cause	Sollution
The value measured is unstable	Pollution?	Clean the measuring cell with a domp soft cloth*
Display fails	Insufficient battery povwer	Replace batteries
Calibration fails	Dirty measuring cell or old / polluted calibration standard.	Always use a 'fresh ' calibration standard. Once opened the calibration standard will not keep.
Display shows UR instead of temperature	The electrode or connection is damaged.	Turn the measuring cell loose and tight. If URL is diaplyed, please contact your distributor.



*Carefully replace the synthetic protection cover en clean the measuring cell with a soft cloth. Rinse the measuring cell thoroughly with demiwater afterwards.

Disclaimer

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