



CJ1193 - Ethiopia Guji Natural Water Process Decaffeinated Crown Jewel

May 2nd, 2018 | [See This Coffee Online Here](#)



Intro by Chris Kornman

We've taken a long break between Decaf Crown Jewel releases, and it's certainly not because we enjoy depriving our customers of the option for 10kg caffeine-free coffee. Rather, we're trying our best to release show-stopping coffees of which we are super proud. Which brings us to this.

So we're pleased to present [this decaffeinated Ethiopian coffee from the Guji zone of Oromia](#). It's pristine and delicious, and we think it's one of the best decafs we've come across recently.

Drying coffee in the cherry, as was the case here, is the original tradition in Ethiopia. Natural or dry-process, fruit- or cherry-dried - however you prefer to talk about this style of 'zero-process' coffee post-harvest production, it all comes back to Ethiopia. While farmers across the globe still practice this method of letting the coffee fruit dry like raisins around the seed, it all started in here. It's still common to see smallholder farmers drying their daily harvest on their porches or lawns across the country. Unlike much of the rest of the world, many of these farmers will then roast and grind their own harvest - Ethiopia is the world's only coffee producing country whose volume of consumption equals its export.

The green coffee was shipped, after preselection by our cupping team here in California, from Ethiopia to Veracruz, Mexico, the location of Descamex and their chemical-free decaffeination method called Mountain Water Process. The technique involves hydrating the coffee beans using water "charged" with green coffee extract - basically everything that makes coffee coffee, except for caffeine. The slurry of coffee solids in water, when exposed to raw green coffee will extract just the caffeine. It's then drained and filtered, and then the process is repeated until the coffee is at least 97% free of the stimulant alkaloid.

If you'd like to read a little more on caffeine, decaffeination methods, and Royal's [decision to discontinue Methylene Chloride](#) method decafs, check out [this article](#) from October, 2016.

Grower:	Smallholder farmers from various cooperatives	Process:	"Natural" dried in the cherry in the sun. Decaffeinated without chemicals via Mountain Water Process.
Region:	Guji Zone, Oromia, Ethiopia	Cultivar:	Indigenous Heirloom Varieties
Altitude:	1200 - 2100 masl	Harvest:	October 2017 - February 2018



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Green Analysis by Chris Kornman

If you've ever set eyes on Mountain Water Processed coffee before, you'll know that "green analysis" is a bit of a misnomer, as the coffee takes on a brownish hue after decaf processing. Not to worry, once you get into the Maillard Reaction during roasting things will start to look normal again, but it can be a little shocking seeing the effects of processing on the physical state of the coffee.

Decaf coffees must be handled with care during processing; the re-hydration involved means they must also be re-dried, and as a result even low moisture decafs can still have high water activity. [This particular example](#) has maintained the characteristic high density associated with Ethiopian coffees. The large discrepancy between moisture readings taken on the Sinar and Kett are a strange anomaly, but consistent with decaf readings I've made in the past.

Also, keep an eye on that higher than average water activity. It's common in decaf to have an elevated level here. You should expect browning reactions to occur a little more quickly in this coffee than average. Jen's notes should shed some light on effective roasting methods, as you can bet it won't react the same as a conventional coffee in the roaster.

<u>Screen Size</u>	<u>Percent</u>	<u>Density (freely settled)</u>
>19	1.68%	0.689 g/mL
18	3.54%	
17	13.43%	<u>Total Moisture Content</u>
16	28.25%	10.6% (Sinar)
15	26.59%	9.1% (Kett)
14	20.36%	<u>Water Activity</u>
≤13	6.15%	0.61 @ 22.9

Ikawa Analysis by Chris Kornman

I made a [small modification to Jen's 5:15 profile](#) by reducing the airflow at the beginning of the roast to the minimum setting on our Ikawa. I thought that this might reduce the warmup time (a practical concern, rather than a scientific interest, I must admit). It did not. It did accomplish two minor changes. First, it increased the time the green coffee was in contact with the metal; the fan wasn't powerful enough to even move the coffee for the first 15 or 20 seconds of the roast. It also lowered the turnaround temperature to about 40 degrees below the programmed setpoint, and about 20 degrees below the usually measured actual temperature of that turnaround. Regardless, the coffee showed up mild and sweet, lacking the hallmark "processing" flavor of decaffeination and instead offering up mild floral and stone fruit flavors we were happy to enjoy.



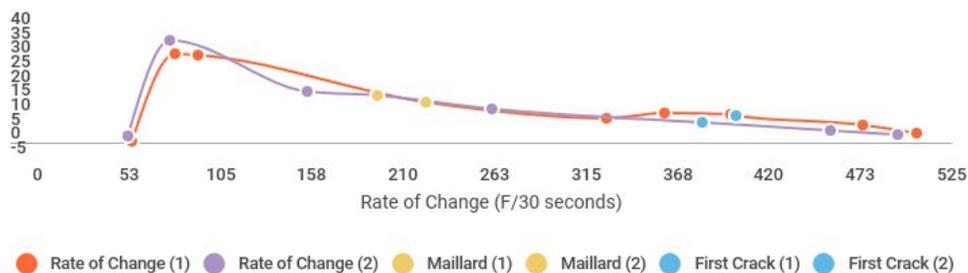
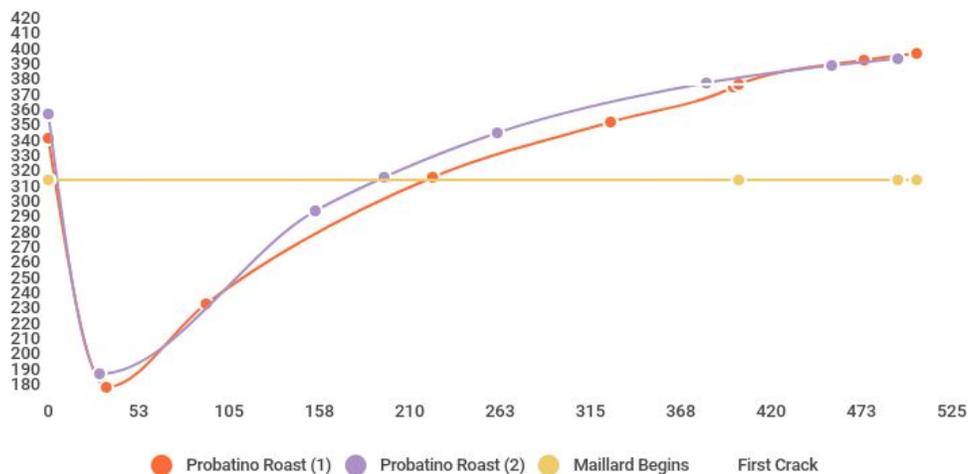
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Roast Analysis by Jen Apodaca

The Ikawa roast that Chris did was very sweet and floral. I knew that it would be easy to create a profile with an emphasis on sweetness, but was unclear in the correct approach to maximize the Ethiopian floral nature of this coffee. I decided to do two roasts with very similar end times and end temperatures. Probatino Roast (1) had a lower charge temperature and I used heat application to propel the roast forward with an extended drying time being the key focus. This water processed decaf, cracked extremely early for the Probatino at 383.0°F, which is 10-15°F sooner than most caffeinated coffees that I roast with the same profile. With that in mind, I used my typical temperature mark for Maillard Begins around 320 °F, although I suspect it may have happened sooner. There is no visual yellowing with decaf, so this metric is not verified.

Probatino Roast (2) had a reduced drying stage and the made up time was distributed among both the Maillard stages and the post crack development to achieve roughly the same total roast time. While Probatino Roast (1) was very bright and floral, Probatino Roast (2) displayed more dried fruit notes and sugar browning flavors. Both roasts had floral and citrus flavors that you would expect from a Guji Natural. This coffee is easily a VIP in my book and can handle a multitude of profiles.





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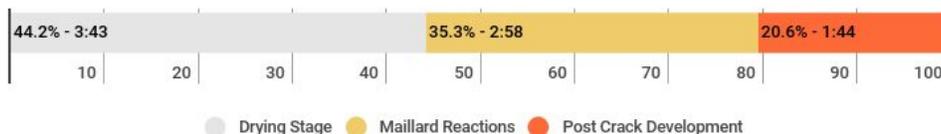
Probatino Roast (1)

First Crack 6:41 @ 383.0°F

End of Roast 8:25 @ 403.4 °F

12.1% loss Colortrack: 67.60 whole bean/ 61.62 ground sample

tasting notes: cherry, orange, pink peppercorns, floral



Probatino Roast (2)

First Crack 6:22 @ 383.6°F

End of Roast 8:14 @ 399.9 °F

11.8% loss Colortrack: 68.81 whole bean/ 60.64 ground sample

tasting notes: apricot, pear, chocolate, creamy



Behmor Analysis by Evan Gilman

Unless otherwise noted, I follow a set standard of operations for all my Behmor roasts. Generally, I'll use the 1lb setting, manual mode (P5), full power, and high drum speed until crack. [Read my original post and stats here.](#)

Decaf Crown Jewels have been few and far in between, so I was happy for the chance to roast [this coffee](#) in the Behmor. During selection, this decaf Guji was the clear favorite of many decaf lots for its bright fruitiness and clean finish.

The character of this coffee was maintained through the roast, which happened to be lighter than I anticipated. As I mentioned in the [analysis for CJ1192](#), I attempted to roast a bit darker for this week's coffees. However, the signals this coffee gave me were rather premature - it cracked earlier than usual, and the smoke emanating from the machine had me second guessing as to when to drop the batch.

The result was delicious, though my roast was certainly underdeveloped for my palate (speaking for myself here). The ColorTrack numbers backed up my experience of this coffee - the whole bean numbers indicated a much darker coffee than the ground sample, meaning that the inside of the bean was less developed than the outside. I would suggest approaching this coffee gently, preparing for a longer roast cycle, and not being distracted by any early pops you might hear. Hang on tight through the smoke, you'll make it!



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Brew Analysis by Sandra Loofbourow

Before getting to deep into the complexities of this coffee, I'd like to make something absolutely clear: this doesn't taste like decaf. On the cupping table, I would regularly forget that there was a decaf being analyzed. Rather than tasting the processing the coffee had gone through, all I detected was the funky sweetness of a superb dry-processed Guji.

I hoped that the V60 would create a super clean cup for all the ripe fruit flavors to shine through. Starting with my usual grind size for this coffee (8 on the EK43), I did careful 50g pours with the Fellow Stagg kettle, maintaining the water line as best I could. I shouldn't have been surprised by the long drainage time - Mountain Water Process coffee tends to create a sludgy brew bed that slows down the brew significantly. The cup had a lot of sweet citrus tropical fruit, but also featured a cooling, piney effect that warned me of over extraction.

I coarsened the grind a full notch; I was already achieving high extractions and had a feeling that the drainage would extend contact time and therefore maintain high extractions even with the coarser grind. Sure enough, TDS and extraction percentage remained high, though both decreased by nearly an entire point. I was unable to mark a change in brew time because the scale died mid way through the brew. However! Since I was using careful 50g doses, I was able to move quickly to a new scale and still add the correct amount of brew water, saving the final cup - one more reason to brew carefully and methodically. This cup had more florality, as all my cuppers noted, along with vanilla, maple, and clove sweetness it lacked the cooling effects of the first cup.

I know a lot of cafes that offer decaf exclusively on espresso, and since we tend to offer only one decaf option at a time it's got to taste delicious across various brew methods. As an espresso shot, this natural processed Guji presented amazing Heath bar and strawberry ice cream notes, but had more of a chocolate and nut butter base than sweet fruit. Delicious, to be sure, but I also knew I could pull more out of this coffee. At a 1:2 extraction I found it to be silky, nougatty, full of pralines and sweet strawberry or cherry candy as well as a long lasting floral finish. Someone claimed that I was pulling a "barista shot", one that's too exciting to make for easy drinking, but I didn't care. This coffee is damned delicious and dialing it in was tons of fun.

Roast	Method	Grind (EK43)	Dose (g)	H2O (g)	Ratio	Preinfusion (g)	Preinfusion (s)	Time	TDS	Ext %
Probat 1	V60	8	25	400	1:16	50	30	4:20	1.39	23.55
Probat 1	V60	9	25	400	1:16	50	30	X	1.31	22.20
Probat 2	GS3	Mazzer	16.2	33.2	1:2	-	-	00:40	9.51	20.30