

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 % |