

Poprawiny Klusa

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **35**
- SRM **4.8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **10 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **31.4 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **31.5 liter(s)**

Steps

- Temp **68 C**, Time **70 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **24.5 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **31.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	6.2 kg (88.6%)	80 %	5
Grain	Viking Carabody malt	0.8 kg (11.4%)	75 %	8

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	30 g	40 min	11 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	30 g	2 min	15.5 %
Aroma (end of boil)	Simcoe	50 g	2 min	13.2 %