PUCK PREPARATION

WDT – VERTICAL TAPS – HOG TOOL

THE FORCE TAMPER – BLOOMING SHOTS – DECENT ESPRESSO V1.1

STÉPHANE RIBES – JUNE 2020

PUCK PREPARATION TECHNIQUES COMPARISON MAIN FINDINGS (JUNE 2020)

- With the tested setup and blooming extraction profile, the best and **most consistent results** were obtained when the 2 below techniques were combined:
  - ✓ **Weiss Distribution Technique** in the complete height of the puck, with a home-made tool (0.4 mm needles)
  - ✓ **Gentle vertical taps** before tamping

- The use of a **Hog tool** (95 spikes of 0.8 mm diameter) after WDT + gentle taps, right before tamping, had a big impact on the extraction dynamics – **faster wetting** of the coffee puck and **higher resistance** during extraction – and on the taste profile of the resulting espresso shots: **increased sweetness and fruity acidity**

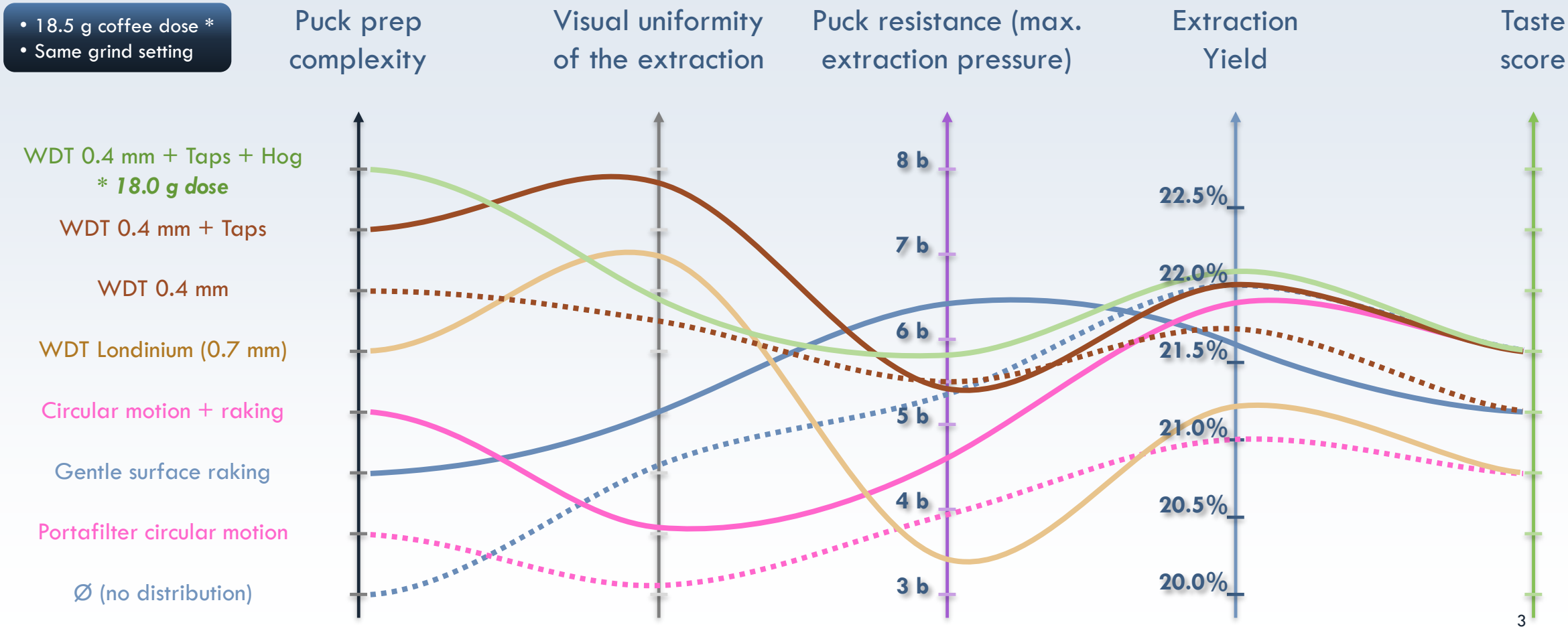
- **No distribution** in the filter basket has sometimes produced tasty shots and high extraction yield values, but **less consistency** than the other best preparation methods tested

- The visual uniformity of the extraction did not always correlate with taste results, or extraction yield values

- The worst tasting shots had the weakest extraction yield values, the best ones the highest EY

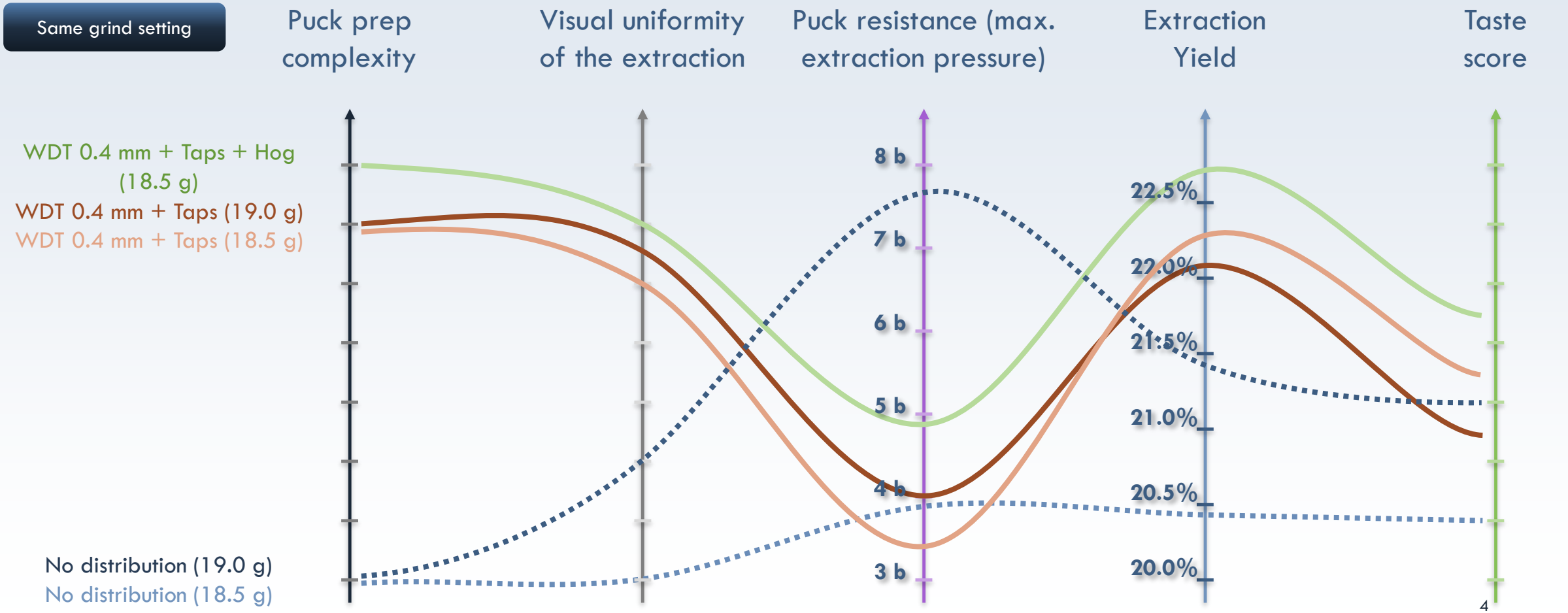
PUCK PREPARATION TECHNIQUES COMPARISON
13/06/2020 TESTS

- 18.5 g coffee dose *
- Same grind setting



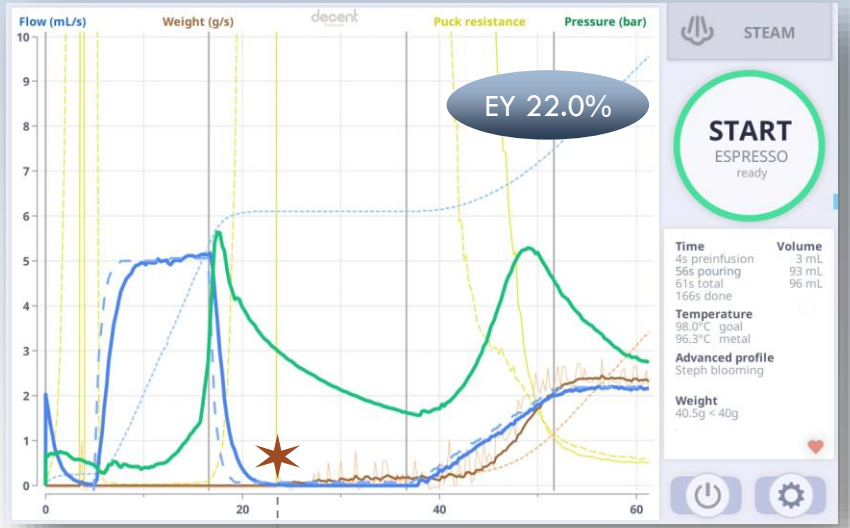
PUCK PREPARATION TECHNIQUES COMPARISON 23/06/2020 TESTS

Same grind setting

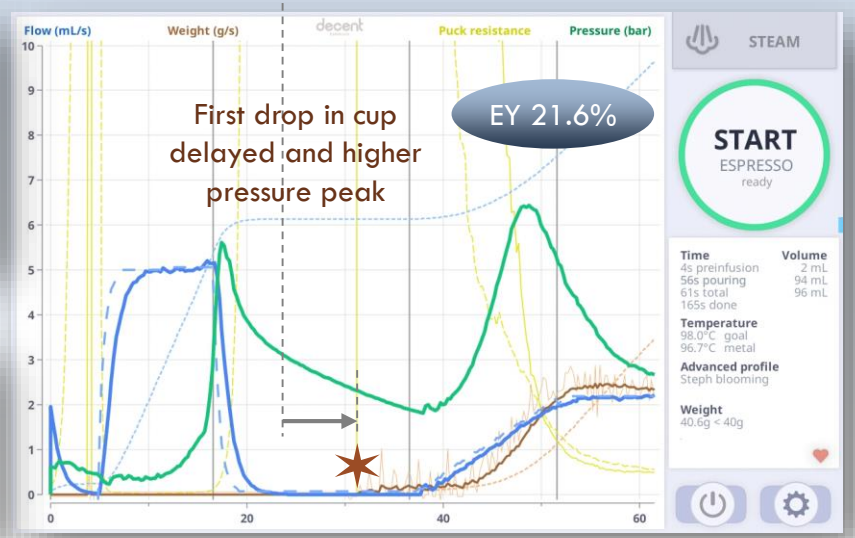


PUCK PREPARATION – 13/06 TESTS (1/4)

No distribution before tamping

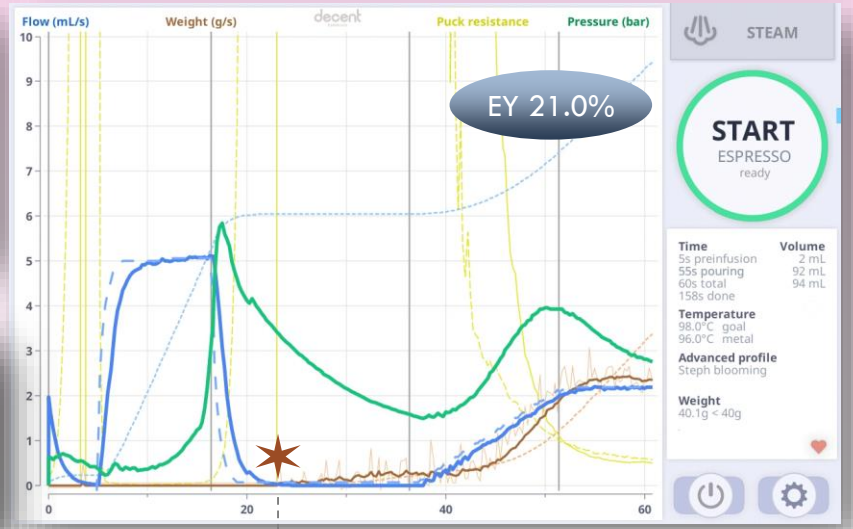


Gentle surface raking with a WDT tool (0.4 mm needles x3)

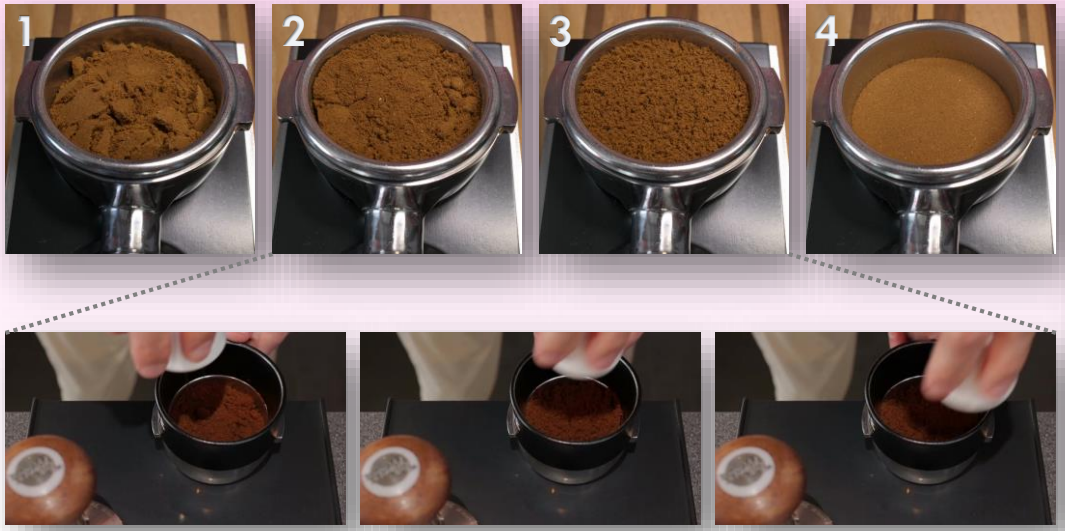


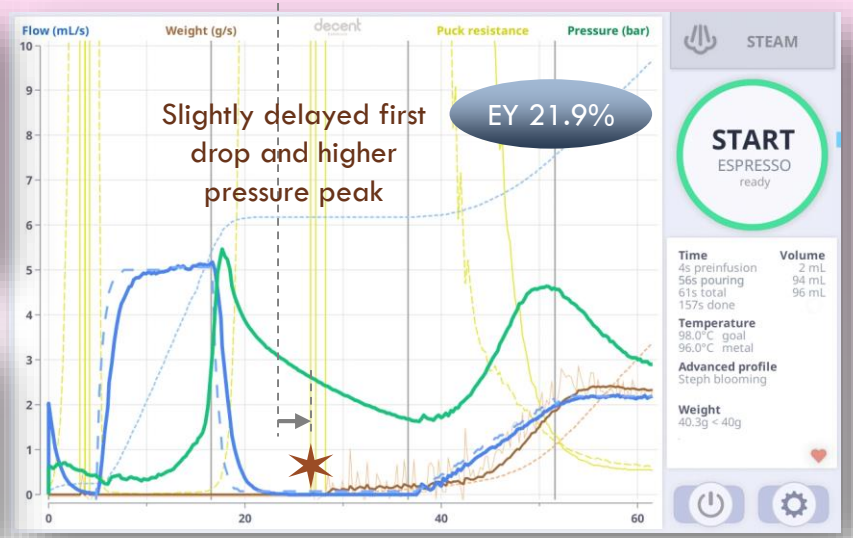
PUCK PREPARATION – 13/06 TESTS (2/4)

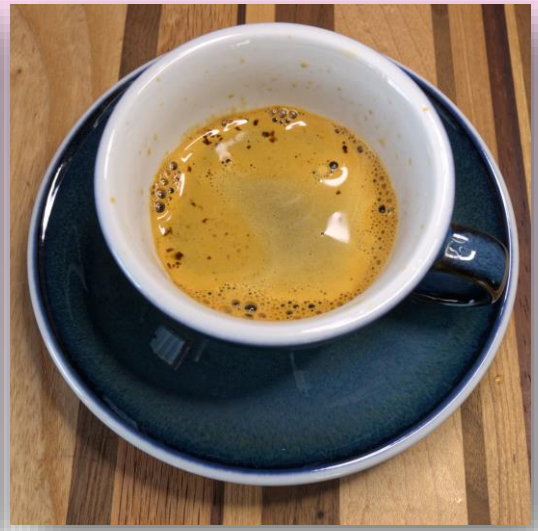
Circular motion of the portafilter



Circular motion + gentle surface raking with a WDT tool (0.4 mm needles x3)

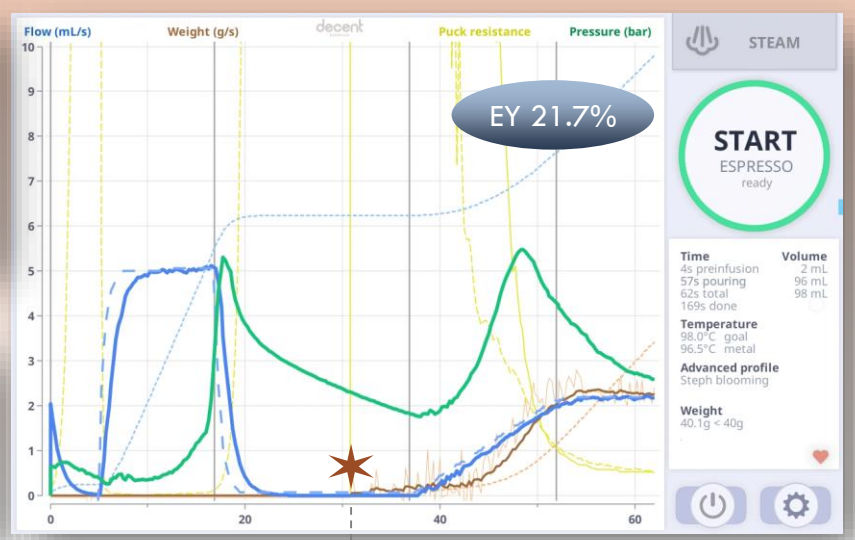




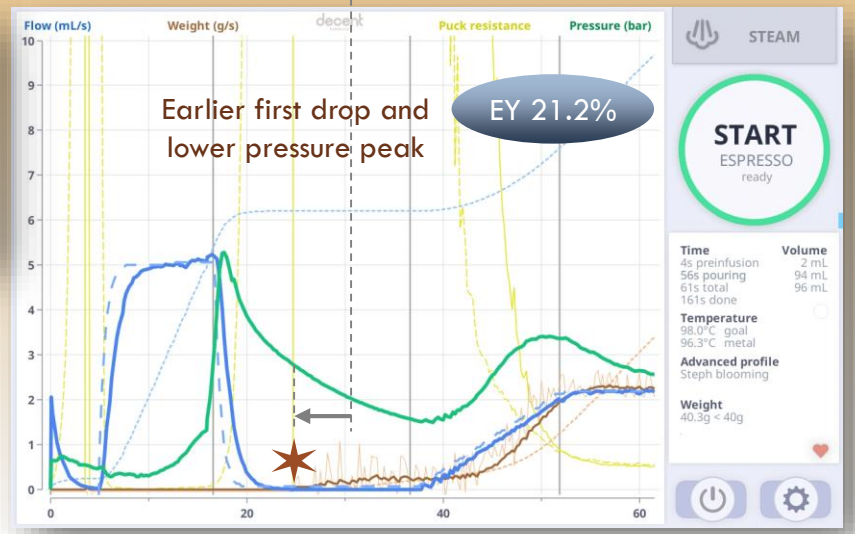


PUCK PREPARATION – 13/06 TESTS (3/4)

Weiss Distribution Technique (entire puck height) – Home-made tool with three 0.4 mm needles

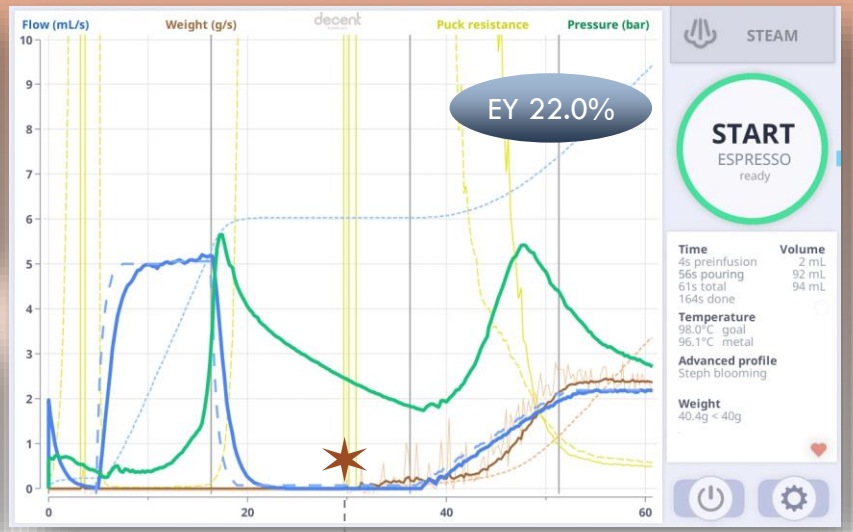


Weiss Distribution Technique (entire puck height) – Londinium tool

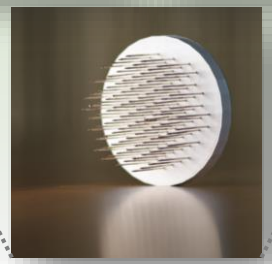


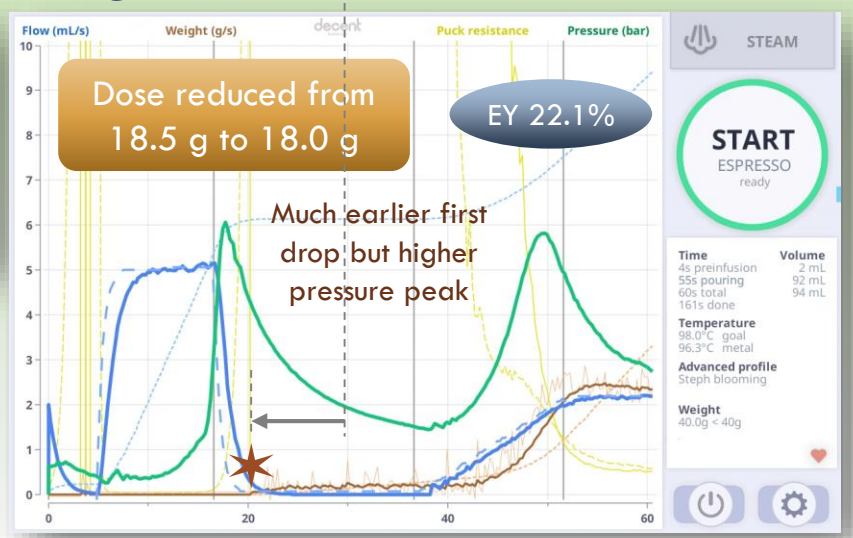
PUCK PREPARATION – 13/06 TESTS (4/4)

WDT with 0.4 mm needles + Gentle vertical taps (x10)



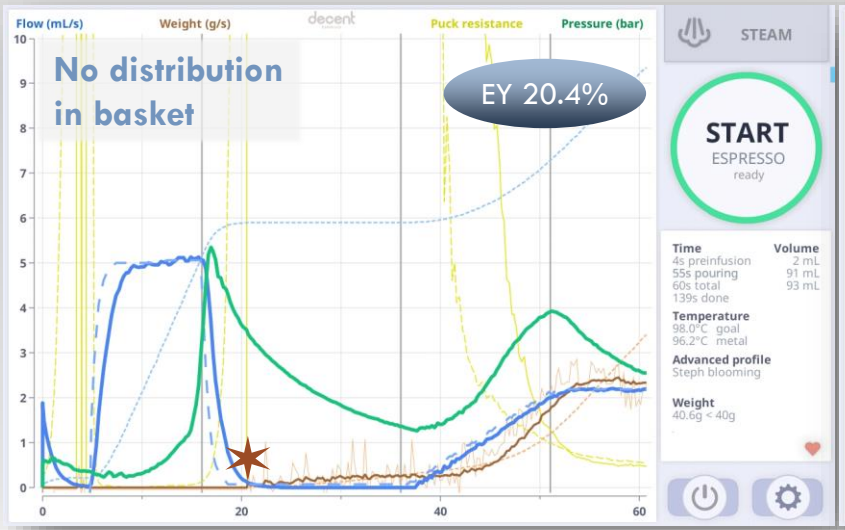
WDT with 0.4 mm needles + Gentle vertical taps + Thin hog tool

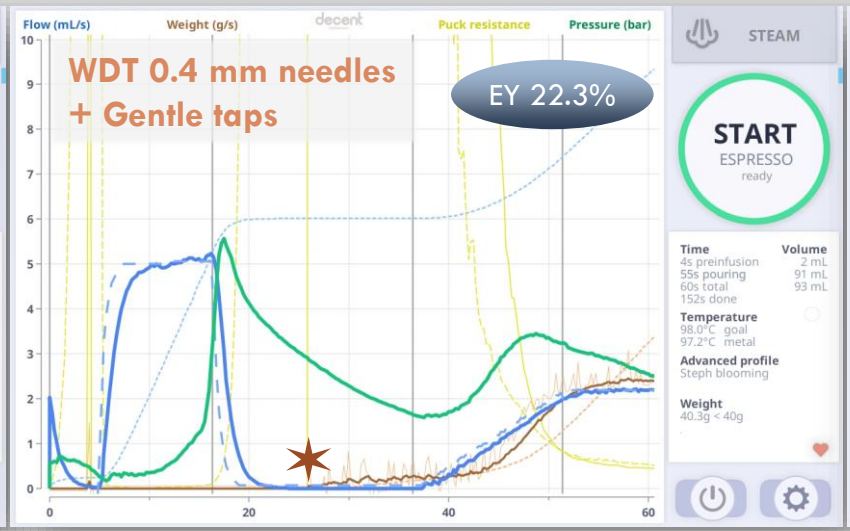


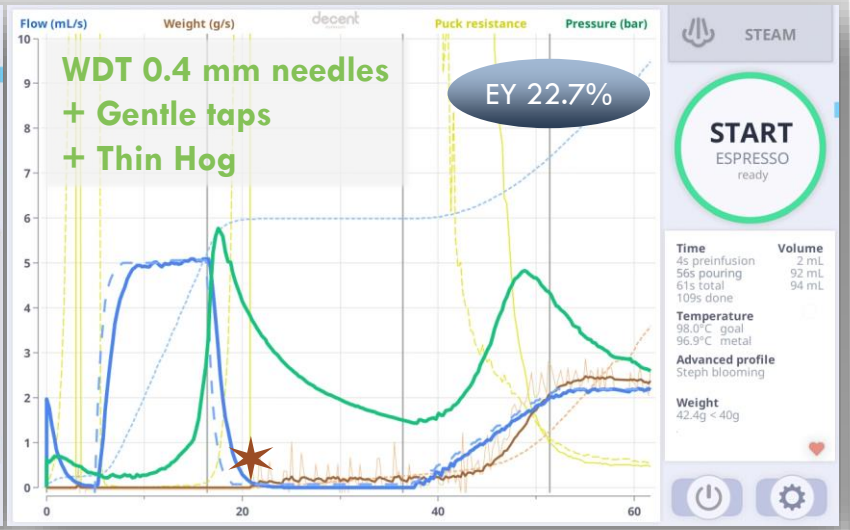


PUCK PREPARATION – 23/06 TESTS (1/2)

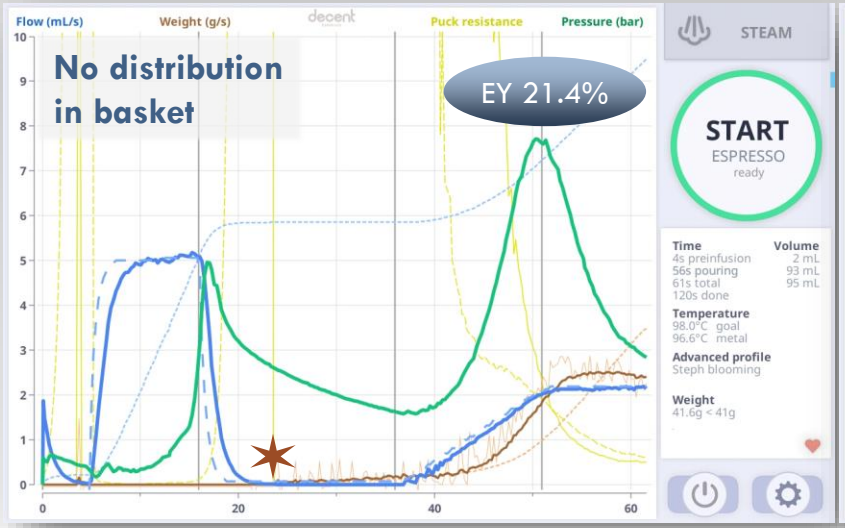
18.5 g coffee dose

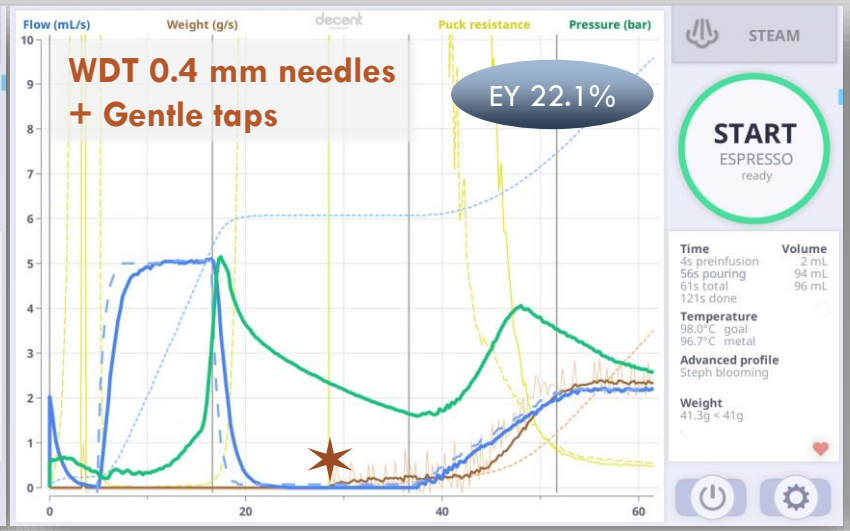






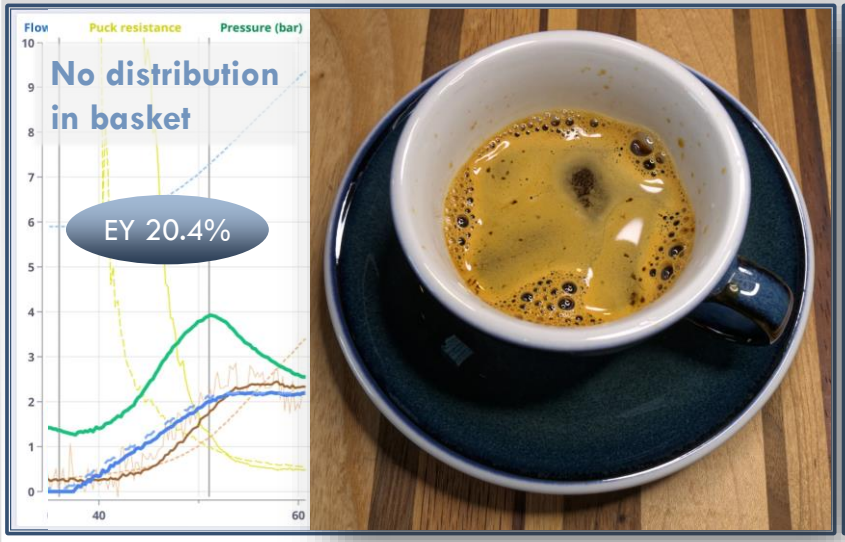
19.0 g coffee dose

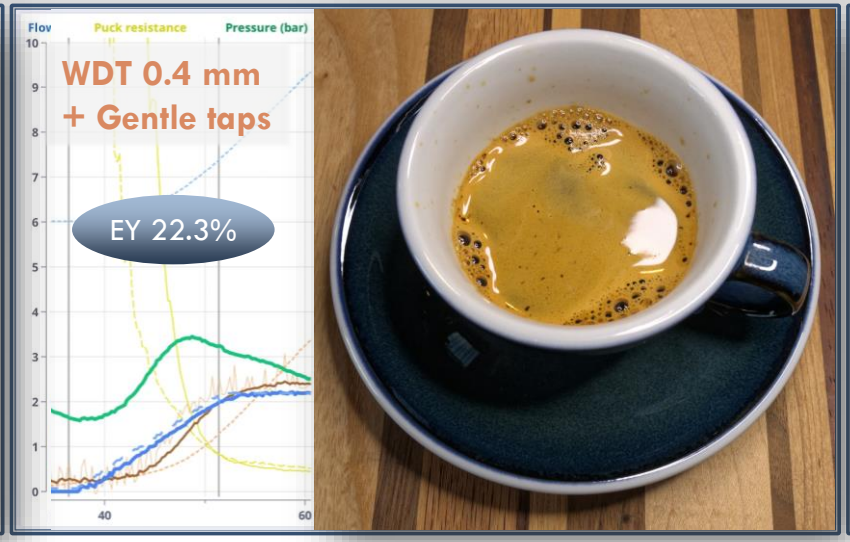


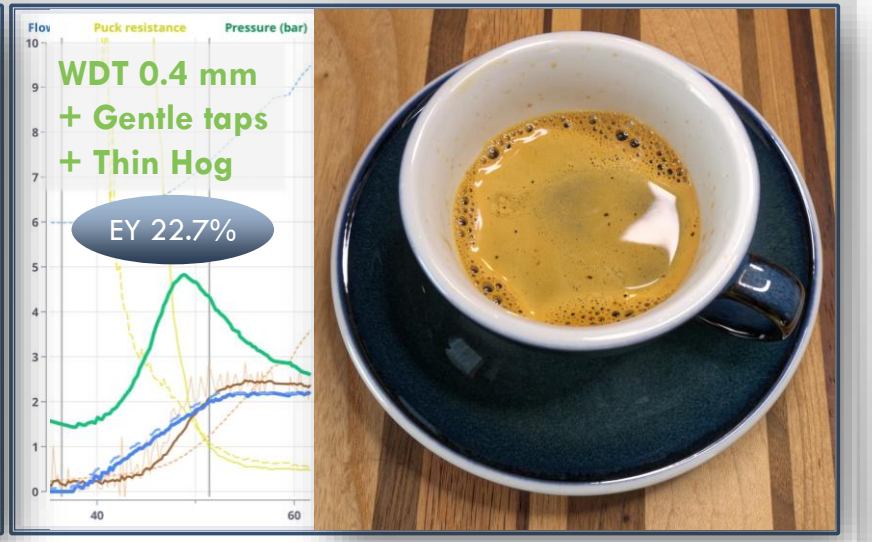


PUCK PREPARATION – 23/06 TESTS (2/2)

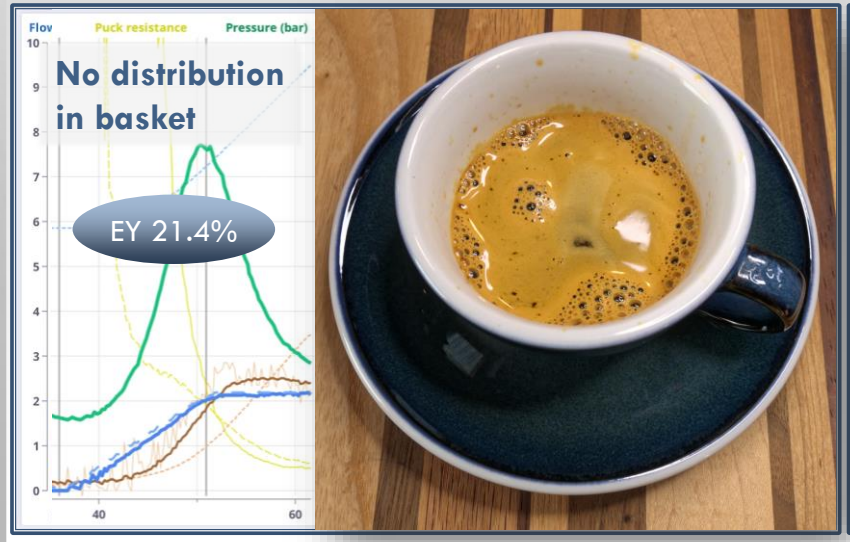
18.5 g coffee dose

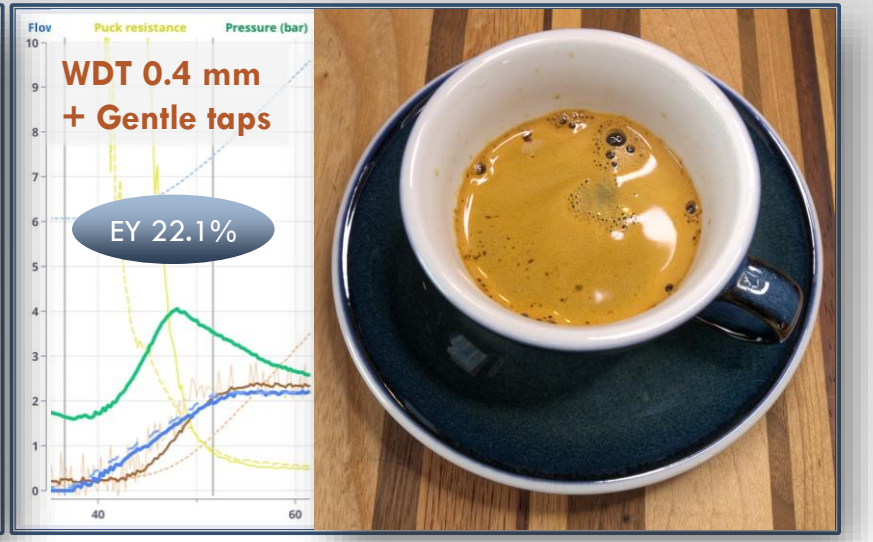






19.0 g coffee dose





PUCK PREPARATION TEST PROTOCOL

- **Decent Espresso Machine DE1PRO v1.1** with a (red) Cafelat 8.0 mm silicone gasket
- IMS SI 200 IM shower screen

- Mahlkönig EK43 S grinder – SSP burrs "High Uniformity" with Silver Knight coating

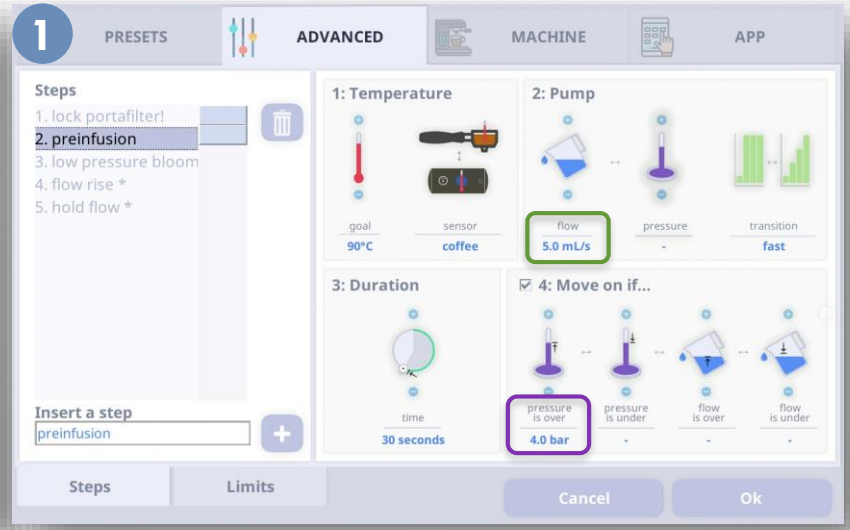
- Montille water (Le Mont Dore, France) – **adjusted to 40 ppm eq. $CaCO_3$ alkalinity and 90 ppm eq. $CaCO_3$ total hardness,** with sodium carbonate and Epsom salts

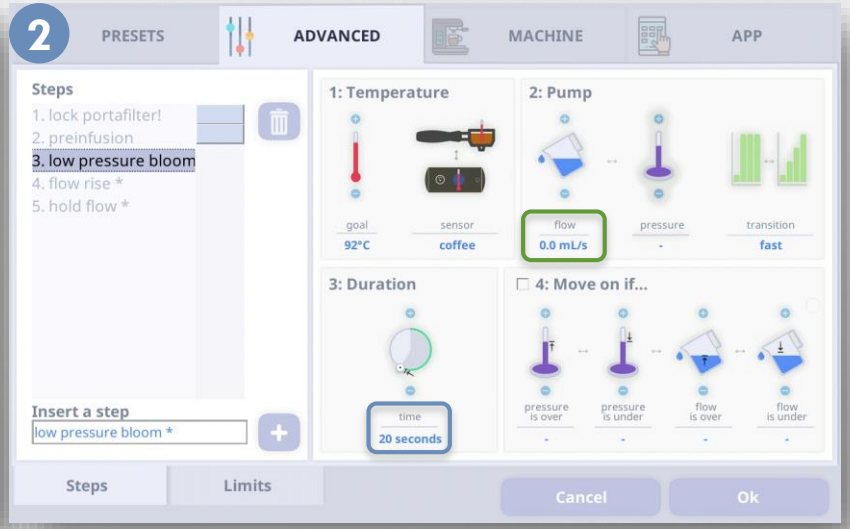
- Portafilter pre-heating: 80°C in a kettle
- Complete drying of the basket and shower screen before each shot, with a clean tissue

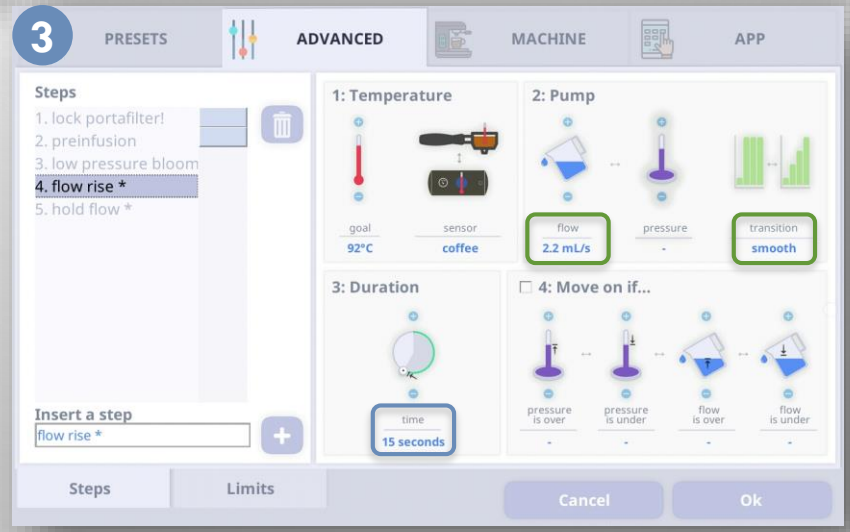
- Single dosing of the beans, ground frozen in a double walled stainless steel cup
- Same grind setting for all shots (EK1.7)
- VST 22g (ridgeless) filter basket
- 18.5 g dose (unless otherwise mentioned) and target brew ratio of 1:2.2
- **The Force Tamper with a 58.5 mm smooth flat base** – Standard spring compression: 24 lbs

- TDS measurements: Atago PAL zeroed with adjusted Montille water – no filtering of the coffee samples – all samples measured at room temperature after vigorous stirring
  1 data point = average of 3 to 5 measurements of each coffee sample

20 SEC BLOOMING AND SLOW RAMP (15 SEC) 2.2 ML/S EXTRACTION







- Slightly adapted blooming profile
- The initial step “lock portafilter!” is optional: it prevents exposure of the coffee puck to the hot machine environment during the final warm-up of the brew water