

## 6# Forest APA

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **29**
- SRM **7.5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.1 liter(s)**
- Total mash volume **18.8 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **14.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **9.6 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

### Fermentables

| Type  | Name                         | Amount         | Yield | EBC |
|-------|------------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt         | 3 kg (63.8%)   | 80 %  | 5   |
| Grain | Słód diastatyczny jęczmienny | 0.5 kg (10.6%) | 80 %  | 3   |
| Grain | Weyermann - Pale Wheat Malt  | 0.5 kg (10.6%) | 85 %  | 5   |
| Grain | Biscuit Malt                 | 0.25 kg (5.3%) | 79 %  | 45  |
| Grain | Caramunich® typ I            | 0.25 kg (5.3%) | 73 %  | 80  |
| Grain | Pilzneński                   | 0.2 kg (4.3%)  | 81 %  | 4   |

### Hops

| Use for | Name              | Amount | Time     | Alpha acid |
|---------|-------------------|--------|----------|------------|
| Boil    | Styrian Golding   | 30 g   | 60 min   | 3.6 %      |
| Boil    | Lublin (Lubelski) | 26 g   | 60 min   | 4 %        |
| Dry Hop | Mandarina Bavaria | 50 g   | 3 day(s) | 10 %       |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11 g   | Fermentis  |

## Extras

| Type        | Name            | Amount | Use for | Time   |
|-------------|-----------------|--------|---------|--------|
| Herb        | pędy świerku    | 400 g  | Boil    | 15 min |
| Water Agent | Whirlfloc       | 1 g    | Boil    | 10 min |
| Water Agent | Gips Piwowarski | 4 g    | Boil    | 60 min |