**What to Blend: Fruit/Veggie Leaves, Skin & Seed Guideline**

With certain fruits, the skin is perhaps its most nutritious part.  With others, it’s the seeds.  A fruit’s stem, core, or pith (the white part just underneath the peel of citrus fruits) might each contain valuable nutrition that, when simply eating these fruits, will be wasted when we discard them. The Vitamix has incredible power and design making a fruit’s entire nutritional content available and easily incorporated into delicious juices and smoothies.

The Vitamix has the ability to break down a fruit or vegetable to what is commonly referred to as the phytonutrient level.  Only at this level are the individual cell walls of fruits ruptured by the blender’s blades.  This action then releases the vast majority of any given fruit’s thousands of phytonutrients – chemical compounds that studies suggest actually improve health in the body when accessed.  Only a high-performance blender can produce a juice or smoothie that incorporates the entire fruit yet leave no textural trace of skin, seeds, core, etc.

With a goal of maximizing the nutrition in juices and smoothies prepared with a high-performance blender, following are the most popular fruits that contain skins and/or seeds that are traditionally discarded before ingestion.

**Apple**:The skins of apples are a good source of vitamin A but are extremely high vitamin C.  As much as 50% of the vitamin C in the fruit can be found in the skin.  The skin also contains fiber, antioxidants, and quercetin, a flavonoid that is purported to have anti-inflammatory properties.  Apple seeds, on the other hand, contain amygdalin, a molecule which produces cyanide once ingested.  Large-scale consumption of blended apple seeds is not recommended.

**Apricot**:  Apricot skins are good sources of vitamin C and beta-carotene.  Their seeds, though, are similar in properties to apples.

**Avocado**:  Discard skin, however, the darker-green flesh just underneath the skin contains its highest concentration of antioxidants.  Scrape the inside of the skin well after peeling.  The avocado seed, or pit, is high in potassium and antioxidants, and is a great sources of soluble fiber.

**Banana**:  The peel of the banana is edible and is actually high in fiber.  With non-organic bananas, however, the peel is highly susceptible to pesticides and chemical residues.

**Blackberry**:  Blackberry seeds are good sources of omega-3 oils, protein, fiber, and antioxidants.

**Cantaloupe**:  The seeds found in cantaloupes are extremely high in protein and are also excellent sources of phosphorus, potassium, vitamins A, B-12, and D, as well as unsaturated fats and digestive enzymes.  Its rind, although very high in fiber and potassium, is also extremely porous, making it susceptible to mold, pesticides, and chemicals.

**Cherry**:  Cherry pits are similar in chemical makeup to apple seeds.  It is best to remove them prior to blending.

**Grape**:  Grape skins are great for you and contain up to 100 times the concentration of resveratrol as does the grape pulp.  Resveratrol is a phytochemical that has been linked to the inhibition of cancer, heart disease, and

even Alzheimer’s.  It is also highly prevalent in the seeds, especially those of globe and muscadine grapes, along with vitamin E, linoleic acid, and other antioxidants.

[***Grapefruit***](http://joyofblending.com/grapefruit-smoothie-recipe/): Remove peel and visible seeds. For delicate recipes, remove fruit from membrane sections as well.

**Honeydew**:  The properties of honeydew seeds and rind are almost identical to those of cantaloupe.

**Kiwi**:  Kiwi seeds have always generally been considered edible.  They are great sources of vitamin E and omega-3 fatty acids.  The skin contains flavonoids and insoluble fiber, but caution should be exercised before ingesting kiwi skin as its hairy texture attracts pesticides.

**Lemon**:  Lemon peels are edible but non-organic ones are often waxed prior to shipping to protect the fruit from bruising.  Just underneath the peel is the pith which is white in color.  The pith is extremely high in vitamin C and contains vitamin B6 and fiber, too.  Trace amounts of salicylic acid (the main ingredient in aspirin) are found in lemon seeds. I use the pith but discard the skin

**Lime**:  The lime is similar to lemon in terms of the nutritive properties of its peel and seeds. I use the skin and pith of (organic) limes.

**Mango**:  Mango peel is rich in phytonutrients but, ironically, is at its most bitter when the fruit is ripest.  I typically discard the peel and the pit.

**Orange**:  Only trace amounts of anti-fungal properties and vitamin B-17, a purported cancer fighter, have been discovered in orange seeds.  There is, however, as much vitamin C in its pith as the rest of the fruit, as well as fiber, pectin, bioflavonoids, and antioxidants.

**Peach**:  The peach pit contains amygdalin, just as apples do.  It’s probably best to avoid it.  The skin, though, is very nutritious, containing vitamins A and C, as well as antioxidants.

**Pear**:  There are numerous pear varieties in the United States, the most common of which is the European.  The seeds in this pear are toxic like apple seeds.  The skin is a good source of vitamin C and chlorogenic acid, an important antioxidant.

[***Persimmon***](http://joyofblending.com/seasonal-ingredients-persimmons-and-cranberries/): Remove leaves and seeds.

**Pineapple**:  The healthiest part of a pineapple is its core which is loaded with bromelain, an enzyme which acts as a natural anti-inflammatory.  Vitamin C, fiber, manganese, and copper can all be found in the core as well.  Pineapple skin is also nutritious, containing vitamin C and bromelain.  Keep in mind its texture, though.  It’s very susceptible to chemicals and pesticides.

**Plum**:  Plum skins contain fiber, vitamin C, beta-carotene, and antioxidants.  The seed or pit, however, contains the same properties as apple seeds.
[***Pomegranate***](http://joyofblending.com/pomegranate-smoothie-technique-video-and-recipe/): Remove skin/pith. Seeds are fine to blend, although they will add a slight gritty texture. If you want the ultimate in smoothness, you can blend on low, then strain out the seeds.

**Strawberry**:  Strawberry “seeds” are actually tiny fruits, themselves, and are fairly good sources of fiber.  I typically remove the cap and stem, but ok to use.

**Watermelon**:  The watermelon, as a whole, is one of the healthiest fruits on the planet.  Its seeds contain zinc, iron, and fiber, and can be composed of up to 30% protein.  The outer skin is not exceptionally nutritious, but the rind definitely is, containing vitamins A and C, beta-carotene, and lycopene, an especially beneficial phytonutrient.

*Select organically grown produce whenever possible.  Should one wish to take advantage of the nutrition in traditionally-grown fruits, however, it should be considered essential that they be washed thoroughly prior to utilizing.*

*Also, keep in mind that thick skins and/or dense seeds and pits can also dramatically alter the flavor of recipes typically made with just the more conventional parts of the fruits.*

**A note on tough (but edible) seeds**

*If you want to blend a tough ingredient to as smooth a consistency as possible, give it a head start on blending (that is, blend it alone or with a little liquid before adding the rest of the ingredients): this will give it more time to break down, and the blades spin faster when there is less material in the container, so they can actually break things down to a finer consistency. Such as berry, raspberry, pomegranate seeds, melon/squash seeds.*

***Asparagus:***Lightly steam before blending in a soup, but it can be consumed raw. Remove tough stem.
[***Basil***](http://joyofblending.com/basil-smoothie-ingredient-recipe/): Remove the thicker stems, although including some stems is fine
[***Beets***](http://joyofblending.com/beet-smoothies/): Scrub with a vegetable brush then cut off and discard the very top and bottom and then blend raw. For a milder flavor you can cook and/or peel.
***Bell pepper***: Usually remove the bulk of the seeds, but blending seeds is fine.
***Broccoli****:* Lightly steam and blend into a soup. Can also add it raw to green smoothies.
***Butternut squash****:* Cook and remove skin and seeds.
***Cabbage****:* Discard the outer leaves and the very bottom of the core. Can be added to smoothies

[***Carrot***](http://joyofblending.com/smoothie-ingredient-carrots/)*:* Scrub with vegetable brush. For more delicate recipes, peel carrots.
***Cauliflower****:* Steam and then blended into soups

***Celery***: Remove the very bottom and the very top, can use both raw and cooked.
[***Chia seeds***](http://joyofblending.com/chia-seeds/)*:* Can pre-soak, before blending. If using dry, seeds will swell after blending making left over smoothies thick. To avoid having dry seeds stick to the walls of the container, add them until after starting blending and a vortex has formed.
[***Cilantro***](http://joyofblending.com/refresh-your-savory-blends-with-cilantro/)*:* Remove the bigger stems.
***Collard greens***: Use raw in green smoothies, include the stalks. Due to the strong taste, pair with ginger and lemon or lime.
***Cranberries****:* Blend whole, pair with lime or sweeter fruits to counteract the bitterness.
***Cucumber***: Remove the stem, use both the seeds and skin.
***Garlic***: The skin is fine to blend
[***Ginger***](http://joyofblending.com/smoothie-ingredient-ginger/): The skin is fine to blend. Fresh ginger freezes well and can be added to smoothies from frozen. Cut into ~⅛” slices perpendicular to length of root to avoid a potential tangle of fibers.
***Green onion***: Cut off very bottom right above roots.
***Kale****:* Can blend it all, raw or cooked. Slightly stronger flavor than spinach.
***Mint****:* Remove tough stems.
***Onion***: Cook before blending in a soup. To use from raw, remove skin and root and start with a small amount.
***Spinach:*** Stems are fine to include.
***Sweet potato:*** Best texture to cook before blending, but can be blended from raw
***Tomato:*** Seeds and skins are fine to blend. Remove stems/leaves.
[***Vanilla***](http://joyofblending.com/smoothie-ingredient-vanilla/)***:*** Blend whole pods.