

# GY Series Analog Fruit Sclerometer

## USER' S MANUAL

### Function

Fruit Sclerometer is an measuring instrument designed for testing hardness of fruit (apple, pear, peach, etc). It is composed of pressing tip, spring, and indicator. The test principle is to press cylindrical spring by tip with regular shape and area, and display hardness value on indicator by drive system. The hardness value is expressed by testing force on unit area.

This series fruit sclerometer is divided into GY-1, GY-2, GY-3, GY-4(digital) four models, which are applied to fruit research institute, fruit company, fruit farm,college, and so on. They are used to test hardness to judge mature for cultivating breed, fruit storage, fruit transportation, or process. With small size, light weight, simple reading, easy carry, the instrument can be used for field test, also can be equipped on specialized test stand to improve stableness and accuracy for laboratory test.

### Structure

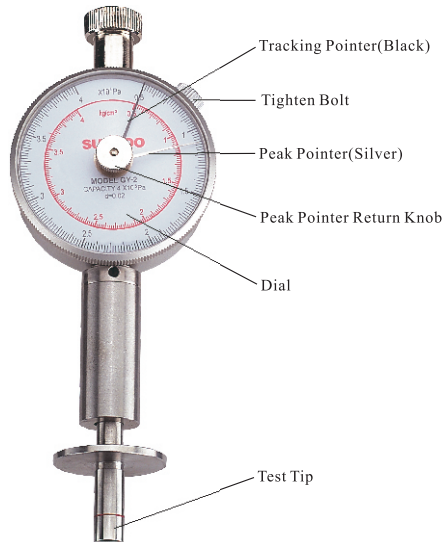
Fruit hardness is defined as supported pressure(N) on unit area(S), and the ratio is fruit hardness value(P).

$$P=N/S$$

P- Hardness value of tested fruit ( $10^5$  Pa or  $\text{kg}/\text{cm}^2$ ).

N- Force value that tip brings pressure to fruit surface(N/kg).

S- Pressure area of fruit( $\text{cm}^2$ ).



## Operation

Before test: First put sclerometer vertically, turn dial to make pointer point to original value(GY-1 is 2, GY-2 is 0.5, GY-3 is 0.5). Then peel off fruit about 1cm<sup>2</sup>.

Test: Hold sclerometer by hand, turn peak pointer to just right side of tracking pointer. Make sclerometer vertical to fruit surface. Press tip into fruit by symmetrical force. At this time, pointer begins to rotate, and stop pressing it when reaching to tip scale (press into 10mm), reading value on dial is the hardness value of fruit.

After test, make peak pointer back to just right side of tracking pointer by adjusting peak pointer return knob, and wait for next test. When finishing test, clean sclerometer by dry and clean cloth to avoid syrup rusting tip.

Please protect sclerometer from humidity and rust if not use with long time.

## Specification

Model	GY-1	GY-2	GY-3	
Capacity	2-15 kg/cm <sup>2</sup> (x10 <sup>5</sup> Pa)	0.5-4kg/cm <sup>2</sup> (x10 <sup>5</sup> Pa)	0.5-12 kg/cm <sup>2</sup>	1-24kg/cm <sup>2</sup>
Resolution	0.1kg/cm <sup>2</sup>	0.02kg/cm <sup>2</sup>	0.1kg/cm <sup>2</sup>	0.2kg/cm <sup>2</sup>
Pressure Diameter	φ 3.5mm	φ 3.5mm	1# φ 11.1mm	2# φ 7.9mm
Accuracy	±2%			
Diaplay	Analog/Dial			
Dimension	L 150xW55xH30 (mm)			
Tip Depth	10mm			
Weight	0.3kg			

Note: GY-3 is model with double capacity, when using 1# test tip(diameter: φ 11.1mm), test capacity is 0.5-12 kg/cm<sup>2</sup>. When using 2# test tip(diameter: φ 7.9mm), test capacity is 1-24kg/cm<sup>2</sup>.

## Calibration

The fruit sclerometer should be calibrated by calibration organization at regular time, generally, the period is about 2 years.

---

### MANUFACTURER: WENZHOU SUND00 INSTRUMENTS CO.,LTD

Add: Building E, No.10 High-tech Industrial Zone, Wenzhou, China

Zip: 325013

Tel: +86 577 88609905 Fax: +86 577 88390155

Http://www.sundoo.com E-mail: export@sundoo.com