

appa

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **25**
- SRM **3.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **77 C**, Time **10 min**

Mash step by step

- Heat up **20 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **77C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (100%)	81 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Chinook	25 g	11 min	11.2 %
Aroma (end of boil)	Centennial	25 g	11 min	9.4 %
Aroma (end of boil)	Amarillo	25 g	11 min	7.3 %
Dry Hop	Chinook	25 g	3 day(s)	11.2 %
Dry Hop	Centennial	25 g	3 day(s)	9.4 %
Dry Hop	Amarillo	25 g	3 day(s)	7.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM53 Voss kveik	Ale	Liquid	1200 ml	FM