

## Quick-Check for Analysers

In case of wrong measurements or malfunction please carry out following checks:

1. is the pompe tube worn out? The producer recommends to replace the tube box after consumption of 5 bottles of reagent or after 6 months use (see manual)
2. is the reagent grown old, wrong or stored wrong ? (especially for hardness analyzers , see manual)
3. is the tube box properly fixed ?
4. is a cleaning of the measuring cell done according to the recommendation of the producer ? (cleaning with **hydrochloric acid 10%**, see above).
5. does the stirrer work and is the moving magnet inside the measuring cell ? (check by manual switching on the stirrer. Visual control with open measuring cell. The cap of the cell must be removed)
6. is the new volume of reagent properly programmed after replacing the reagent ? (see manual)
7. does the sample meet the specifications issued by the producer ? (see manual)
8. do the programmed values meet the individual requirements ? (see manual)
9. check the connection of external devices according to the connection diagram
10. check the main fuse of the instrument.

If all checks did not show any compliant but the instrument did not work proper, please contact the supplier.

To help the supplier for a diagnosis, please carry out following **special checks**:

### A) Inspection of the measuring cell and cleaning procedure

Press the key on the touchscreen for the inlet valve in order to fill the cell with clear sample. Press the key again to close the valve.

**Important:** there must be no reagent or other additives in the cell. This means, the cell must be rinsed carefully.

Then the display should show a value of **100 or less**.

(**attention:** silica-instruments show **180 – 200**).

Empty the cell by the following process:

take off the screws, remove the cap of the cell.

Remove the inlet tube for the sample. Put a vessel below the valve, not to splash the liquid to the ground.

Open the inlet valve. Wait until the cell is complete empty.

Now the display should show a value of **350 –360**.

If there are great differences to the shown values, please clean the cell as follows.

Close the hand operation inlet valve.

Open the cell. (see above)

Fill in **10% hydrochloric acid** from the top. Turn on the stirrer and wait for at least 2 minutes. Then turn off the stirrer, connect the inlet tube, close the cell and fasten the screws. Now turn on the inlet valve, open the hand operation valve and rinse the cell carefully. Start automatic operation and check the result of at least two analysis.

**B) Check the sample for air bubbles/high gas inclusion.**

Start manual mode.

Fill the cell with sample by turning on the inlet valve.

Then turn off the valve, turn on the stirrer. Observe the reading on the display.

After 1 minute it should show a stable reading. If the value tends to drift to higher reading the gas inclusion of the sample may be too high.

Important: If there are air bubbles on the glass surface inside the measurement chamber, it could be helpful to clean the glass surface with a special paper towel for glasses or with a glass cleaning solution.

**C) Check for correct reagent supply, (only for hardness instruments).**

Start manual mode.

Fill the cell with deionised water. Note the reading in the upper display.

Turn on the pump for ten rotations (count the rotations), turn on the stirrer.

After ten rotations turn off the pump and stirrer.

The value shown on the display should have a difference of about **100** to the first noted value.

**For Example: 1.value= 070, 2.value = 170.**

If there are great differences to the shown values, may be the reagent is not all right, or the amount of reagent dose is too less because the pump tube is worn out.

**D) Check the valve.**

Start manual mode. Open the valve. The sample flow rate should be appr. 20 – 30 l/h.

Close the valve. If still some water drops are flowing out of the measurement chamber, the valve has not closed properly. In this case, clean the valve or replace the valve. If there are particles in the valve, install a pre-filtration.