

HI 83746 Photometer

FOR RESIDUAL SUGAR MEASUREMENT IN WINE

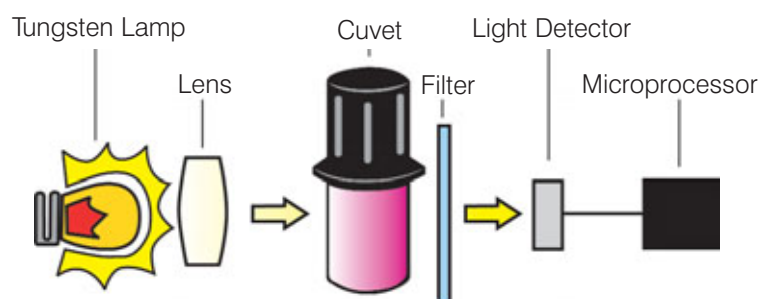




WINE
line

Optical system of HI 83746

The HI 83746 uses a tungsten light source and a narrow band filter of 610 nm



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Residual Sugar in Wine

Sugar is an essential component in the production of wine. During alcoholic fermentation, yeast feeds on the sugar found in grape juice and converts it to ethyl alcohol, or ethanol, and carbon dioxide. The amount of sugar fermented determines the wine's alcohol level and the amount of residual sugar left in the wine.

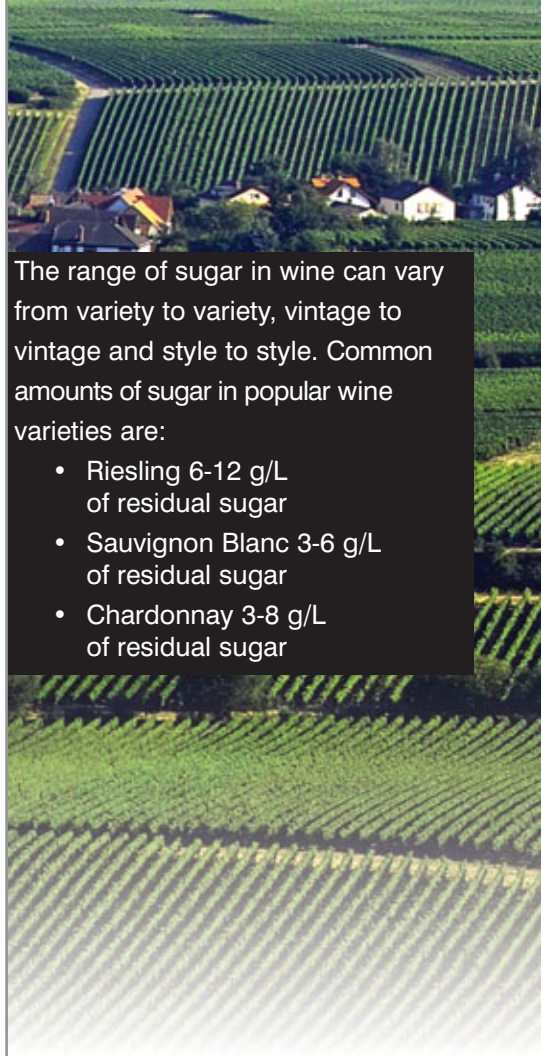
- Glucose and fructose are the main fermentable sugars in grape juice. Although each type of sugar exists in approximately equal concentrations in wine, fructose is roughly twice as sweet as glucose.
- Glucose is fermented at a faster rate, which means that a wine fermented to dryness will have less residual glucose than fructose. If two wines have the same residual sugar concentration, the one with more fructose will taste sweeter.
- Wine also contains very small concentrations of unfermentable sugars that yeast cannot convert to alcohol, such as pentose, that also contribute to residual sugar.

Residual sugar concentration is a measure of the amount of sugar solids in a given volume of wine following the end of fermentation and any sugar addition when making a sweet wine.

- Residual sugar concentration is expressed in grams per liter (g/L) or as a percentage of weight to volume
- For example, a wine with 0.2% residual sugar contains two grams of sugar in a liter of wine, or approximately 1/4 ounce in a gallon
- Dry wines are typically in the 0.2–0.3 percent range, off-dry wines in the 1.0–5.0 percent range, and sweet dessert wines in the 5.0–15 percent range

The range of sugar in wine can vary from variety to variety, vintage to vintage and style to style. Common amounts of sugar in popular wine varieties are:

- Riesling 6-12 g/L of residual sugar
- Sauvignon Blanc 3-6 g/L of residual sugar
- Chardonnay 3-8 g/L of residual sugar



Measurement in 3 Easy Steps



1 Prepare the Sample



2 Zero the Instrument



3 Press READ and View the Results on the LCD

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Ordering Information

HI 83746 is supplied with 1000 μ l pipette with 2 tips, 200 μ l pipette, (2) cuvettes, filter papers, cuvet cleaning cloths, 1 bottle color removal, funnel, 12 VDC power adapter, (4) 1.5V AA batteries and instruction manual in a hard carrying case.



Specifications	HI 83746 Residual Sugar Photometer
Range	0.00 to 50.00 g/L
Accuracy	Typical $\pm 5\%$
Resolution	0.25
Light Source	Tungsten lamp with narrow band interference filter @ 610 nm
Sensor	Silicon photocell
Method	Fehling
Environment	0 to 50°C; max 95% RH non-condensing
Battery Type	(4) 1.5V AA batteries/12 VDC adapter
Auto Shut-off	After 15 minutes of non-use
Dimensions	225 x 85 x 80 mm
Weight	500 g

Recommended Accessories

HI 83746-20 Reagents for reducing sugar analysis (20 pcs.)

HI 731318 Cuvet tissue (4 pcs)

HI 731331 Large 10 mL cuvet (4 pcs.)

HI 731340 200 μ l pipette

HI 731350 200 μ l pipette tips (25 pcs.)

HI 731341 1000 μ l pipette

HI 731351 1000 μ l pipette tips (25 pcs.)

HI 740142P 1 ml graduated syringe

HI 740144P 2 mL graduated syringe tips (10 pcs.)

HI 740216 Tube rack for glass vials

HI 740217 Safety shield

HI 740232 Filter paper type 1 (100 pcs)

HI 839800-02 Thermoreactor

HI 93703-59 Carbon decoloration for red wine

HI 740027P 1.5V AA batteries (10 pcs.)

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