

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **41**
- SRM **3.9**
- Style **Classic American Pilsner**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.8 liter(s)**

Mash information

- Mash efficiency **95 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **12.5 liter(s)**
- Total mash volume **15 liter(s)**

Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **15 min**
- Temp **100 C**, Time **15 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **12.5 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **15 min** at **72C**
- Keep mash **15 min** at **72C**
- Keep mash **0 min** at **76C**
- Keep mash **15 min** at **100C**
- Sparge using **5.8 liter(s)** of **76C** water or to achieve **15.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński klepiskowy bruntal	2 kg (80%)	75 %	3.5
Grain	Strzegom Monachijski typ I	0.5 kg (20%)	79 %	16

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Polaris	10 g	20 min	21 %
Whirlpool	Polaris	20 g	15 min	21 %

Yeasts

Name	Type	Form	Amount	Laboratory
wyeast 2308	Lager	Slant	200 ml	---