

## Equipment configuration

- | inox structure
- | volatimeter flask 50 ml R-19
- | volumetric cylinder 5.1 ml
- | volumetric cylinder 3.2 ml
- | metallic clamp
- | volatile acidity 500 ml
- | phenolphthaleine 10 ml
- | siliconed pumice stone
- | power cable
- | instructions manual

ref. 3162017  
 ref. 3162002  
 ref. 3162001  
 ref. 1040919  
 ref. 1008001  
 (ref. 1004001)  
 (ref. 1015002)



## Required material

- | burette support GAB inox
- | burette clamp w/nut
- | burette 25 ml PTFE key
- | pipette 11 ml 1 mark "A"
- | erlenmeyer 100 ml n/neck
- | beaker 50 ml low form

ref. 1010007  
 ref. 63204115  
 ref. 3019068  
 ref. 3019018  
 ref. 3026133  
 ref. 3026162



## Comments

- This is an instrument for the determination of the volatile acidity according to Garcia-Tena method which incorporates for the distillation of the wine sample an electric heater (230V-160W) which transmits heat by contact gently. The heater is armored, clean, efficient and with long lifespan. This equipment forms a very little compacted unit with the distiller and cooler conceived particularly for the distillation of little volumes of liquid.
- The novelty of this instrument is that it does not use tap water for cooling which is very respectful with the environment if we consider that it is wasted 10 L each analysis we perform in a standard distiller. Furthermore it allows to finally disengage from the sink and allow us free movement and placement in any laboratory space for better work flexibility and comfort.

## Instructions

Operational technique Garcia-Tena method

- 01 Connect the device through the supplied cable to the 230V network.
- 02 Switch on the front button and pilot's light will light.
- 03 Place under the central outlet pipe made of silicone the 5,1 ml cylinder.

## Operational technique Garcia-Tena method

- 04 Measure 11.00 ml of the wine sample to analyze and drop into the distillation flask adding 2-3 granules of siliconed pumice stone.
- 05 The flask is placed in the chrome adapter using the O-ring in the middle holding it with the metal clip and it is placed on the heater.
- 06 After few moments boiling process begins and when 5.1 ml are collected in the cylinder (# 1) it is swaped by the 3.2 ml cylinder (# 2) taking care not to lose any drop.
- 07 Once the distillation process is finished withdraw the flask using the metal clip and place it in front of the hook guide. If more analysis must be done there will be no need to switch it off so that the heater stays hot.
- 08 The distilled liquid from the 3.2 ml cylinder is dropped in the 100 ml erlenmeyer flask and a few drops of phenolphthalein solution will be added. It is titrated with sodium hidroxide N/49 till persistent pinkish colour.
- 09 For a better titration the liquid is dropped from the erlenmeyer flask to the cylinder and again it is dropped to the erlenmeyer. If decoloration appears more reagent will be added.
- 10 Calculation: multiply the spent millilitres in the burette by the 0.366 factor and will be obtained the grams per litre of acetic acid (gr./L acetic acid, Real Volatile Acidity).

## Observations

- If foam is observed during the boiling process it will be strongly recommended to repeat the analysis with more quantity of siliconed pumice stone (pumice stone with antifoaming effect).
- This same device can be used for the volatile acidity analysis by the A.O.A.C. method.

