

Fruit Juice, Pear, Concentrate

Revised 2018

Storage Conditions

	Refrigerated	
	Concentrated 68-69° Brix	Concentrated 70-72° Brix
Temperature	25-45°F (-3.9 to 7.2°C)	45°F (7.2°C) or less
Storage Period	6 months	6 months

Handling and storage of fruit concentrates at 68° Brix and above is largely dependent upon the final manufacturing use quality requirements for color and flavor attributes. All fruit juice concentrates will develop brown hues and a raisin flavor note upon aging at elevated temperatures. Pear concentrate is often used in final blend applications with other juice concentrates.

Pear juice concentrates are normally shipped in 55-gal (208-L) open head drums or 55-60 U.S. gallons (208-227 L) aseptic packed drums. Sterile or aseptically packed juice concentrates may be shipped or stored at room (ambient) temperatures; however, if quality attributes of color and flavor are of prime consideration and the concentrate is to be held longer than 6 months, it should be stored at temperatures below 45°F (7.2°C).

Temperatures of 32°F (0°C) or slightly below are acceptable temperatures for storage and shipment of pear concentrates.

Freezing temperatures of 0°F (-18°C) are not recommended due to the potential for development of crystallization of the pear fruit sugars and subsequent development of dextrose dropout.

Pear concentrates of 70-72° Brix may be sold based on color measurements. The specification is normally established based on a Spectronic 20 instrument using a ½ in (1.3 mm) O.D. round tube. Dilution of the concentrate is to 12° Brix. (Color @ 440 nm; haze @ 625 nm.)

Type I	Primary - amber	45% color photometric 94% haze photometric
Type II	Decolorized reduced acid Yellow golden color	85% color photometric 94% haze photometric
Type III	Decolorized Yellow golden color	85% color photometric 94% haze photometric

Temperature and storage period would apply as shown under the 70-72° Brix concentration.

Pear juice concentrate is a fairly stable product, and storage life depends on whether it is classified as a clarified or non-clarified concentrate. Clarified will normally show reduced color deterioration if stored at 32-45°F (0-7.2°C) vs. non-clarified which is stored at the same temperatures. Non-clarified pear concentrate will develop a brown hue within 6 months at these temperatures. Clarified pear juice concentrate can be stored at 32°F (0°C) for 1 year without development of brown color.

Pear juice concentrate is also available in a deodorized/decolorized format created by running clarified concentrate through special ion exchange columns. This item is less subject to color and flavor degradation than the clarified product and will typically have a longer shelf life (1 year to 18 months at 32°F [0°C]). It may require special designation on ingredient labels, depending on the country of use.

Packaging

Modern packaging of purees and puree concentrates utilizes some form of aseptic totes. There are a number of different styles, including stainless steel totes that can be sterilized and reused; reusable plastic totes with disposable aseptic liners; or large (275 to 300 gallon) fiberboard disposable totes. It is important to note that none of these container types are designed for frozen use. Freezing and thawing destroys the integrity of the disposable fiberboard totes, and the plastics can become brittle and/or break. Stainless steel totes can burst with freezing due to internal gas pressure. As a result, containers should be stored in either ambient or refrigerated areas using similar storage length as drums under the same conditions. This limits their use to aseptic products. After opening, the items either need to be used immediately or transferred into another container for refreezing and storage.

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