

Forest APA

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **31**
- SRM **3.8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19.8 liter(s)**

Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **10.3 liter(s)**
- Total mash volume **14.4 liter(s)**

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Viking Pilsner malt | 2.2 kg (53.7%) | 82 % | 4 |
| Grain | Płatki owsiane | 0.6 kg (14.6%) | 85 % | 3 |
| Grain | Viking Wheat Malt | 1 kg (24.4%) | 83 % | 5 |
| Grain | Płatki żytnie | 0.3 kg (7.3%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|------------|--------|--------|------------|
| Boil | Simcoe | 15 g | 20 min | 13.2 % |
| Whirlpool | Simcoe | 45 g | 5 min | 13.2 % |
| Whirlpool | Cascade PL | 50 g | 5 min | 5.2 % |

Yeasts

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

Extras

| Type | Name | Amount | Use for | Time |
|--------|-----------------|--------|---------|-------|
| Flavor | Gałązki świerku | 0 g | Mash | 0 min |
| Flavor | Gałązki sosny | 0 g | Mash | 0 min |
| Flavor | Gałązki jodły | 0 g | Mash | 0 min |

Notes

- Przez wypełniony fermentor i gałązkami przefiltrować zacier.
Użyto 70% świerku 15% sosny 15% jodły.
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