

Jasne, że do pełna!

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **19**
- SRM **3.4**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **52.5 liter(s)**
- Trub loss **4 %**
- Size with trub loss **54.6 liter(s)**
- Boil time **90 min**
- Evaporation rate **4 %/h**
- Boil size **59.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **33 liter(s)**
- Total mash volume **44 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **33 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Sparge using **37.6 liter(s)** of **76C** water or to achieve **59.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	11 kg (100%)	81 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	9 %
Boil	Lublin (Lubelski)	50 g	20 min	3.7 %
Aroma (end of boil)	Lublin (Lubelski)	50 g	5 min	3.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Bavarian Lager M76 Mongrove Jack's	Lager	Slant	1000 ml	---