

# ColorFlex EZ Coffee sample dish discoloration

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**FAQ: “I got a call from a coffee client who has had a ColorFlex EZ Coffee for about a month and a half.**

**From what he told me, there is a difference in measurement results for the same ground coffee lot read in the morning versus the late afternoon; 86 vs 77 (not sure what coffee metric this is from). The sample is from the same batch but not sure if it is a different sample or not.**

**He did mention that there is bright sunlight entering the room in the afternoon. I don’t think this sunlight is the cause since the sample measured through the bottom of the plastic sample dish is opaque.”**

ANS: “Humidity and temperature are two environmental issues that could be influential for the same sample read at different times. Additional sample issues such as variation in grind size could also be in play. Oxidation effects should not be significant over this short a time.

The PQ (Performance Qualification) Coffee Tile that comes standard with the CFEZ Coffee provides you and the customer a method of separating instrument performance from sample variation.

Standardize normally in the morning and prior to making ground coffee measurements, read the PQ Coffee Tile. The read values should closely match the read-at-factory values on the back of the tile.

Then read the ground coffee sample.

In the afternoon, standardize the instrument; read the PQ Coffee Tile again, and then the same ground coffee sample. If the instrument is reading the read-at-factory values on the tile closely but the sample values are different; it is a sample issue, not an instrument issue.



**FAQ: “It turned out to be a sample dish problem. They are using the plastic dish a number of times and it was discolored.”**

ANS: HunterLab chose a commercially-available plastic dish to keep sample container costs low for the customer. Yes, a glass container with an optically clear bottom (no swirls) can be used but many companies will not allow breakable glass to be used in their food QA laboratory.

Plastic dishes are inexpensive, work well and can be re-used with two caveats:

1. These plastic dishes will show abrasion scratches from use over time. A little scratch on the bottom of the dish will not make a difference as the ColorFlex EZ Coffee area averages a large 25 mm diameter view of the sample. However, if the dish shows many fine abrasion lines that you can see, it’s time to re-cycle the dish and get a new one.

2. If the dishes are discolored by staining with coffee oils that leach slowly into the plastic, they can be washed with a dilute solution of dish soap (lab detergents like Sparkleen or Alconox are best) with the optional addition of vinegar. If you can see no visual difference between a washed plastic dish and a new one, the dish can be re-used for ground coffee measurement.

If the lab is performing many ground coffee measurements every shift, a further option to assist with cleaning is to purchase a dish washer. Load up the plastic dishes (after single or several sample measurements) and wash with a lab detergent and hot water. If this does not remove the coffee stains, a further option is to include a small bowl of vinegar in with the sample dishes. If any dish shows visible discoloration (particularly yellowness) after washing, re-cycle the dish and replace with a new one.