



Invigorate your Hard Cider
with Tree Top's



Heritage-Style Fermenting Juice
& *Finishing-Style* Juice

More *fruits*, more *forms*, more *possibilities*.™

Tree Top's Heritage-Style Fermenting Apple Juice Concentrate or our Finishing Juice Concentrate can invigorate the hardest of ciders.

Heritage-Style Fermenting Juice Concentrate

is processed in a way to increase the concentrations of tannins already present in apples.

The typical range of traditional apple juice concentrate has a gallic acid equivalent (GAE) of 200 - 450 ppm. Tree Top's Heritage-Style Fermenting Juice ranges between 730 - 1000 ppm GAE at single strength juice value.

Finishing-Style Juice Concentrate

is a special crafted blend of apples grown in the western U.S. These apples are hand picked at the peak of harvest and processed in a way to capture the fresh, crisp apple flavor consumers have come to know.

Packaging

- 5 gallon pails
- 52 gallon drums
- 275 gallon totes

Palletized

- 36 pails per pallet
- 4 drums per pallet
- 1 tote per pallet

Heritage-style apple juice concentrate shall be prepared from commercially grown apples. The unfermented juice from these apples shall be clarified (filtered), concentrated and the essence (aroma) held separately. The concentrate shall contain no additives, preservatives, flavors or colors of any kind. The product shall be prepared, processed, packaged and delivered in accordance with current good manufacturing practices and under strict sanitary conditions to assure good product definitions. This ingredient shall be of food grade and shall be in all respects in compliance with the U.S. Food, Drug and Cosmetic Act of 1938 as amended and all applicable regulations thereunder.

Heritage-Style Apple Juice Concentrate

ANALYSIS:

	TARGET	MINIMUM	MAXIMUM
Brix	70.0°	70.0°	71.0°
Haze %Transmittance @ 625nm, 11.5° Brix	95%	90%	100%
Turbidity NTU, 11.5° Brix	0	0	5
pH, 11.5° Brix	3.8	3.2	4.4
Pectin	0%	0%	2.0%
Starch	0	0	0
Sediment	0	0	0
Total Plate Count (CFU/ml)	0	0	500
Yeast/Mold	0	0	500
Acid as Malic g/100g @ 70.0° Brix	1.85	1.60	2.20
Acid as Malic g/100mL @ 11.5° Brix	0.32	0.27	0.38
Color %Transmittance @430nm, 11.5° Brix	50%	35%	65%

Finishing apple juice concentrate shall be prepared from commercially grown apples. The unfermented juice from these apples shall be clarified (filtered), concentrated and the essence (aroma) returned to the concentrate. The concentrate shall contain no additives, preservatives, flavors or colors of any kind. The product shall be prepared, processed, packaged and delivered in accordance with current good manufacturing practices and under strict sanitary conditions to assure good product definitions. This ingredient shall be of food grade and shall be in all respects in compliance with the U.S. Food, Drug and Cosmetic Act of 1938 as amended and all applicable regulations thereunder.

Finishing-Style Apple Juice Concentrate

ANALYSIS:

	TARGET	MINIMUM	MAXIMUM
Brix	70.0°	70.0°	71.0°
Haze %Transmittance @ 625nm, 11.5° Brix	95%	90%	100%
Turbidity NTU, 11.5° Brix	0	0	5
pH, 11.5° Brix	3.8	3.2	4.4
Pectin	0%	0%	2.0%
Starch	0	0	0
Sediment	0	0	0
Total Plate Count (CFU/ml)	0	0	500
Yeast/Mold	0	0	500
Acid as Malic g/100g @ 70.0° Brix	1.85	1.60	2.20
Acid as Malic g/100mL @ 11.5° Brix	0.32	0.27	0.38
Color %Transmittance @430nm, 11.5° Brix	50%	45%	70%

SHELF LIFE AND STORAGE RECOMMENDATIONS:

	Ambient <70°F	Refrigerated <45°F	Frozen <0°F
Standard Apple Juice Concentrate:	Not recommended	18 Months	2 years

For a complete list of all of our fruits, in all of their forms and endless possibilities, visit treetoppingredients.com

Tree Top, Inc. • P.O. Box 248 • 220 E. Second Ave. • Selah, WA 98942 • 509.698.1435 or 1.800.367.6571 ext. 1435

Heritage-Style Fermenting Juice

Instructional Guide

Four basic ways to use heritage apple juice concentrate to make hard cider. In each case, the finished, bottled product would meet the 50% juice equivalent minimum for hard cider, and contain about 5.5-6% ABV. In each example, there will be five gallons to ferment. To each, the cider maker will need to add a sulfite source and yeast nutrients.

1. No dilution/blending of the fermented cider, i.e. 50% juice equivalent, starting at 11.2 brix. This requires a combination of apple juice concentrate and sugar. Add 0.32 gallons of heritage apple juice concentrate (3.6 pounds), 2.36 pounds of sugar and water (about 4 ½ gallon) to make 5 gallons of fermentable must.
2. No dilution / blending of the fermented cider but want to make a 100% juice equivalent claim. Start at 11.5 Brix. Add 0.64 gallons (7.2 pounds) of Tree Top Heritage Apple Juice Concentrate to 4.36 gallons of water to make 5 gallons.
3. Preparation of must for wine production that will be diluted 1:1 to make a finished apple cider after fermentation. In this example, the juice will be at 100% equivalent in the wine, so that the diluted finished product will have the 50% minimum required. Add 0.64 gallons of Tree Top Heritage Apple Juice Concentrate, and 3.52 pounds of sugar to 4.1 gallons of water to make 5 gallons of must at 19 brix.
4. Preparation of must for wine production that will be diluted 1:1 to make a finished apple cider after fermentation, maximize effect of higher tannin content from the Heritage Apple Juice Concentrate. Add 1.1 gallons of Tree Top Heritage Apple Juice Concentrate to 3.9 gallons of water to make 5 gallons of must at 19 brix.

	TT Heritage AJC (gal)	Sugar (lb)	Water (gal)	Brix Must	Est. Fermented ABV	Juice equivalent in fermenting must
1	0.32	2.36	4.50	11.2	6.5	50%
2	0.64	0	4.36	11.5	6.7	100%
3**	0.64	3.53	4.1	19.0	11.0	100%
4**	1.10	0	3.9	19.0	11.0	170%

** after fermentation, both 3 and 4 will be diluted 1:1 for preparation of a formulated, finished cider, resulting in 5.5% ABV in both cases, and a 50% minimum juice equivalent for #3 and an 85% juice equivalent for #4.

Finishing-Style Apple Juice Concentrate

The amount of Finishing-Style Apple Juice Concentrate may vary depending on your desired taste. For moderately dry hard cider, finishing juice is added at 5% by volume.

Example formula:

5 gallons of Tree Top's Heritage-Style Fermenting Juice

0.5 gallons of Tree Top's Finishing-Style Apple Juice Concentrate

10 grams of potassium sorbate if you are not going to in-bottle pasteurize

20 ppm sulfur dioxide added as sodium sulfite

4.58 gallons of water (*dissolve the potassium sorbate in a small amount of this water before addition*)

Additional apple essences as desired. (*See Northwest Naturals' website at www.nwnaturals.com*)

Mix and carbonate (if desired), bottle and pasteurize if desired.

Inspiring New Flavors

Inspiring new hard cider flavor combinations does not have to be difficult. Simply contact Tree Top's R&D staff for the latest trendy fruit juice concentrate blends. We offer more fruits, in more forms, providing you with more possibilities.

Global New Hard Cider Introductions by Fruit Type

Apple	Grape	Blackberry
Pear	Cherry	Kiwi
Lemon	Strawberry	Pineapple
Elderberry	Lime	Guava
Black Currant	Blueberry	Apricot
Raspberry	Peach	Papaya

Mintel GNPD Global Product Introductions Hard Cider Past 3 Years - Date ending June 2015

For a complete list of all of our fruits, in all of their forms and endless possibilities, visit

treetopingredients.com

or visit Northwest Naturals at nwnaturals.com

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