

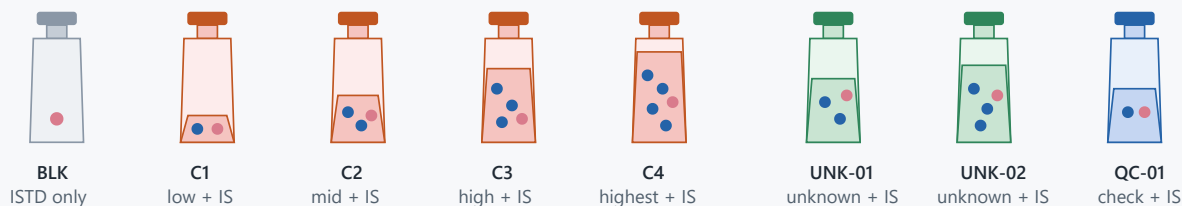
ISTD initial calibration

Internal standard, ratios, dose IS.

Internal standard. Every bottle that you intend to quantitate carries the **same known ISTD spike**. The curve is built from **ratios**, so a weak injection moves both peaks together and still lands on the line.

ISTD □ same spike in every bottle

Pink drop = ISTD at dose IS. Blue drops = target. The curve uses response ratio vs concentration ratio.



● ISTD amount is the same known spike in every vial (method dose IS). A missing ISTD peak flags the bottle.

On the Quant, set ISTD to the ISTD analyte (Analyte|Quant when several QntKeys exist). ISTD analytes themselves fit average response factors. Per-sample ISTD concentration can override the method IS dose on that bottle.

Blank, multi-level cals, samples, and QC, each with a pink ISTD drop

When to use it

- Recovery, evaporation, or injection volume varies.
- You spike the same ISTD (or a labeled analog) into blanks, cals, QCs, and samples.
- You still want one global curve (**Initial calibration**).

Set it up

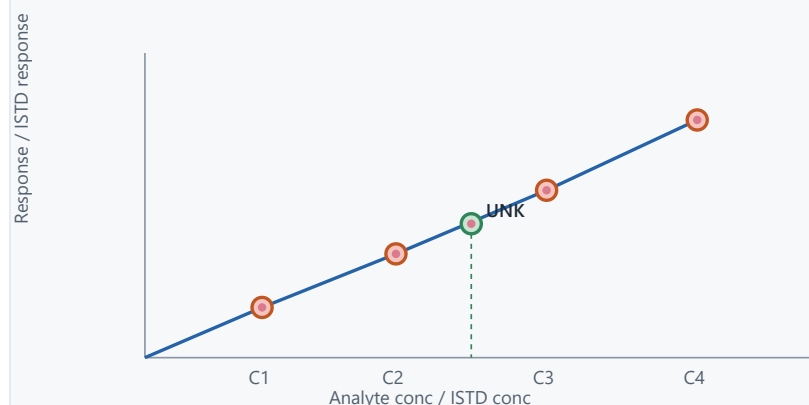
1. Create the **ISTD** analyte (type **ISTD**) and its Quant.
2. Create the target analyte (type **Target**). On its Quant, set **ISTD** to that ISTD Quant. When several QntKeys exist, the cell shows `Analyte|Quant`.
3. Keep the reserved dose name **IS**. Put the spike concentration on the ISTD analyte (and on the target if you override per bottle).
4. Create **C1...C5** (or your levels) for the **target** only. Those are the curve levels.
5. Spike ISTD into every bottle you will read. Mark cals with Dose **C1...C5**. The ISTD amount stays **IS**.
6. **Analyze**.

A blank in ISTD work usually still has the pink drop. It should show ISTD and no target.

How the curve is read

ISTD curve □ ratios, not raw areas

A weak injection shrinks both peaks. The ratio stays on the curve.



Each point is a pair

$$X = C_{\text{analyte}} / C_{\text{ISTD}}$$

$$Y = R_{\text{analyte}} / R_{\text{ISTD}}$$

C_ISTD comes from dose IS or a per-sample override.

If ISTD response is missing, the bottle cannot be read on an ISTD quant.

Ratio curve: analyte over ISTD on both axes

Axis	Value
X	Target concentration ÷ ISTD concentration
Y	Target response ÷ ISTD response

Quanto resolves ISTD X and Y from the linked ISTD result in the same file (or the ISTD response stored on the calibration point). If ISTD response is missing or ≤ 0 , that bottle cannot be read on this Quant.

ISTD analytes themselves are fitted as **average of response factors**. They are the denominator, not a second target curve.

Overrides

- **Compound ISTD concentration** on a sample overrides the method IS dose for that bottle.
- Dilution divides the on-column concentrations the same way as ESTD.
- **Outlier ISTD % deviation** on the analyte flags a bottle whose ISTD response wandered.

Mixing ESTD and ISTD

One method can have ESTD quants and ISTD quants. Key Review and reports still pick per analyte. A target without an ISTD link behaves as in [ESTD](#).

Bracketing uses the same ratios; only the set of cal bottles changes. See [Bracket calibration](#).