

Excipients

Overview

Excipients are inert substances used in the manufacturing of supplements. They are used to give consistency or form for tableting. Vitamin tablets cannot be manufactured without excipients, they ensure quality control in the tablet manufacturing process. Tablet excipients help ensure that the bulk powder flows smoothly through the equipment, and that the tablets are of the right consistency so they will break down in your body as predicted. Tableting is a combination of science and art, it takes years of experience to master the tableting process. Some of the common excipients include: binders, fillers, lubricants and disintegrants.

Binders: Holds tablets together, prevents breakage. Substances that give cohesive qualities to powdered materials; they hold the ingredients together for tablet formulation. A common binder is cellulose.

Fillers: Allows tableting of small amounts of nutrients to be large enough to manufacture. Inert materials added to the tablets to increase their bulk, in order to make them fit a particular size tablet mold for compression. Some common fillers are calcium phosphate and cellulose.

Lubricants: Allows tablet to be ejected from its mold without fracture. Inert material added in very small amounts (usually less than 1%) to the powder blend to prevent the compressed tablet from sticking to the tablet punches and dies. Common lubricants include vegetable stearins (similar to vegetable shortening), stearic acid, and magnesium stearate.

Disintegrants: Helps the product to break up inside the digestive tract. Added to the formulation to help the tablet disintegrate after consumption, thereby releasing the active ingredients. Common disintegrants include several modified cellulose derivatives, which work by swelling when wet.

Emulsifiers: A surface-active agent that promotes the formation and stabilization of an emulsion. Helps to keep raw material in formula in suspension.

Coating: Allows for easier swallowing, prevents powdering, masks odor and offensive tastes, enhances stability (freshness).

Flavors and Sweeteners: Used to increase the palatability of certain supplements, these are used especially in chewables and sublinguals.

Below is a list of the excipients used in Our Private Label products

Excipient	use	what is it?	safety
acacia gum, aka gum arabic	used as a binder, sometimes also used as a granulating agent or a filler. used to help suspend the insoluble ingredients in a formulation	plant derived, it is a complex and variable mixture of arabinogalactan oligosaccharides, polysaccharides and glycoproteins	widely used in foods
calcium stearate	helps to ensure that ingredients flow smoothly during manufacture, may be used as an emulsifier	mineral calcium with stearic acid, which is a fatty acid that is derived from vegetable fats	widely used in foods; GRAS status
carob	a low fat alternative to cocoa powder, used as flavoring; also used to color softgels (particularly flax softgels), the purpose for this is to protect active ingredients from light	derived from the pod of locust bean (a tropical tree)	widely used in health foods
cellulose capsule (vegi-cap)	2-piece hard-shelled capsule that contains mixed powders, vegetarian alternative to gelatin capsule	derived from wood pulp	widely used in nutritional supplement industry GRAS status

citric acid	used to help protect flavors in chewables	derived from citrus foods	safe as food
croscarmellose sodium	helps ensure that the tablet will be able to disintegrate during digestion (helps to ensure proper absorption)	modified cellulose gum, cellulose is plant fiber	regarded as a non-toxic and non-irritant material
dicalcium phosphate, tricalcium phosphate	used to hold tablets together, ensures that the tablet does not break apart in the bottle; sometimes used as a source of calcium or phosphorus	inert mineral composed of calcium and phosphate; occurs in nature	widely used in foods; GRAS status
ethylcellulose	helps to improve the stability of a formulation; sometimes used to mask the taste of a tablet	fiber taken from a plant source	widely used in foods; GRAS status
food glaze	used for coating tablets	vegetable derived	widely used in foods
fructose	used as a sweetener; absorbs more slowly from the GI tract than sucrose (table sugar)	a simple sugar that occurs naturally in fruits (a monosaccharide)	naturally occurring in fruits and honey
gelatin	used for forming capsules and softgels	purified protein taken from animal collagen	widely used in foods
glycerin	serves as a preservative, may be added to provide moisture to a product; also can be used to provide a sweet flavor	occurs naturally in fats and oils	widely used in foods; GRAS status; normally consumed in the diet
glyceryl monostearate	helps ensure that the ingredients flow smoothly during manufacture, can be used as a coating to promote the stability of the product; also used to improve texture	substance derived from fatty acids of plants	widely used in foods
glycine	an amino acid sometimes used as a filler for tableting	isolated from gelatin	safe as food
guar gum	used as a thickener and stabilizer, sometimes used as a binder, also used as a source of dietary fiber	gum derived from the seeds of the guar plant, a natural polymer composed of units of sugar	widely used in foods
gum arabic	used as a binder, sometimes also used as a granulating agent or a filler	plant derived, it is a complex and variable mixture of arabinogalactan oligosaccharides, polysaccharides and glycoproteins	widely used in foods
hydroxypropyl methylcellulose	used to coat tablets, ensuring stability	fiber derived from a plant source	widely used in foods
magnesium stearate	used to help ensure that the ingredients flow smoothly during manufacturing	a combination of the mineral magnesium and stearic acid, a fat found in vegetables	widely used in foods; GRAS status
maltodextrin	used during manufacture to help ensure that ingredients flow smoothly; may be used to help stabilize a product; can serve as a thickener or improve texture; used as a nutritive sweetener	a non-fermentable sugar obtained from conr starch	GRAS status
microcrystalline cellulose	often used to hold a tablet together—ensures that the tablet does not break apart in the bottle; may also be used to help ensure that the tablet will be able to disintegrate during digestion (helps to ensure proper absorption)	a fiber derived from plant sources that has increased water solubility	GRAS status
natural colors (beet juice, turmeric, caramel, carob)	used to enhance colors of supplements	beet juice—juice of beets turmeric—spice caramel—caramelized sugar carob--bean	safe as food
natural flavors (orange, cherry, papaya, raspberry, vanilla, chocolate)	used to enhance the palatability of supplements (esp chewables), also used as a masking agent	fruit powders	safe as food

pectin	as both a thickener and an additional source of Fiber	polysaccharide derived from citrus peels	safe as food
protein hydrolysate	digestive protein	derived from protein	safe as food
rice powder, rice bran	used as filler	gluten-free flour milled from rice	safe as food
silicon dioxide	can help ensure that the ingredients don't get too sticky; used sometimes as a flavor; can be used as an emulsifier; can also be used for adding moisture to certain products	naturally occurring form of the mineral silica	GRAS status
sorbitol	used as a sweetener or a sugar substitute; may also be used to provide moisture to a product	a sugar alcohol; half as sweet as sugar	widely used in prepared diabetic foods: GRAS status
stearic acid	used as an emulsifier or a sugar substitute; may also be used to help ensure that the ingredients flow smoothly during manufacture; sometimes used as a flavoring.	a fatty acid derived from vegetable fats	widely used in foods; GRAS status
sweeteners (fructose, honey, maple crystals, molasses, sucrose, sugar)	used to enhance the palatability of supplements (esp chewables), also used as a masking agent	various food sources	safe as food
vegetable oils (olive and sunflower)	used in the manufacturing of softgels as a filler	vegetable oil	safe as food
xanthan gum	used to help stabilize a product; also may be used as an emulsifier	polysaccharide (complex sugar) produced through fermentation and purification of a carbohydrate	used in foods; GRAS status