

# 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     |