Sugar Factory Pol Balance and Unknown Losses

Pol in sugar % cane, total, determined and unknown losses from pol % cane, the losses in bagasse, filter cake and final molasses, and sugar made.

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

Input parameters

Unit system: SI

Parameter	Value	Unit
Pol % cane	13.500	%
Pol in bagasse % cane	0.52000	%
Pol in filter cake % cane	0.080000	%
Pol in final molasses % cane	1.4500	%
Sugar made % cane	11.200	%
Pol % sugar	99.700	%

Calculated results

Parameter	Value	Unit
Pol in sugar % cane	11.166	%
Total losses % cane	2.3336	%
Determined losses % cane	2.0500	%
Unknown losses % cane	0.28360	%

Formula and method

$$L_t = Pol_c - Pol_S\,R, \quad L_u = L_t - (L_B + L_{FC} + L_{FM})$$

Variables

Pol_c	Pol % cane	-
L_B	Pol in bagasse % cane	-
L_{FC}	Pol in filter cake % cane	-
L_{FM}	Pol in final molasses % cane	-
R	Sugar made % cane	-
Pol_S	Pol % sugar	-
$Pol_{S,c}$	Pol in sugar % cane	-
L_t	Total losses % cane	-
L_d	Determined losses % cane	-
L_u	Unknown losses % cane	-

Method and standards

Pol balance.

Assumptions and limits

- Same basis for all terms.
- Negative total losses (more pol in sugar than in cane) and negative unknown losses are flagged.

References

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

Report details

Report reference	FCC-DRT2-CE52 (the same inputs always give the same reference)
Generated	17 November 2026, 19:50 UTC
Calculator	Sugar Factory Pol Balance and Unknown Losses
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/chemical-control/sugar-pol-balance-losses

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.