

PAL-COFFEE

Digital Hand-held "Pocket" Refractometer

	PAL-COFFEE Cat.No.4523	PAL-COFFEE(TDS) Cat.No.4532	PAL-COFFEE(BX/TDS) Cat.No.4533
Measurement Range	Brix : 0.00 to 25.00%(ATC) Temperature : 10.0 to 100°C	TDS : 0.00 to 22.00%(ATC) Temperature : 10.0 to 100°C	Brix : 0.00 to 25.00%(ATC) TDS : 0.00 to 22.00%(ATC) Temperature : 10.0 to 100°C
Resolution	Brix : 0.01% Temperature : 0.1°C	TDS : 0.01% Temperature : 0.1°C	Brix : 0.01%, TDS : 0.01% Temperature : 0.1°C
Measurement Accuracy	Brix : ±0.10% Temperature : ±1°C	TDS : ±0.10% Temperature : ±1°C	Brix : ±0.10%, TDS : ±0.10% Temperature : ±1°C
Temperature compensation range	10 to 100°C (Automatic Temperature Compensation)		
Ambient Temperature	10 to 40°C		
Sample Volume	At least 0.3ml		
Measurement Time	Approx. 5 seconds 120 seconds of continuous measurement		Approx. 3 seconds
Power Supply	Two (2) AAA alkaline batteries		
International Protection Class	IP65 Dust-tight and Protected against water jets.		
Dimensions and Weight	55 (W) × 31 (D) × 109 (H)mm, 100g (main unit only)		

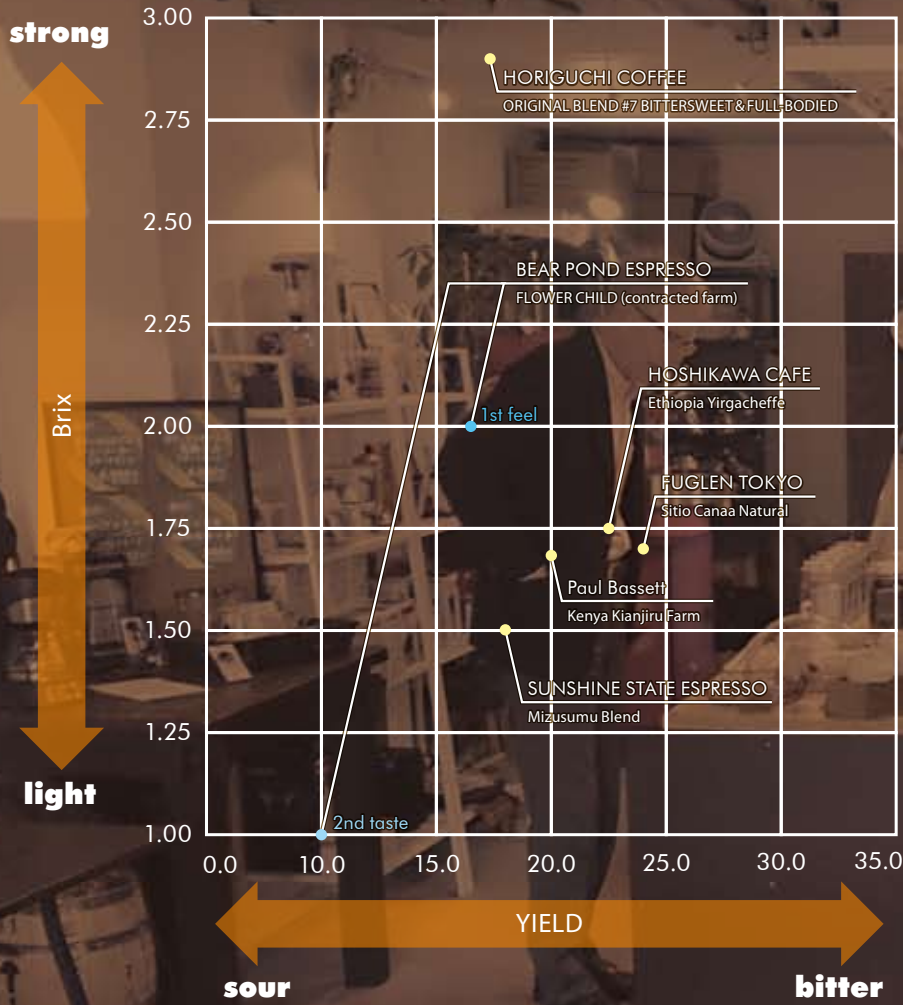
- To control coffee concentration using TDS%, PAL-COFFEE (TDS) is recommended. ATC=Automatic Temperature Compensation
- To ascertain both Brix% and TDS%, PAL-COFFEE (BX/TDS) is recommended.

All ATAGO refractometers are designed and manufactured in Japan



QUICK QUOTE

Brix and Yield (with target value examples provided by our coffee shop customers)



Yield calculation example

When 140g (ml) of coffee brewed from 12g of grounds measures 1.8% Brix:

$$\frac{1.8 \times 140}{12} = 21\%$$

When 1,600g (ml) of coffee brewed from 100g of grounds measures 1.6% Brix:

$$\frac{1.6 \times 1600}{100} = 25.6\%$$

Typical correlation

- Too low a yield = sour-tasting coffee
- Too high a yield = bitter-tasting coffee
- High Brix = strong coffee
- Low Brix = weak coffee

*The Brix / concentration of coffee may not always be indicative of its yield.

Before & After Measurement

- **Zero-set the unit with room temperature water.** Make sure that both the unit and water for zero-setting have been acclimated to room temperature.
- **Keep the prism clean.** Residues left behind may cause erroneous readings. Clean the prism thoroughly after each measurement. Cotton swabs work well for cleaning the edges.

Tips for Measuring Different Types of Coffee

- **Common for all types**
The concentration of coffee changes over the course of the extraction process. Gently stirring the coffee will even out the consistency and promote measurement stability.
- **French press coffee**
Pour the coffee into a cup and let it sit undisturbed for a while to allow particles to sink to the bottom. Avoid sampling from the oily surface.
- **Espresso**
Espresso generally contains more particles than drip coffee. Measurement fluctuation by 0.5% is common.
- **When cupping**
Scoop out any floating grounds and oil thoroughly as they may cause unstable measurements.



MY COFFEE RECIPE

Ideal for top quality coffee recipe management.

The Hoshikawa Café occupies a relaxing, wood-finished space in Kumagaya, Saitama. With only a few seats, the café is nevertheless a popular destination. Customers flock here for the owner's service, the coffee brewed from coffee beans airfreighted from Norway, and the pancakes baked from locally produced flour. The coffee to order here has to be the single origin brewed in a coffee press. The hot coffee is good, too, but their iced coffee is alluring in summer. There is probably nowhere else in Saitama to enjoy coffee this invigorating and clean-tasting. PAL-COFFEE is put to work in settling on the coffee brewing recipes.



The flavor of Norway in northern Saitama



HOSHIKAWA CAFE

1-77 Hoshikawa, Kumagaya-shi, Saitama-ken Japan
TEL:81-48-594-7574
<http://www.hoshikawa-cafe.com>

Horiguchi Coffee occupies a onetime retail space refurbished in April 2013, and besides its carefully selected in-season coffee beans boasts an impressive line-up of coffee-related equipment. The café space serves a variety of coffees from drip coffee to fancier variations, with a daily changing menu of parfaits and sandwiches. The Setagaya branch offers the added enjoyment of an espresso menu. PAL-COFFEE is used here to consistently recreate those winning flavors.



The New Coffee Classic



The Setagaya branch



The Komae branch



The Setagaya branch

HORIGUCHI COFFEE

The Setagaya branch: 1-12-15 Funabashi, Setagaya-ku, Tokyo Japan TEL:81-3-5477-4142
The Komae branch: 1-1-30 Izumihoncho, Komae-shi, Tokyo Japan TEL:81-3-5438-2143
<http://www.kohikobo.co.jp>

The espresso that won the 2003 World Barista Championship can be enjoyed in Shinjuku and in the Hikarie ShinQs shopping mall in Shibuya. For espresso, choose between single origin and blend, both featuring exquisite balance between mouthfeel, acidity and other elements. The cafés have their own roaster, so you can watch the roasting take place before you. PAL-COFFEE helps ensure that Paul Bassett espresso maintains its uniform world-class brewing.



Paul Bassett

A coffee shop with the cred of a champion barista



The Shibuya Hikarie ShinQs branch



The Shibuya Hikarie ShinQs branch



The Shinjuku branch

Paul Bassett Shinjuku

Shinjuku Nomura Bldg. B1F, 1-26-2 Nishishinjuku, Shinjuku-ku, Tokyo Japan
TEL:81-3-5324-5090
<http://www.paulbassett.jp>

Paul Bassett Shibuya Hikarie ShinQs

Shibuya Hikarie ShinQs B2F, 2-21-1 Shibuya, Shibuya-ku, Tokyo Japan
TEL:81-3-5468-3165
<http://lcdhpb.jp>

No more fluctuation! Secret to stable measurements.

When measuring hot coffee with a conventional refractometer, the readings tend to fluctuate at the beginning. This is because it takes some time for the temperature of the coffee to be detected by the refractometer's sensor.

The PAL-COFFEE waits until the sample temperature is measured accurately to start measuring, producing accurate, stable readings. While it depends on the brewing method, it takes quite a while for freshly brewed coffee above 80°C to cool down completely.

With the PAL-COFFEE, measurement fluctuation has been reported to be less than 0.1%. This high repeatability enables even inexperienced users to achieve accurate results.

It is recommended to take 3 consecutive measurements to ensure absolute accuracy. You can be confident that the 3rd reading is the fully stabilized value.

