

Rating the coffee!



Espresso is prepared by dissolving solids in hot water, from the grind coffee beans under pressure.

The degree of extraction depends strongly on the type of machine used for preparation. Grinding, brewing pressure, quantity of coffee the extraction time and amount of water are all effecting the degree of the extraction.

Using a refractometer this degree of extraction of espresso can be measured. This is done by direct measurement of the total of dissolved parts from the ground coffee in water, after extraction. The taste can not be measured though. However, on the basis of this measurement, we can assess how well these are being extracted and to make a statement on the freshness and the preparation of espresso.

What practical benefit has a refractometer?

Comparison of the extraction behavior of different espresso machines
Quality control in the preparation of espresso (measurable quality standards)
Assessment of the freshness of coffee beans (coffee)

The refractometer to compare espresso machines

Each espresso machine provides different conditions for the preparation of an espresso. Particularly large is the difference between fully automatic (home) and traditional espresso coffee machines (professional), espresso coffee machines but also among each of the types there are differences. Generally it can be stated that the higher the degree of extraction (Brix value) the more aromatic is the espresso.

To adjust a machine the grade of grinding, the brewing pressure, amount of coffee and the extraction time should be matched to the individual machine to find parameters such to achieve the best result. A general overview of the achievable values:

- 1.5 ° -2 ° Brix - Filter Coffee
- 3.3 ° -5.6 ° Brix - fully automatic home machine
- 10 to 12.5 ° Brix - filter holder, home machine, single tuned
- 13 to 14.5 ° Brix - professional espresso machine

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Quality control for the preparation of espresso

In the restaurant, all drinks should be measured to determine which extraction provides the best result. During business, you can check very quickly whether the currently poured out drinks meet these standards.

The digital refractometer is ideal for quality control in the gastronomy, to establish the best degree of extraction and determine whether the measurement of the individual coffees differ from one another, which would mean the preparation was not uniform.

Assessment of the freshness of coffee

In order to evaluate the freshness of the coffee beans, the measurement should be determined immediately after roasting (or after the opening of the sealed package) and this value should be documented. This value can be later compared with the values actually measured.

Generally one can say that the older the coffee is, the less of the substances are extracted.

This is due to the loss of carbon dioxide, which is important for the formation of the crema, and the simultaneous loss of flavor (the escape of carbon dioxide is carrying out flavors from the bean). From the moment of roasting, the coffee is continuously losing carbon dioxide.

To achieve significant assessment of the freshness, all preparation parameters (same coffee machine, at the same pressure and same amount of coffee ...) have to be replicated as best as possible.

For professional espresso machine the ideal value expected for a fresh coffee, is in the range between 12 ° Brix and 14 ° Brix. The older the coffee, the lower is the extraction. Freshly roasted coffee can lose up to 2.5 ° Brix, clearly influencing the taste.

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