

# chmielowa podstawa

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **41**
- SRM **4.4**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **20.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **55 C**, Time **5 min**
- Temp **65 C**, Time **40 min**
- Temp **68 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **40 min** at **65C**
- Keep mash **20 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **10.2 liter(s)** of **76C** water or to achieve **20.2 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount       | Yield | EBC |
|-------|----------------------|--------------|-------|-----|
| Grain | Viking Pale Ale malt | 3 kg (60%)   | 80 %  | 5   |
| Grain | Pszeniczny           | 1 kg (20%)   | 85 %  | 4   |
| Grain | Rice, Flaked         | 0.8 kg (16%) | 70 %  | 2   |
| Grain | Płatki owsiane       | 0.2 kg (4%)  | 60 %  | 3   |

## Hops

| Use for | Name  | Amount | Time   | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil    | lunga | 38 g   | 40 min | 10 %       |

## Yeasts

| Name           | Type | Form | Amount | Laboratory |
|----------------|------|------|--------|------------|
| lalbrew kolsch | Ale  | Dry  | 11 g   | Lallemand  |

## Extras

| Type  | Name       | Amount | Use for | Time     |
|-------|------------|--------|---------|----------|
| Spice | witamina C | 2 g    | Primary | 7 day(s) |

## Notes

- Na 10 min przed końcem dodałem 120 ml starej gęstwy drożdżowej dla zwiększenia FAN. 5 min przed 2g Wit c. Na tlenione blenderem. Do fermentora dodałem trochę osadu z gotowania. Piwo klarowne jasne.  
*Mar 28, 2022, 8:19 PM*