

Apaa

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **28**
- SRM **3.8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **77 C**, Time **0 min**

Mash step by step

- Heat up **15.6 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **77C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilsner® 2,5-4,5 EBC Weyermann	5.2 kg (100%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Equinox	10 g	10 min	13.1 %
Boil	Equinox	20 g	5 min	13.1 %
Aroma (end of boil)	Sterling	30 g	0 min	4.5 %
Aroma (end of boil)	Simcoe	30 g	0 min	13.2 %
Whirlpool	Sterling	15 g	30 min	4.5 %
Whirlpool	Simcoe	15 g	30 min	13.2 %
Whirlpool	Centennial	15 g	30 min	10.5 %
Dry Hop	Simcoe	15 g	3 day(s)	13.2 %
Dry Hop	Sterling	15 g	3 day(s)	4.5 %
Dry Hop	Centennial	15 g	3 day(s)	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale