

# FOREST

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **42**
- SRM **4.4**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **44 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **53.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **42 liter(s)**
- Total mash volume **54 liter(s)**

## Steps

- Temp **67 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **42 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **40 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **23.6 liter(s)** of **76C** water or to achieve **53.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	10 kg (83.3%)	75 %	5
Grain	Pszeniczny	1 kg (8.3%)	75 %	4
Grain	Płatki owsiane	1 kg (8.3%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	50 g	60 min	13 %
Boil	Citra	25 g	20 min	12 %
Aroma (end of boil)	Cascade	25 g	0 min	6 %
Dry Hop	Citra	25 g	6 day(s)	12 %
Dry Hop	Cascade	25 g	6 day(s)	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
us 05	Ale	Dry	23 g	---

## Extras

Type	Name	Amount	Use for	Time
Herb	pechy sosny wywar	500 g	Boil	20 min
Herb	pechy sosny wywar	300 g	Secondary	4 day(s)
Herb	pechy sosny wywar	200 g	Bottling	---
Fining	mech irlandzki	10 g	Boil	10 min
Water Agent	kwask mlekowy	8 g	Mash	10 min
Other	witamina c	10 g	Bottling	---
Water Agent	gips piwowarski	8 g	Mash	60 min