

Fruit Juice, Apple Concentrate

Revised 2008

Storage Conditions

| | Concentrated 67.9° Brix or lower | Concentrated 68.0-68.9° Brix | Concentrated 69.0-72.0° Brix |
|----------------|-------------------------------------|---------------------------------|---------------------------------|
| Temperature | 0°F (-17.8°C) | 25-45°F (-3.9 to 7.2°C) | 50-70°F (10-21°C) |
| Storage Period | 3 years | 2 years | 1 year |

Storage and handling of fruit concentrates at 68° Brix and above or below is largely dependent upon the final manufacturing use quality requirements for color and flavor. All fruit concentrates will develop color changes, normally a brown hue and a raisin flavor note upon aging at temperatures above 45°F (7.2°C).

Apple concentrate used for fruit jellies or fruit drinks may require a bright yellow or light golden color vs. amber hues. Concentrates used for this type manufacturing would require temperatures of storage less than 45°F (7.2°C).

Apple concentrates used in a manufactured finished product of dark or medium dark color, as may be derived from the color of other product ingredients, may not require rigid shipment or storage temperature control.

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.

Most apple concentrates are shipped in 55-gal (208-L) open head or 55-gal (208-L) aseptic packed drums. Sterile or aseptically packed juice concentrates may be shipped or stored at room (ambient) temperatures; however, if a color quality attribute is to be held longer than 6 months, it should be stored at temperatures below 45°F (7.2°C).

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