

## 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  |