MASS-BALANCE WORKSHEET

Ingredient Selected: ______________________________________

Audit Period: ______________ to ______________

Units of Measure: ____

Variable	Amount	Source Record
A (Beginning Inventory)		
B (Produced)		
D (Ending Inventory)		
A + B – D = C (Available Product)		
Documented Loss (Samples/Shrink/ Waste)		
C (Available Product) Adjusted		
Quantity Needed per Records		
Discrepancy		**Within documented loss tolerance?** ☐ **Yes** ☐ **No**
RESULT (check one)	☐ **Balance** ☐ **Concern**	

Instructions

Walk through the following steps to run your own internal mass-balance. Pick an ingredient you purchase in volume for a product with a known formula. If you haven't done this before, start with your highest-volume organic ingredient and a recent quarter.

1. **Select an ingredient.** Choose one used in multiple products if possible, so the exercise tests your formulations across the full product line.
2. **Define the audit period.** Align the period with your inventory cycle. Use the dates of your two most recent physical inventory counts for the ingredient.
3. **Gather inventory records.** Confirm A (beginning inventory) and D (ending inventory) come from documented physical counts, not calculated figures.
4. **Gather receiving records.** Total all purchases, returns, and transfers in during the period (B). Verify each has an invoice designating the product as organic.
5. **Apply the formula. A + B – D = C.** C is how much of the ingredient should have left inventory during the period. Pull waste logs, discard records, and sample retention records. What remains after subtracting those documented losses is the quantity that should have gone into production.
6. **Pull formulas and batch records.** Calculate how much of the ingredient each finished product should contain (formula amount per unit × units produced). Compare that to actual ingredient use from batch records. Note any discrepancy and check whether it falls within your documented process loss tolerance.
7. **Run the finished product balance.** For each product containing the ingredient: beginning finished product inventory + produced – ending finished product inventory = shipped/sold. Compare against sales records and shipping BOLs.
8. **Reconcile.** If the numbers balance, your records are mass-balance ready for this ingredient and period. If they don't, identify where the gap is and whether it can be explained by documented losses. Unexplained gaps are the thing to address before inspection.