

## Bez nazwy

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **28**
- SRM **5.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**

### Mash step by step

- Heat up **18 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **19.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

| Type  | Name                     | Amount       | Yield | EBC |
|-------|--------------------------|--------------|-------|-----|
| Grain | Viking Pale Ale malt     | 5 kg (83.3%) | 80 %  | 5   |
| Grain | Karmelowy Jasny<br>30EBC | 1 kg (16.7%) | 75 %  | 30  |

### Hops

| Use for             | Name                   | Amount | Time   | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil                | Chinook                | 20 g   | 30 min | 13 %       |
| Boil                | Columbus/Tomahawk/Zeus | 20 g   | 10 min | 15.5 %     |
| Aroma (end of boil) | Hallertau              | 30 g   | 0 min  | 4.5 %      |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 20 g   | Fermentis  |