

ESPRESSO EXTRACTION RADIAL UNIFORMITY

BPLUS CONTACT SCREEN

RADIAL UNIFORMITY OF ESPRESSO EXTRACTIONS TEST PROTOCOL



EY puck
outside

EY puck
middle

EY puck
centre



EY
espresso

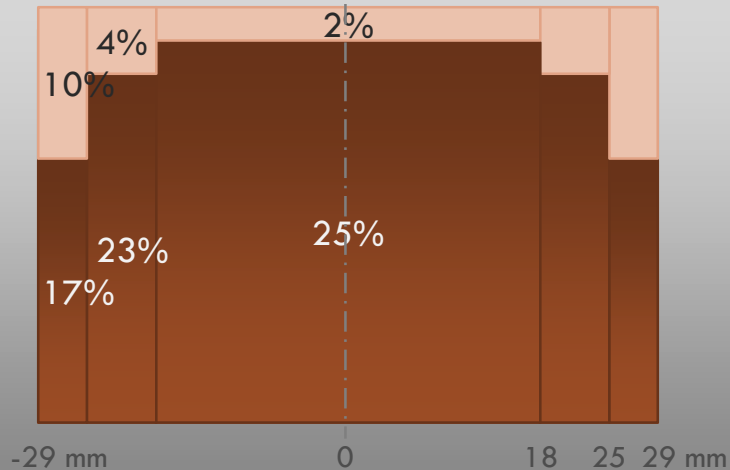
*Extraction Yield (EY) values
determined with TDS measurements*

BPLUS CONTACT SCREEN – VST FILTER BASKET

No contact screen



Extraction yield radial distribution

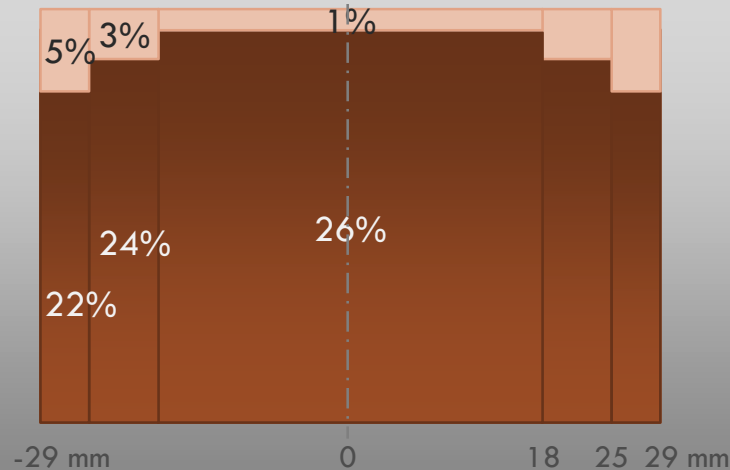


Shot EY: 22%

BPLUS contact screen above the puck



Extraction yield radial distribution



Shot EY: 24%

- Without the BPLUS contact screen, the extraction of the outer grinds of the puck (ca. 30% of the total dose weight) is **limited to 2/3 of the extraction of the center grinds**
- With the BPLUS contact screen **the extraction is more uniform**
- This results in a **significant increase in the average extraction yield (22% → 24%)**

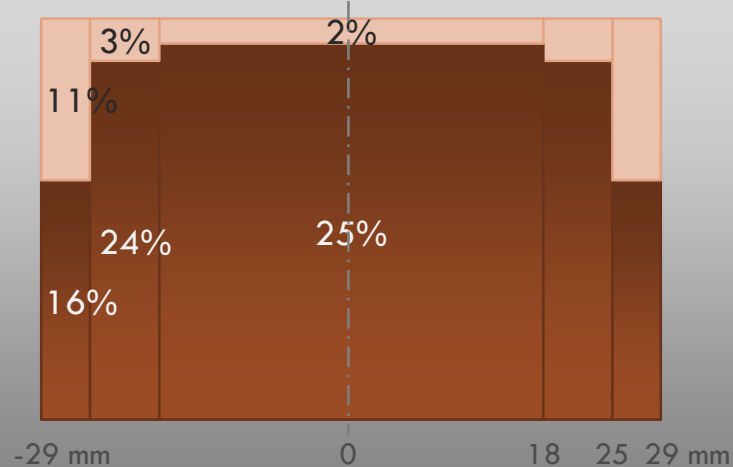
*Same grind setting for all shots (Ultra 2.0)
19 grams dose in a 20g VST basket
Bravo Tamper, Flat base, 58.5 mm
1:2.0 brew ratio*

BPLUS CONTACT SCREEN – PULLMAN FILTER BASKET

No contact screen



Extraction yield radial distribution

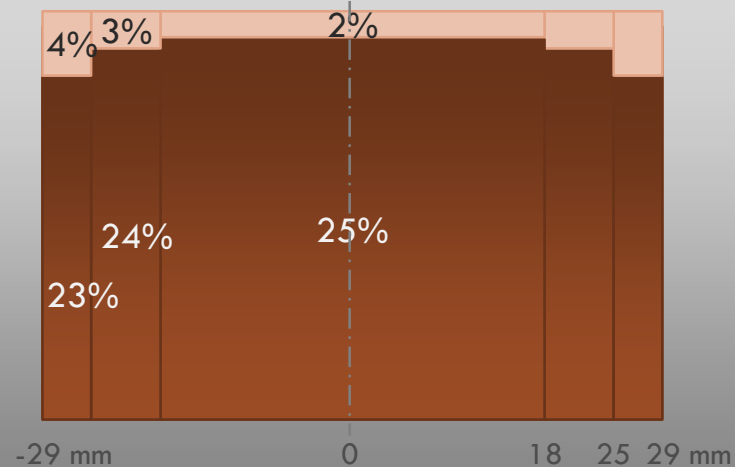


Shot EY: 21%

BPLUS contact screen above the puck



Extraction yield radial distribution



Shot EY: 24%

- Without the BPLUS contact screen, the extraction of the outer grinds of the puck (ca. 30% of the total dose weight) is **limited to 2/3 of the extraction of the center grinds**
- With the BPLUS contact screen **the extraction is more uniform**
- This results in a **significant increase in the average extraction yield (21% → 24%)**

*Same grind setting for all shots (Ultra 2.0)
19 grams dose in a 20g Pullman basket
Bravo Tamper, Flat base, 58.5 mm
1:2.0 brew ratio*

BPLUS RADIAL EXTRACTION UNIFORMITY TEST PROTOCOL

- **Decent Espresso Machine DE1PRO v1.1**, S22A Ultem prototype shower, IMS CI 200 IM shower screen (protrusion into the basket: 9.6 mm)
- Easy Blooming extraction profile (90°C – bloom exit pressure: 2.5 bar – 7.5 bar max extraction pressure)
- **Levercraft Ultra Grinder** – SSP High Uniformity blind burrs with Red Speed coating 100 RPM – Grind setting 2.0 (100 microns above burrs touching)
- Montcalm water (Pyrenees, France) - 4 ppm eq. CaCO_3 alkalinity and 10 ppm eq. CaCO_3 total hardness
- Portafilter and basket 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 frozen beans ground into the filter basket (with a Decent funnel) – **19g of ground coffee**
- **WDT** in the basket with a Levercraft WDT tool (8 needles of 0.4 mm diameter), raking with a BPLUS stirrer
- SworksDesign **PorcuPress v1** – standard density hex insert (109 needles of 0.8 mm diameter)
- **Bravo Tamper**, flat base, 58.5 mm diameter, 26 lbs tamping force, light polishing when the contact screen is not used
- TDS measurements: Atago PAL zeroed with Montcalm 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

