

# Warszawski Chmielak (lagerChmielak)

- Gravity **12.1 BLG**
- ABV ---
- IBU **52**
- SRM **5.6**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **7.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **8 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **9.9 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **5.3 liter(s)**
- Total mash volume **7.1 liter(s)**

## Steps

- Temp **69 C**, Time **80 min**
- Temp **75 C**, Time **5 min**

## Mash step by step

- Heat up **5.3 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **80 min** at **69C**
- Keep mash **5 min** at **75C**
- Sparge using **6.4 liter(s)** of **76C** water or to achieve **9.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1.42 kg (79.8%)	81 %	4
Grain	Monachijski	0.3 kg (16.9%)	80 %	16
Grain	Weyermann - Carapils	0.06 kg (3.4%)	78 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	10.72 g	30 min	9 %
Boil	Lublin (Lubelski)	16.07 g	30 min	4 %
Aroma (end of boil)	Hallertau	16.07 g	7 min	4 %
Aroma (end of boil)	Oktawia	10 g	7 min	7 %
Dry Hop	Hallertau	20 g	28 day(s)	4 %
Dry Hop	Oktawia	20 g	28 day(s)	7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
W-34	Lager	Dry	11 g	Safale