

APA z resztek

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **29**
- SRM **5.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **70 liter(s)**
- Trub loss **2 %**
- Size with trub loss **71.4 liter(s)**
- Boil time **70 min**
- Evaporation rate **3 %/h**
- Boil size **76.8 liter(s)**

Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **2.3 liter(s) / kg**
- Mash size **32.4 liter(s)**
- Total mash volume **46.5 liter(s)**

Steps

- Temp **66 C**, Time **70 min**

Mash step by step

- Heat up **32.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **66C**
- Sparge using **58.5 liter(s)** of **76C** water or to achieve **76.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------------------|-----------------|-------|-----|
| Grain | Viking Pale Ale malt | 12.5 kg (88.7%) | 80 % | 5 |
| Grain | Karmelowy Pszeniczny Strzegom | 0.3 kg (2.1%) | 79 % | 130 |
| Grain | Karmelowy żytni Strzegom | 0.3 kg (2.1%) | 75 % | 150 |
| Grain | Słód Wędzony - Wiśnia | 1 kg (7.1%) | 82 % | 10 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Marynka | 100 g | 60 min | 6.8 % |
| Aroma (end of boil) | Lebelski | 30 g | 15 min | 4 % |
| Aroma (end of boil) | Citra | 20 g | 5 min | 12 % |
| Aroma (end of boil) | Sybilla | 15 g | 4 min | 6 % |
| Aroma (end of boil) | Cascade | 20 g | 5 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 500 ml | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------|-----------------|--------|---------|--------|
| Spice | Trawa cytrynowa | 75 g | Boil | 10 min |