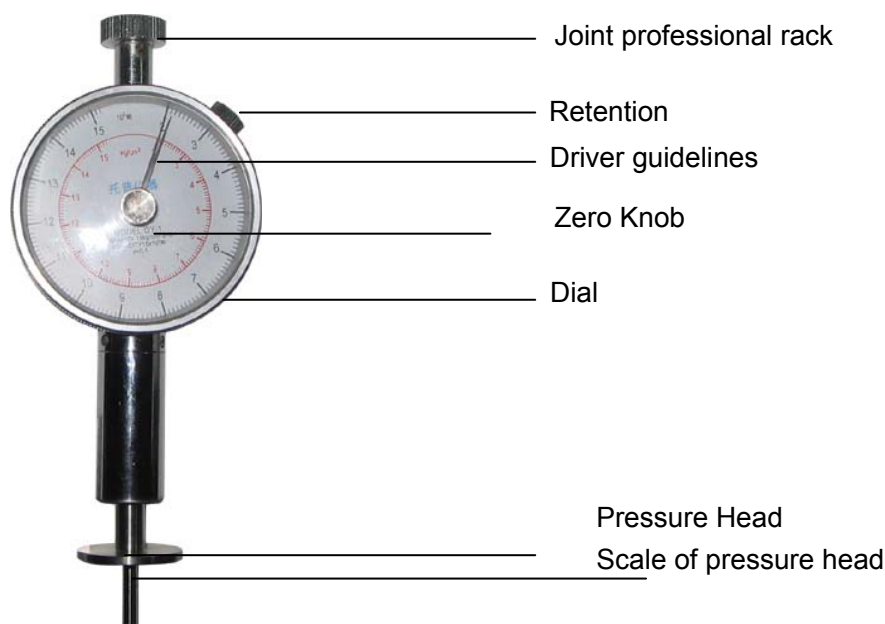


GY series Fruit Hardness Tester

User Manual

1. Functions

The product has three models, including GY-1, GY-2 and GY-3. It can test fruits' hardness such as apple, pear, watermelon, banana and so on in order to judge fruits' maturity. It is suitable for the fruit tree scientific research department, the fruits company, the fruit tree farm, unit and so on technical colleges, agriculture colleges and universities, to cultivate the improved variety, the harvest storage, the product transportation and the processing and so on by the fruits' hardness.



2. Principle

The hardness of fruit can express by the unit area(S) could undertake the pressure of dynamometer (N) , their specific value is just as the hardness(P).

$$P = N / S$$

P—the hardness value of fruit 10^5Pa or (kg/cm^2)

N— pressure of dynamometer (N) N or (kg)

S—the area of pressure m^2 or (cm^2)

3. Specification

Model	GY-1	GY-2	GY-3	
Scale value	2-15kg/cm2 ($\times 10^5\text{Pa}$)	0.5-4kg/cm2 ($\times 10^5\text{Pa}$)	1-24kg/cm2 ($\times 10^5\text{Pa}$)	0.5-12kg/cm2 ($\times 10^5\text{Pa}$)
Measuring head size	$\Phi 3.5\text{mm}$	$\Phi 3.5\text{mm}$	$\Phi 8\text{mm}$	$\Phi 11\text{mm}$
Accuracy	± 0.1	± 0.02	± 0.1	
Inserting Depth of pressure head	10mm			
Shape size	140×60×30mm			
Weight	0.3kg			

4. Instructions

Before measuring: Before measuring: Rotating dial, justify the dial and driven guidelines and the initial alignment of the same scale (Scale make of GY-1 is 2, scale mark of GY-2 and GY-3 is 0.5). Cut 1 square centimeters of the peel by small knife.

Measuring: Pressure head press in fruits slowly and vertically. The pointer start rotation. Press the head in 10 mm and stop. The pointer will display the fruit of hardness. Taking three times average.

After measuring:

Rotary knob back to zero, so that indicators reset to the initial scale line.

5. Attentions

5.1 When testing, should be uniformly slow insertion, can not turn pressure, should not impact measurement.

5.2 Pressure head and fruits should be vertical surface.

5.3 The instruments and pressure head should be kept clean. After finishing measurement, it should be cleaned up the juice.

5.4 Using more than a year, should open the back cover, pour in some lubricating oil in the main shaft, gear, precious stones eyes, groove-oriented, to improve accuracy and extend the useful life of equipment.

5.5 GY-1 and GY-2 type fruit hardness tester, outside scale unit is $\times 10^5$ Pa, inside track scale unit is kg/cm^2 .

5.6 The factory has been standardized the calibration, don't rotate screw nut.

Comparison list

Indicating value	Equal	
	Pound/ cm2	Pound/Inch
$\times 10^5$ Pa		
1	2.20	14.22
2	4.40	28.44
3	6.60	42.66
4	8.81	56.88
5	11.0	71.10
6	13.2	85.32
7	15.4	99.54
8	17.6	113.76
9	19.8	127.98
10	22.0	142.20

6. Accessory

Fruit Hardness Tester 1 unit
User Manual 1 book