

9 MAINTENANCE

This chapter provides necessary information concerning general maintenance by the user.



If any faults should occur which cannot be remedied, then service should be contacted. Repairs at the device may be carried out only by authorized specialist staff. Through improper repairs the warranty extinguishes, and the user can be heavily jeopardized.

9.1 CLEANING INSTRUCTION



Liquid waste is potentially biologically hazardous. Always wear gloves if handling those materials. Do not touch parts of the device other than those specified. Consult the laboratory protocol for handling biohazardous materials.



Take care that no liquid enters the device! There is no protection against penetrating of liquids (Code IP X0). Check from time to time that the tubing and the connections are leakproof.

The **flow-through system** of the Photometer 5010 has to be washed with dist. water regularly before and after measuring 2 – 3 times. Depending on sample material and reagent, and **always** at the end of a working day, the Photometer 5010 has to be cleaned additionally with a phosphate-free detergents, e.g. with approx. 5ml of 1 % Hitergent solution (REF 5010-024), and afterwards rinsed with 5ml distilled water.

Persistent residues are to be removed with a combined alkaline-acid treatment. The following procedure is advised step by step:

1. 5 x wash with NaOH 1 N
2. 5 x rinse with dist. water
3. 5 x wash with HCl 0.5 N
4. 5 x rinse with dist. water

If the system is contaminated severely, it may alternatively be cleaned with hypochlorite. The following procedure is advised step by step:

1. 5 x rinse with dist. water
2. 2 – 3 x wash with hypochlorite (1:20 diluted solution) or ISE Cleaning Solution, undiluted, let it possibly affect up to 20 minutes
3. 5-10 x rinse with dist. water

For device cleaning and surface decontamination purposes use commercial decontaminating solution which are usually available in clinical chemistry laboratories like Mikrozid[®] AF Liquid, Bacillo[®] plus, 3 % Kohrsolin[®] or similar solutions. Switch off the device and disconnect it from the mains voltage. Then clean the device with soft cloth and decontaminating solution.

Empty the drain tank at the end of daily measurement, or whenever filled.

9.2 CALIBRATING MEASURING SYSTEM

At doubtful measurement results a dark level adjustment must be carried out corresponding to chapter 8.2.1. It is recommended to calibrate the device every four weeks to ensure that it operates optimally.

9.3 ADJUSTMENT OF BUBBLE DETECTOR

See chapter 8.2.2 – Adjustment of bubble detector.

9.4 CALIBRATION OF PERISTALTIC PUMP

See chapter 5.7 – Pump utilities

9.5 CHANGING RIBBON

Open printer cover. Lift used ribbon by pressing "PUSH" on the left. Take ribbon cassette out of the printer. Take new ribbon cassette out of the wrapping. Turn small wheel on the left in the direction marked by an arrow till the inked ribbon is tightened. Put in the ribbon cassette. Pay attention that the paper is to be taken through inked ribbon and cassette. Take printer paper through the crack of the printer cover and close the printer cover.

9.6 CHANGING PAPER ROLL

See chapter 2.4 – LOADING PRINTER PAPER.

9.7 CHANGING ASPIRATE TUBE

For changing the aspirate tube pay attention to the sequence of the assembly parts as shown below. Then put aspirate tube without bending from the cuvette area side through the metal inlet tube. Turn screw connection with fingers into the cuvette.

