

Penison

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **34**
- SRM **6**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.4 liter(s)**
- Total mash volume **23.2 liter(s)**

Steps

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

Mash step by step

- Heat up **17.4 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **17.4 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pilsen Malt	3 kg (51.7%)	80.5 %	2
Grain	Briess - 2 Row Brewers Malt	2 kg (34.5%)	80.5 %	4
Grain	Briess - Victory Malt	0.5 kg (8.6%)	75 %	55
Grain	Caramel/Crystal Malt - 20L	0.3 kg (5.2%)	75 %	39

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mosaic	30 g	15 min	11.4 %
Boil	Mosaic	30 g	10 min	11.4 %
Boil	Mosaic	30 g	5 min	11.4 %
Aroma (end of boil)	Mosaic	30 g	0 min	11.4 %
Whirlpool	Mosaic	30 g	0 min	11.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	30 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	4 g	Mash	60 min
Water Agent	kwask mlekowy	0 g	Mash	45 min