

Normalization Summary of All Tables

Table	Normal Form	Notes
manufacturer	BCNF	Simple entity; all attributes depend only on the PK.
supplier	BCNF	Entity with alternate key; all dependencies from superkeys.
category	BCNF	PK plus unique name; no transitive dependencies.
user_account	BCNF	PK with unique username; role depends on key.
ingredient	BCNF	PK; name unique; all attributes depend on ingredient_id.
ingredient_material	BCNF	Intersection table; composite PK; qty depends on whole key.
supplier_ingredient	BCNF	Intersection; composite key defines full dependency.
supplier_formulation	BCNF	PK + logical natural key; all non-key attributes depend on formulation.
supplier_formulation_material	BCNF	Composite PK; qty depends only on entire key.
do_not_combine	BCNF	Composite key-only table; no non-key attributes.
product_type	BCNF	PK + alternate natural key; all fields depend on product type.
recipe_plan	BCNF	PK; version_number forms logical alternate key.
recipe_plan_item	BCNF	PK; (recipe_plan_id,

		step_number) logical candidate key.
ingredient_batch	BCNF	PK; lot_number alternate key; no transitive dependencies.
staging_consumption	BCNF	Now normalized with surrogate PK staging_id.
product_batch	BCNF	PK; product_lot_number alternate key; attributes depend on batch.
product_batch_consumption	BCNF	PK; qty depends only on row key.