

PRODUCTION & PACKAGING · V5 ULTIMATE

Adjust the quantity, show the working, check it backwards.

A worksheet for formulation, quality and production teams: agree which lot factors adjust a formula quantity, work out the quantity to weigh, check it backwards, and decide what happens when a value is missing.

FACTOR DECISIONS

CALCULATOR

BACKWARDS CHECK

MISSING VALUES

Agree the factors first

Write these down with quality before any calculation is configured.

CHECK	DECISION	OK?
Factors	Which lot factors adjust which formula lines (for example assay, loss on drying)	_____
Basis	The basis each factor is reported on (as is, dried, anhydrous); apply LOD only to convert a dried-basis value, never twice	_____
Order	The order factors are applied, written down once	_____
Source	Where each lot value comes from and who confirms it	_____
Rounding	Carry full precision; round only the final quantity to the scale	_____

Quantity to weigh

Each factor has its own operation on its stated basis. In the worked example: ÷ dried-basis assay, then ÷ (1 – LOD) to convert dried to as-is. Overage and other factors follow your formula; there is no single rule.

LINE	FORMULA QTY	ASSAY %	LOD %	QTY TO WEIGH	BACKWARDS CHECK
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

ILLUSTRATIVE EXAMPLE · INVENTED NAMES AND VALUES

STEP	WORKING	RESULT
Formula quantity (active)	as stated	20.000 kg
Assay 97.5 % (dried basis)	$20.000 \div 0.975 =$ dried mass	20.513 kg
LOD 1.2 % (dried → as-is)	$20.513 \div (1 - 0.012)$, full precision carried	20.762 kg
Backwards check	$20.762 \times 0.988 \times 0.975$	≈ 20.000 kg (rounded)

Fictional work order **WO-0151**, Material B, lot L-0940. **Worked assumption:** the assay is reported on the dried basis, and LOD is the separate correction from dried to as-is material. An assay already reported as is is not corrected by LOD again. With LOD only (assumes no assay factor applies to this material): $20.000 \div 0.988 = 20.243$ kg. Whether another line is reduced to keep batch mass is a formula decision.

When data is missing or late

Agree these rules before the first adjusted dispense.

- ☐ A missing value is never assumed to be 100 %
- ☐ Who may enter or correct a lot value
- ☐ What happens if a result arrives after dispensing
- ☐ How the working is shown to the reviewer
- ☐ Who approves an exception

WHERE V5 FITS

- Formulas and production instructions are maintained in V5; dispensing is recorded against each lot.
- Whether adjusted targets are calculated in V5 for your formulas depends on set-up; confirm the factors you need with us.
- People review the working and sign; V5 does not decide specifications.
- Limit: available workflows depend on production configuration and user permissions.

Check your factors with us

Tell us which factors adjust your formulas and we will talk through how that would be set up in V5.

TALK TO US →

Opens the contact form on
v5ultimate.com

A planning aid, not a specification, offer or quote. Examples are illustrative, not customer data or results. Which V5 capabilities are on your plan, and how they are configured, is confirmed with you. © 2026 SG Systems Global.