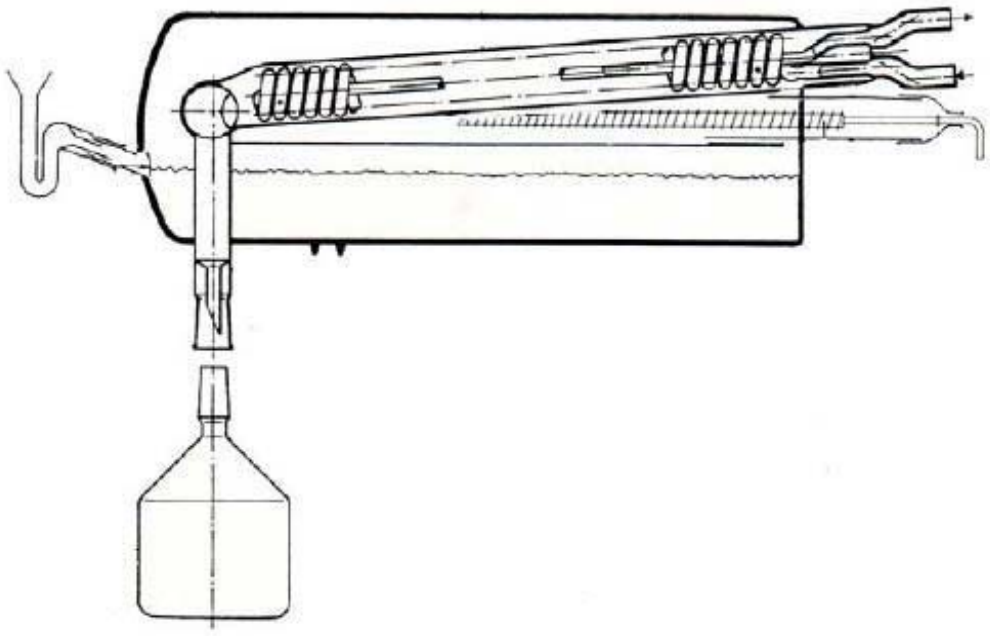
Pyrodest

High purity Water-Distillation
made of Quartz Glass
for discontinuous using



PYRODEST

High purity Water-Distillation Unit made of Quartz Glass for discontinuous using

The principle of surface evaporation is especially suitable for the purification of liquids by distillation. Unlike boiling evaporation no fog or aerosol is produced. The distillate is therefore of very high purity.

The purest water is needed for seeding the cell, tissue and organic cultures. There is no contact of water with the sockets. The sockets at the filling tube and the collecting bottle are arranged in a way that drains impurities to the outer wall. The apparatus is filled by a specially formed funnel. After having started the operation this funnel is rotated on the filling tube by 90°, so the U-shaped outlet is filled with liquid and acts like a siphon between apparatus and outer atmosphere. Pressure balance takes place through this siphon during the heating and cooling period.

Operation

The water surface gets heated and evaporated by infra red elements. The water steam enters the unit made of quartz glass
and gets overheated (450-500°C) on its way to the cooling system. The overheated water steam condenses in the cooler and cumulated via outlet connecting piece in a collecting bottle. This happens without connection of water and the joints, otherwise, we have a danger of impurity. For this operation a distillated or salt free liquid is necessary.

Advantages of surface evaporation by overheat-level:

- totally sterile distillate
- pyrogene free
- very low electric capability
- lack of high molecular organic connection i. e. bacteria, pesticides, insecticides or detergencies
- heavy metal free
- distillate exceeds clearly the DAB7 regulations
- the heating system has a double function- as a surface evaporator and an overheating device
- small size of an apparatus
- saving energy

Such high level of purity is needed mainly in the medicine, biology, chemistry and physics.

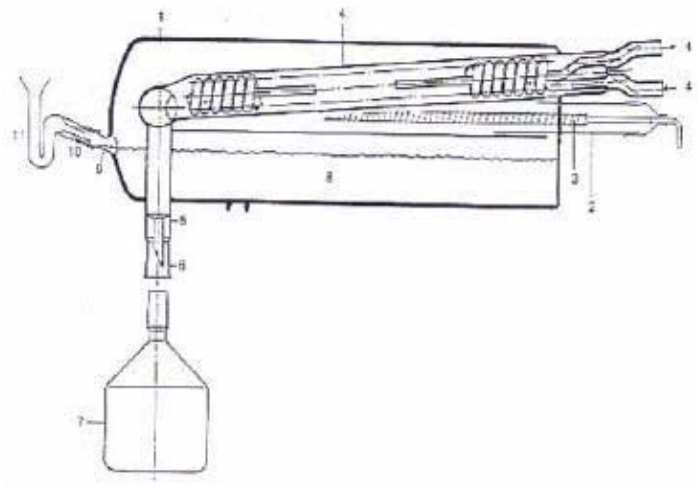
During the construction phase of the PYRODEST a high value was set on easy handling. On the stainless steel frame a high-adjustable console for the collecting flask can be installed either on the right or left side. For thorough cleaning the infra red elements can be easily removed. The coolant joints have GL 14 screw connection. The bottom is emptied through the filling tube which is installed at a height which ensures that the liquid cannot wet either the condenser or the infra red element.

After filling the apparatus with liquid, it gets distillated till maximum 550 ml/h.

The purity values can only be obtained when the PYRODEST and all other used glassware was cleaned thoroughly by steaming out with concentrated nitric acid for several hours and when all analytical work is done with the required care for work with purest materials.

Dimensions

Wide:	approx. 500 mm
Height:	approx. 200 mm
Depth:	approx: 350 mm
<u>Distillation flask:</u>	
Length:	approx: 320 mm
Diameter:	approx: 105 mm



1 = Distillation Flask
2 = Covering Tube for Infra Red Heaters
3 = Infra Red Heaters
4 = Cooling Finger with 4'' = Cooling Water in
4'' = Cooling Water out
5 = Outlet Connecting Piece
6 = Covering Body with Joint Socket
7 = Collecting Bottle with Joint Cone
8 = Liquid to be distilled
9 = Filling Tube
10 = Joint of Filling Tube
11 = Filling Funnel with U-Tube