

APA v3 #75

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **31**
- SRM **4.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **82.1 %**
- Liquor-to-grist ratio **4.76 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **24.2 liter(s)**

Steps

- Temp **66 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **75 C**, Time **7 min**

Mash step by step

- Heat up **20 liter(s)** of strike water to **70.8C**
- Add grains
- Keep mash **30 min** at **66C**
- Keep mash **40 min** at **72C**
- Keep mash **7 min** at **75C**
- Sparge using **10.7 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|----------------|-------|-----|
| Grain | Viking - pale ale | 2.8 kg (66.7%) | 79 % | 6 |
| Grain | Viking - pilzniejszy | 0.6 kg (14.3%) | 80 % | 4 |
| Grain | Viking - monachijski I | 0.4 kg (9.5%) | 78 % | 16 |
| Grain | Płatki owsiane | 0.4 kg (9.5%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------|--------|----------|------------|
| First Wort | Chinook PL | 12 g | 60 min | 8.6 % |
| Aroma (end of boil) | Columbus | 25 g | 10 min | 12.4 % |
| Aroma (end of boil) | Sorachi Ace | 25 g | 3 min | 12.5 % |
| Dry Hop | Columbus | 25 g | 3 day(s) | 12.4 % |
| Dry Hop | Cascade US | 20 g | 3 day(s) | 6.9 % |
| Dry Hop | Sorachi Ace | 25 g | 3 day(s) | 12.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------------|------|--------|--------|------------------|
| FM54 Gorączka kalifornijska | Ale | Liquid | 110 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|------------------------|--------|---------|-------|
| Water Agent | gips | 2 g | Mash | --- |
| Water Agent | kwask mlekowy 80% [ml] | 4.53 g | Mash | --- |
| Water Agent | chlerek wapnia [ml] | 3.44 g | Mash | --- |
| Water Agent | epsom | 1.5 g | Mash | --- |
| Water Agent | mech irlandzki | 3 g | Boil | 5 min |