

# Light german lager - Pałacowy single hop

- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **22**
- SRM **3.3**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19.3 liter(s)**

## Steps

- Temp **69 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **10 min** at **76C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilznieński	4 kg (93%)	80 %	4
Grain	Weyermann - Carapils	0.3 kg (7%)	78 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Magnat	10 g	60 min	11.7 %
Boil	Pałacowy	20 g	10 min	8 %
Aroma (end of boil)	Pałacowy	40 g	0 min	8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Liquid	1000 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	NaCl	5 g	Mash	60 min