

Orange zest apa

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **20**
- SRM **4.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **10 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **34.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **31.5 liter(s)**

Steps

- Temp **62 C**, Time **55 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **24.5 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **55 min** at **62C**
- Keep mash **5 min** at **78C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **34.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	7 kg (100%)	80 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	20 g	60 min	12.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Us-05	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
Flavor	Sok z pomaranczy 4 sztuki	1 g	Boil	10 min
Flavor	Zest z 4ech pomaranczy	3 g	Boil	10 min
Flavor	Laktoza	275 g	Boil	10 min