

Apa

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **46**
- SRM **4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **6 %**
- Size with trub loss **26 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.1 liter(s)**

Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.6 liter(s)**
- Total mash volume **22.1 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **16.6 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **78C**
- Sparge using **20 liter(s)** of **76C** water or to achieve **31.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	4 kg (72.3%)	82 %	4
Grain	Viking Wheat Malt	1 kg (18.1%)	83 %	5
Grain	Weyermann - Carapils	0.386 kg (7%)	78 %	4
Grain	Abbey Malt Weyermann	0.15 kg (2.7%)	75 %	45

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	7 g	60 min	4 %
Boil	Saaz (Czech Republic)	38 g	60 min	4 %
Boil	Marynka	30 g	60 min	8.8 %
Boil	Marynka	20 g	10 min	8.8 %
Aroma (end of boil)	lunga	25 g	0 min	12.5 %
Aroma (end of boil)	Sybilla	25 g	0 min	7 %
Whirlpool	lunga	25 g	0 min	12.5 %
Whirlpool	Sybilla	25 g	0 min	7 %
Dry Hop	lunga	50 g	3 day(s)	12.5 %

Dry Hop	Sybilla	50 g	3 day(s)	7 %
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Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	200 ml	Fermentum Mobile