

Forest APA

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **32**
- SRM **3.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **3 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **70 min**
- Evaporation rate **3 %/h**
- Boil size **28.5 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **21.4 liter(s)**
- Total mash volume **26.8 liter(s)**

Steps

- Temp **65 C**, Time **20 min**
- Temp **68 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **21.4 liter(s)** of strike water to **70.6C**
- Add grains
- Keep mash **20 min** at **65C**
- Keep mash **40 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **12.5 liter(s)** of **76C** water or to achieve **28.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 2.5 kg (46.7%) | 80 % | 5 |
| Grain | Strzegom Pilzneński | 1.3 kg (24.3%) | 80 % | 4 |
| Grain | Płatki owsiane | 0.4 kg (7.5%) | 85 % | 3 |
| Grain | Viking Malt - Pszeniczny | 1 kg (18.7%) | 83 % | 5 |
| Grain | Zakwaszający | 0.15 kg (2.8%) | 70 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|------------|--------|----------|------------|
| Boil | Chinook | 10 g | 70 min | 11 % |
| Boil | Cascade | 50 g | 10 min | 6 % |
| Boil | Mosaic | 30 g | 0 min | 12 % |
| Whirlpool | Centennial | 40 g | 20 min | 10.5 % |
| Dry Hop | Simcoe | 50 g | 7 day(s) | 13.2 % |
| Dry Hop | Citra | 30 g | 7 day(s) | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|-------|-----|-----|------|-----------|
| US-05 | Ale | Dry | 23 g | Fermentis |
|-------|-----|-----|------|-----------|

Extras

| Type | Name | Amount | Use for | Time |
|-------|--------------|--------|---------|--------|
| Spice | Pędy sosny | 300 g | Boil | 30 min |
| Spice | Owoc jałowca | 15 g | Boil | 30 min |