Mill Extraction from the Pol Balance

Pol % cane, pol in mixed juice and in bagasse % cane, and mill extraction from mixed juice and bagasse quantities and their pol.

Method: Sugar factory chemical control (daily manufacturing report) definitions; as compiled in SugarProcessTech; ...

Input parameters

Unit system: SI

Parameter	Value	Unit
Mixed juice % cane (net, after the drit correction)	105.00	%
Pol % mixed juice	12.500	%
Bagasse % cane	29.000	%
Pol % bagasse	1.8000	%

Calculated results

Parameter	Value	Unit
Pol in mixed juice % cane	13.125	%
Pol in bagasse % cane	0.52200	%
Pol % cane (by balance)	13.647	%
Mill extraction (pol in juice / pol in cane)	96.175	%

Notes for this case

- Use net mixed juice (after the drit correction) for mixed juice % cane.

Formula and method

$$Pol_c = Pol_{MJ}\,MJ + Pol_B\,B, \quad ME = \frac{Pol_{MJ}\,MJ}{Pol_c}$$

Variables

MJ	Mixed juice % cane	-
Pol_{MJ}	Pol % mixed juice	-
B	Bagasse % cane	-
Pol_B	Pol % bagasse	-
$Pol_{MJ,c}$	Pol in mixed juice % cane	-
$Pol_{B,c}$	Pol in bagasse % cane	-
Pol_c	Pol % cane	-
ME	Mill extraction (pol in juice / pol in cane)	-

Method and standards

Pol balance over the mill.

Assumptions and limits

- Steady crush; pol by routine methods.
- Mixed juice must be the net weight after the drit correction; gross juice overstates pol % cane and extraction.
- Pol % cane here is by balance, not by direct cane analysis.

References

- Sugar factory chemical control (daily manufacturing report) definitions
- as compiled in SugarProcessTech
- Formulas for calculating sugar industry DMR

Report details

Report reference	FCC-EFDB-83Z4 (the same inputs always give the same reference)
Generated	17 November 2026, 19:49 UTC
Calculator	Mill Extraction from the Pol Balance
Method last reviewed	13 November 2026
Software release	FireCAD Calc, release of 17 November 2026
Release checks	2 reference cases of this calculator, computed independently, are checked on every release

Results are for engineering estimation. Verify critical designs against the referenced standards and your own data.

This calculator online

https://calc.firecad.com/sugar-ethanol/milling/mill-extraction-pol-balance

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.