

Keg

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **31**
- SRM **4.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **28 liter(s)**
- Trub loss **5 %**
- Size with trub loss **30.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **37 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **21.6 liter(s)**
- Total mash volume **29.6 liter(s)**

Steps

- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **21.6 liter(s)** of strike water to **76.9C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **23.4 liter(s)** of **76C** water or to achieve **37 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (62.5%)	80 %	5
Grain	Strzegom Pszeniczny	1 kg (12.5%)	81 %	6
Grain	płatki jęczmienne	1 kg (12.5%)	60 %	4
Grain	Płatki owsiane	1 kg (12.5%)	60 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Magnum	20 g	10 min	13.5 %
Aroma (end of boil)	East Kent Goldings	20 g	10 min	5.1 %
Aroma (end of boil)	Styrian Golding	20 g	10 min	3.6 %
Aroma (end of boil)	Styrian Golding	25 g	5 min	3.6 %
Aroma (end of boil)	East Kent Goldings	25 g	5 min	5.1 %
Aroma (end of boil)	Magnum	25 g	5 min	13.5 %
Whirlpool	East Kent Goldings	25 g	10 min	5.1 %
Whirlpool	Styrian Golding	25 g	10 min	3.6 %
Whirlpool	Magnum	25 g	10 min	13.5 %
Whirlpool	East Kent Goldings	25 g	5 min	5.1 %
Whirlpool	Styrian Golding	22 g	5 min	3.6 %

Whirlpool	Magnum	22 g	5 min	13.5 %
Dry Hop	East Kent Goldings	100 g	4 day(s)	5.1 %
Dry Hop	Styrian Golding	100 g	4 day(s)	3.6 %
Dry Hop	Magnum	100 g	4 day(s)	13.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	23 g	Fermentis