

## Forest Pale Ale 4

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- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **30**
- SRM **4.3**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

### Steps

- Temp **65 C**, Time **45 min**

### Mash step by step

- Heat up **18 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **45 min** at **65C**
- Sparge using **13.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Best Pilsen	5 kg (83.3%)	80.5 %	4
od 62C				
Grain	Viking Pale Ale malt	1 kg (16.7%)	80 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mosaic	20 g	50 min	11.8 %
Aroma (end of boil)	Mosaic	30 g	5 min	11.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Spice	Pędy świerku	500 g	Boil	10 min
Flavor	Napar z pędów świerku i sosny	6000 g	Boil	0 min