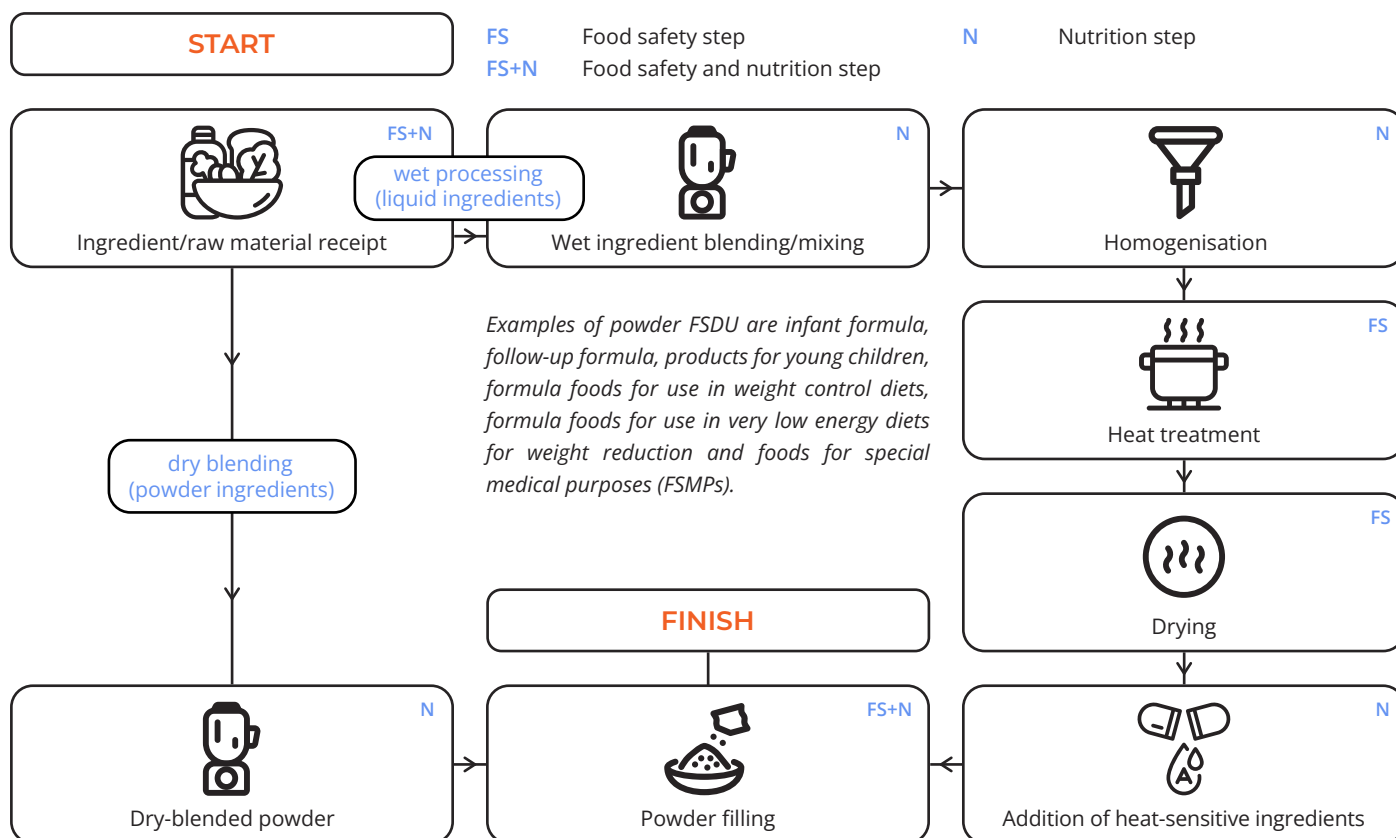


Powder FSDU Flowchart



INGREDIENT/RAW MATERIAL RECEIPT

FOOD SAFETY & NUTRITION

Raw incoming ingredients are tested to confirm they are acceptable, which could include nutritional, sensory and microbiological analyses, among others.

DRY-BLENDED POWDER

NUTRITION

When wet processing is not required, the ingredients are processed into a powder form and added to a “dry blender” to mix them until they become homogeneous. A key benefit of dry blending over wet processing is that it avoids the need for heat treatment and drying, thus helping to preserve heat-sensitive ingredients.

WET INGREDIENT BLENDING/MIXING

NUTRITION

The ingredients, including non-heat sensitive vitamins and minerals, are mixed well to ensure they are uniformly dispersed into a homogeneous wet mix. This ensures the correct amount of each ingredient is dispersed throughout the formulation.

HOMOGENISATION

NUTRITION

The liquid is pumped through a small opening under high pressure, causing the large oil particles to break up into many smaller particles that become uniformly dispersed in the mixture and are less likely to separate over time. This helps ensure a uniform distribution of nutrients in the product.

HEAT TREATMENT

FOOD SAFETY

The liquid mixture is heated to evaporate the water and concentrate the wet mix. This prepares it for the drying process and kills pathogenic and spoilage microorganisms, ensuring the product is safe for consumption.

DRYING

FOOD SAFETY

The liquid mixture is sprayed into a drying chamber, which evaporates the water very quickly to leave a dry powder. This is vital to ensure microbiological safety and quality in the final product, and to manage certain physical and sensory characteristics.

ADDITION OF HEAT-SENSITIVE INGREDIENTS

NUTRITION

Heat-sensitive ingredients that couldn't be added at the start, such as certain vitamins and minerals, are now added to the formulation and dry blended to mix them until they are homogeneously mixed within the product. This is essential to ensure that the final product is nutritionally adequate.

POWDER FILLING

FOOD SAFETY & NUTRITION

The powder is packaged to protect and maintain its safety and quality throughout the shelf-life.