

Apa

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **52**
- SRM **5.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **36 liter(s)**
- Trub loss **5 %**
- Size with trub loss **37.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **43.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27 liter(s)**
- Total mash volume **36 liter(s)**

Steps

- Temp **67 C**, Time **70 min**

Mash step by step

- Heat up **27 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **70 min** at **67C**
- Sparge using **25.6 liter(s)** of **76C** water or to achieve **43.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.5 kg (50%)	80 %	5
Grain	Oats, Flaked	1 kg (11.1%)	20 %	2
Grain	Viking Wheat Malt	1 kg (11.1%)	83 %	5
Grain	Strzegom Monachijski typ I	2.5 kg (27.8%)	79 %	16

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	19 g	60 min	13.5 %
Aroma (end of boil)	Cascade PL	100 g	5 min	5.4 %
Aroma (end of boil)	Mosaic	100 g	5 min	12.8 %
Aroma (end of boil)	Mandarina Bavaria	100 g	5 min	10.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Slant	300 ml	---