

Valley Forge Spruce Ale American Pale Ale

Recipe Specs

Batch Size (G): 6.1
Total Grain (lb): 10.750
Total Hops (oz): 2.00
Original Gravity (OG): 1.045 (°P): 11.2
Final Gravity (FG): 1.011 (°P): 2.8
Alcohol by Volume (ABV): 4.42 %
Colour (SRM): 11.9 (EBC): 23.4
Bitterness (IBU): 56.6 (Tinseth - No Chill Adjusted)
Brewhouse Efficiency (%): 70
Boil Time (Minutes): 90

Grain Bill

10.000 lb American - Pale 2-Row (93.02%)
0.500 lb American - Caramel / Crystal 40L (4.65%)
0.250 lb American - Chocolate (2.33%)

Hop Bill

1.00 oz Centennial Pellet (10% Alpha) @ 60 Minutes (Boil) (0.2 oz/Gal)
1.00 oz Centennial Pellet (10% Alpha) @ 15 Minutes (Boil) (0.2 oz/Gal)

Misc Bill

0.50 oz Spruce Tips @ 60 Minutes (Boil)
0.50 oz Spruce Tips @ 45 Minutes (Boil)

Single step Infusion at 151°F for 90 Minutes.
Fermented at 68°F with American Ale 1056

Notes

The encampment of Continental Army at Valley Forge (12/19/1777 -- 6/19/1778) is known as the time of the greatest suffering. By the end of the encampment, almost a forth of the original army had died of disease, exposure, and privation.

The food was said to have been both bad and infrequent. Even though food was available, there were no wagons or teams to haul it. Of course biggest problem was caused by people not a Valley Forge at all. Graft and the inefficiency of the Congress was (still is) widespread, agents of the various hospitals bid against each other for little food there was, and many farmers refused to sell to the Continental Army hoping to be paid in gold by the British rather than promisory notes by Congress.

Malnutrition lead to many disease including scurvy caused by a lack of vitamin C in the diet. The indians, however, had long ago taught settlers to make teas an beer from spruce as cure for scurvy. Boiling the spruce tips (a part of the tree that you cannot build with, eat, or burn) in the wort for beer adds not only flavor but this critical nutrient. And Continental soldiers were promised (not given but promised) a gallon of beer a day! why not make it spruce beer.

Another import reason for brewing spruce beer was tied more closely to the revolt against Parliment. Hops were not grown widely in America and had to be imported. When Parliment instituted the Townsen Acts, groups like the Sons of Liberty argued for boycotts of goods produced outside the colonies. These non-importation and non-consumption movements took enough of a toll on British commerce to force Parliment to repeal these taxes. Drinking spruce beer is not only good for your health, its a political statement!

So, no matter what the hardship, a little Valley Forge Spruce Ale makes it a little less severe.

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This beer was designed and first brewed by
Michael Carver in 2017 as part of development
effort for a colonial brewery project in Philadelphia.

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