

# Index of Refraction





thanks to ATAGO Co., Ltd. for image source

# Uses of refractometers

- Brix is used in the food industry for measuring the approximate amount of sugars in [fruits](#), [vegetables](#), juices, [wine](#), soft drinks and in the sugar manufacturing industry. Different countries use the scales in different industries; in the UK brewing is measured with [specific gravity](#) X 1000, European brewers use [Plato degrees](#), and US industries use a mix of specific gravity, Brix, [degrees Baumé](#) and Plato degrees.
- For fruit juices, one degree Brix is about 1-2% sugar by weight. This usually correlates well with perceived sweetness.
- Since Brix is related to the concentration of dissolved solids (mostly sucrose) in a fluid it is therefore related to the specific gravity of the liquid. Because the specific gravity of sucrose solutions is well known, it can also be measured by refractometers.
- 
- 
- A Brix-measuring instrument for use in the vineyard
- Modern Brix meters are digital refractometers that calculate the Brix value based on refractive index. These meters are typically portable, splashproof and very simple to use, so that they can be operated by anybody directly on location. More and more often Brix is measured to determine ideal harvesting times of fruit and vegetables so that products arrive at the consumers in a perfect state or are ideal for subsequent processing steps such as vinification.



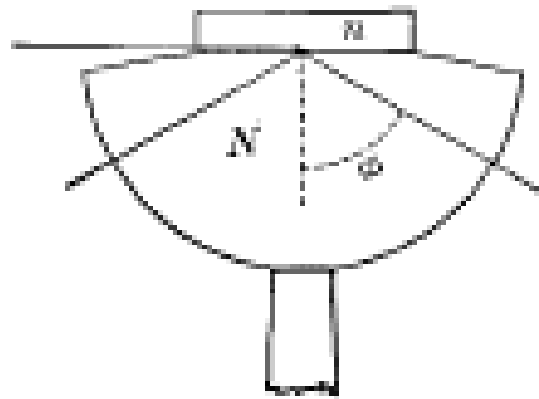


FIG. 102. CRYSTAL-  
REFRACTOMETER

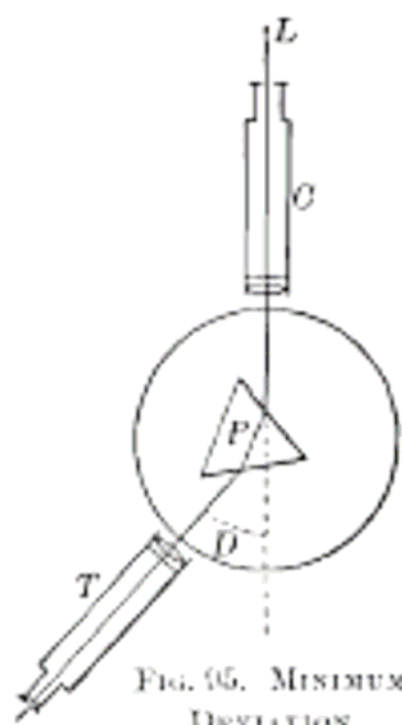


FIG. 95. MINIMUM  
DEVIATION

