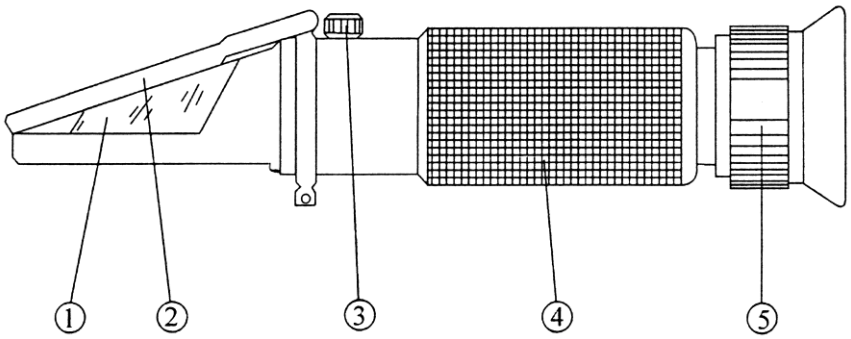
# Instruction manual

## NAME OF COMPONENTS




1.Prism 2.Cover plate 3.Calibration 4.Mirror tube 5.Eyepiece(Adjusting ring of diopter)

## METHOD OF OPERATION

1.Prepare: Aim the front end of the refractometer in the direction of a bright light, and adjust the adjusting ring of diopter(5) until the reticle can be seen clearly.

2.Calibration:

**Calibration A: This calibration just use for measure from 0%.**

open the cover plate(2), drop one or two drops of distilled water on the prism surface, closed cover plate, press it lightly, then adjust the correct screw (3) to make the light/blue boundary concide with null line.

**Calibration B: This calibration just use for model Mod. 102**

open the cover plate(2), drop one or two drops of saturated sodium chloride solution on the prism surface, closed cover plate, press it lightly, then adjust the correct screw (3) to make the light/blue boundary concide with null line. Adjust to 29.9% at 15$^{o}$C, adjust to 29.6% at 20$^{o}$C, adjust to 29.2% at 25$^{o}$C.

## ATTENTION AND MAINTENANCE

1.Adjustment for the null liquid and specimen should be in the same temperature. Once the temperature move greatly, the null point should be adjusted once per 30 minutes.

2.After usage, do not use water to wash the instrument, so as to avoid water entering the inside of the instrument.

3.This is a precision optical instrument. Handle it gently and take good care of it. Do not touch or scratch the optical surface. Please keep it in a dry, clean and non-corrosiveness environment, to prevent the surface from turning mouldy and foggy. Please avoid strong shock during transportation.

4.If the consumers use the instrument in accordance with the mentioned method of usage, the optical performance should not be changed.

## TEMPERATURE COMPENSATION

ATC is mounted with Automatic Temperature Compensation, it has the extra function, it enables user concentrate on measurements without worrying the temperature. Compensation range is 10~30$^{o}$C.

## ACCESSORY

1. Eyeshade;
2. Suction tube;
3. Screw driver

| MODEL | MEASURING RANGE | RESOLUTION | ACCURACY | SIZE(mm) | NW(g) |
|---|---|---|---|---|---|
| **Mod. 101** | 0~32 %Brix | 0.2 % | ± 0.2 % | 27×40×160 | 175 |
| **Mod. 102** | 28~62 %Brix | 0.2 % | ± 0.2 % | 27×40×160 | 175 |
| **Mod. 103** | 0~80 %Brix | 0.5 % | ± 0.5 % | 27×40×160 | 175 |
| **Mod. 104** | 58~92 %Brix<br>12~27 %$H_2O$<br>38~43 °Bè | 0.5 %<br>1 %<br>0.5 °Bè | ± 0.5 %<br>± 1 %<br>± 0.5 °Bè | 27×40×160 | 175 |
| **Mod. 105** | 0~12 g/dL<br>1.000~1.050 SG<br>1.3330~1.3600 nD | 0.2 g/dL<br>0.002 SG<br>0.0005 nD | ± 0.2 g/dL<br>± 0.002 SG<br>± 0.0005 nD | 27×40×160 | 175 |
| **Mod. 106** | 0~28 % NaCl | 0.2 % | ± 0.2 % | 27×40×160 | 175 |
| **Mod. 106 ATC** | 0~100 ‰ NaCl<br>1.000~1.070 d | 1 ‰<br>0.001 d | ± 1 ‰<br>± 0.001 d | 27×40×160 | 175 |
| **Mod. 107** | 0~35 %Brix<br>0~28 Kmw | 0.2 %Brix<br>0.2 Kmw | ± 0.2 %Brix<br>± 0.2 Kmw | 27×40×160 | 175 |
| **Mod. 414** | -50~0 °C glycol<br>-40~0 °C cleaner<br>1.10~1.40 sg | 1 °C<br>5 °C<br>0.01 sg | ± 1 °C<br>± 5 °C<br>± 0.01 sg | 27×40×160 | 175 |

## DISPOSAL OF ELECTRONIC DEVICES

The electrical and electronic equipment marked with this symbol cannot be disposed of in public landfills.

According to the UE Directive 2002/96/EC, the European users of electrical and electronic equipment can return it to the dealer or manufacturer upon purchase of a new one.

The illegal disposal of electrical and electronic equipment is punished with an administrative fine.