ALL-GRAIN RECIPE

PALISADE® PILS

TASTING NOTES: APRICOT • CITRUS • GRASS • FLORAL

SPECIFICATIONS

ORIGINAL GRAVITY	FINAL GRAVITY	IBU	ABV
1.050	1.010	38	5.5%

INGREDIENTS

GRAINS	AMOUNT
Pilsner Malt	
Vienna Malt	
Wheat Malt	

YEAST & ADJUNCTS	AMOUNT
German Lager 18 million	cells/mL
Whirlfloc	Variable
Yeast Nutrient	Variable

HOPS	ТҮРЕ	AA%	ADDITION	AMOUNT
Columbus	T-90 Pellets	14.5%	90 min	0.5 g/L
Palisade® Bran	dT-90 Pellets	6.6%	15 min	1.1 g/L
Palisade [®] Bran	dT-90 Pellets	6.6%	5 min	1.5 g/L
Palisade® Bran	dT-90 Pellets	6.6%	Whirlpool	1.5 g/L

INSTRUCTIONS

- **STEP 1** Perform an infusion mash to achieve a mash temp of 144°F/62°C for 40 min.
- **STEP 2** Second mash temp is at 162°F/72°C for mash temp for 20 min.
- STEP 3 If a step-mash is not possible, perform a single-infusion mash at 147°F/64°C for 60 minutes.
- **STEP 4** Vorlauf until the wort has cleared and is free of grain particles.
- **STEP 5** Runoff into the kettle and sparge with 180°F/82°C water.
- **STEP 6** Bring the wort to a boil.
- **STEP 7** After 45 min, add Whirlfloc for clarity and yeast nutrient for yeast health.
- **STEP 8** After 60 min, turn off the burner. Let the wort cool to about 204°F/96°C. Add the whirlpool hop additions. Note: All whirlpool additions are calculated based on a 15 minute whirlpool starting at 204°F/96°C.
- **STEP 9** Gently create a whirlpool in the kettle.
- STEP 10 Quickly cool the wort to 50°F/10°C, aerate it, and transfer in into a sanitized fermenter.
- **STEP 11** Pitch the appropriate amount of German Lager yeast and add either an airlock or blowoff tube to the fermenter.
- **STEP 12** Fermentation schedule: Ferment to at least 50% attenuation at 52°F/11°C. Then, with around 1.024 specific gravity remaining gradually increase temp to 59°F/15°C.
- **STEP 13** After the beer has passed forced diacetyl test, cool the fermenter to 32°F/0°C at a rate of 2°C per day.

