FRUITS HARDNESS TESTER
Cat.Nos. 510-5 (FHR-5) and 510-1 (FHR-1)

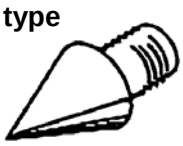
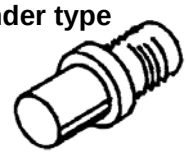
When fruits are ripen, the thickness of its cuticle and cortex is decreased in most cases, and its hardness is also decreased.
This tester is designed to put pressure on the surface of fruit to check its resistance which conforms to the degree of ripening.
There are two types of testers with the pressure to be loaded, maximum 5kg and 1kg.
Each tester is equipped with 3 different tips to be used according to the shape of fruit surface.

[SPECIFICATION]

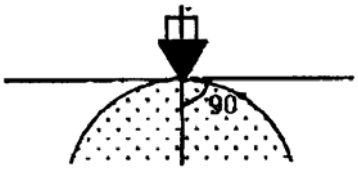
Model	Max. pressure	Min. Scale	Fruits to be measured
FHR-5	5kg	50g	Apple, Pear, Persimmon, Kiwi fruit, Durian, Watermelon, Melon, etc.
FHR-1	1kg	10g	Grape, Peach, Strawberry, Orange, etc.
Dimensions and weight		40 x 35 x 175mm, approx. 220g	

[OPERATION]

1) Select an appropriate type of tip following the kind of fruit and purpose of measurement.
2) The shape and purpose of use of tips are as follows :

	Purpose of measurement	Measuring item
• **Cone type** 	Resistance of total fruit sarcocarp - Base diameter : 12mm, - Height : 10mm,	Value to be measured just at the moment of tip intrusion to the cuticle
• **Cylinder type** 	Maximum resistance at the moment of cuticle penetration - Base diameter : 5mm, - Height : 10mm,	Value to be measured at the moment of tip penetration to the cuticle and cortex
• **Hemisphere type** 	Elasticity of fruit - Base diameter : 12mm, - Height : 10mm,	Value to be measured at the moment when deformation (or indenting) starts.

3) Apply a tester just perpendicularly on the upper surface of the fruit to be measured as illustrated below.



4) Make your own list for different fruits showing the correlation between the loaded pressure values (indicating fruits hardness) and the degree of ripening, and use this tester.
[Measure your fruits by this tester, selecting useful items as mentioned above which will be effective to know the degree of fruits ripening, and record the values and degree of ripening as your “experienced values”.]