

kangaroo

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **60**
- SRM **7.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **18 %/h**
- Boil size **30.2 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **75 C**, Time **5 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **5 min** at **75C**
- Sparge using **19.2 liter(s)** of **76C** water or to achieve **30.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (90.9%) | 80 % | 5 |
| Grain | Strzegom Karmel 150 | 0.37 kg (6.7%) | 75 % | 150 |
| Grain | Karmelowy Jasny 30EBC | 0.13 kg (2.4%) | 75 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|------------|--------------|--------|----------|------------|
| Boil | Chinook | 25 g | 60 min | 13 % |
| Boil | Enigma (AUS) | 13 g | 60 min | 17.2 % |
| Boil | Enigma (AUS) | 12 g | 10 min | 17.2 % |
| Whirlpool | Vic Secret | 50 g | 0 min | 16.3 % |
| 80st 10min | | | | |
| Dry Hop | Galaxy | 50 g | 3 day(s) | 15 % |