

# PORTABLE REFRACTOMETER OPERATING INSTRUCTIONS

## SERIES

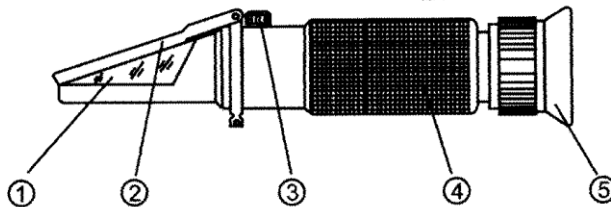
STYLE	MODEL	MEASURING RANGE	RESOLUTION	SIZE $\varnothing \times L$	WEIGHT
	ORD/ATC			ORD/ATC	ORD/ATC
Protein	FG-301/311	0~12g/dl 1,000~1,040sg	0.2g/dl 0.002sg	29×160mm	175g
	FG-302/312	0~12g/dl 1,000~1,050sg 1,3330~1,3600RI	0.2g/dl 0.002sg 0.0005RI	29×160mm	175g

ORDinary: If the condition temperature isn't 20°C, it need to adjust the zero for the measuring accuracy.

ATC(Automatic Temperature Compensation): The ATC device is a built-in type. Its compensation temperature range: 10°C~30°C

## NAME OF COMPONENTS

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



## APPLICATION

Portable refractometer FG301/311,FG302/312 were developed for quick determination of protein in serum and urine specific gravity, and refractive index of the checked liquid.

## METHOD OF OPERATION

1. Aim the front end of the refractometer to the direction of bright light, and adjust the adjusting ring of diopter(5) until the reticle can be seen clearly.
2. Adjustment of null  
Open the cover plate(2), drop one or two drops of pure distilled water on the surface of the prism. Close the cover plate and press it lightly, then adjust the correct screw (3) to make the light/dark boundary coincide with the water line.
3. Open the cover plate(2) and clean the water on the prism and cover plate by soft

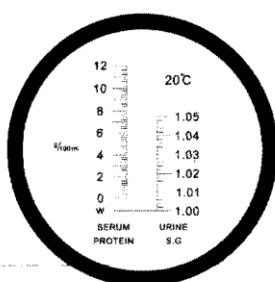
cotton flannel, then drop one or two drops of the serum(plasma). Close the cover plate and press it lightly, the corresponding dial reading on the light/dark boundary is the concentration of albumen.

4. After measurement, clean away the adherent on the surface of prism and cover plate by moist gauze. After drying, it should be stored perfectly.

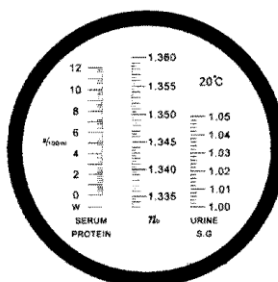
### ATTENTIONS AND MAINTENANCE

1. Adjusting the null liquid and specimen should be under the same temperature, if the temperature varied greatly, the null point should be adjusted once per 30 minutes.
2. The prism must be cleaned completely, because any residual impurity on it could cause error during measuring.
3. After usage, don't use water to wash the instrument, so as to avoid water entering into the pipe of the instrument.
4. As it is a kind of precision optical instrument, you should hand it gently and take good care of it, don't touch and scratch the optical surfaces. It should be kept in the environment of dry, clean and non-corrosiveness air, so as to prevent the surface of it turning mouldy and foggy. Please avoid strong shock during transportation.
5. If the consumers use the instrument in accordance with the mentioned method of usage, it guarantee that instrument can't break down, the optical performance can't change.

### DIALS



FG-301/311



FG-302/312

### ACCESSORY:

1. Plastic pipette 2
2. Screw driver 1
3. Cotton flannel 1