

# 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 |