

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 %