

# Witbier

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **16**
- SRM **3.6**
- Style **Witbier**

## Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **3 %**
- Size with trub loss **25.4 liter(s)**
- Boil time **80 min**
- Evaporation rate **13.5 %/h**
- Boil size **35.6 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

## Steps

- Temp **55 C**, Time **20 min**
- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **75 C**, Time **5 min**

## Mash step by step

- Heat up **14.7 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **20 min** at **55C**
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **75C**
- Sparge using **25.8 liter(s)** of **76C** water or to achieve **35.6 liter(s)** of wort

## Fermentables

| Type   | Name                                  | Amount         | Yield | EBC |
|--|---------------------------------------|----------------|-------|-----|
| Grain  | Pilzński 3,2-4,5<br>EBC Viking Malt   | 2.5 kg (39.1%) | 80 %  | 4   |
| Adjunct  | Pszenica<br>niesłodowana              | 1.5 kg (23.4%) | 65 %  | 3   |
| Temperatura kleikowania pszenicy - 58-64 °C.<br>Pszenicę wcześniej skleikować w temp. 85C i dodać do zacierania jako podgrzanie. |                                       |                |       |     |
| Grain  | Pszeniczny 3,5-6,5<br>EBC Viking Malt | 1.5 kg (23.4%) | 80 %  | 5   |
| Grain  | Płatki pszeniczne<br>błyskawiczne     | 0.5 kg (7.8%)  | 80 %  | 4   |
| Lub owsiane zamiast pszenicznych.  |                                       |                |       |     |
| Grain  | Płatki owsiane<br>błyskawiczne        | 0.4 kg (6.3%)  | 80 %  | 3   |

## Hops

| Use for | Name         | Amount | Time   | Alpha acid |
|---------|--------------|--------|--------|------------|
| Boil    | Pacific Jade | 10 g   | 50 min | 14.8 %     |
| Boil    | Pacific Jade | 5 g    | 10 min | 14.8 %     |

|                     |       |      |       |     |
|---------------------|-------|------|-------|-----|
| Aroma (end of boil) | Perle | 20 g | 5 min | 7 % |
|---------------------|-------|------|-------|-----|

## Yeasts

| Name               | Type  | Form  | Amount | Laboratory       |
|--------------------|-------|-------|--------|------------------|
| FM20 Białe Walonki | Wheat | Slant | 240 ml | Fermentum Mobile |

## Extras

| Type  | Name                           | Amount  | Use for   | Time      |
|-------|--------------------------------|---------|-----------|-----------|
| Spice | kolendra                       | 16.32 g | Boil      | 5 min     |
| Spice | curacao                        | 19.2 g  | Boil      | 5 min     |
| Spice | skórka z 2 pomarańczy          | 28.8 g  | Boil      | 5 min     |
| Spice | Skórka z pomarańczy w alkoholu | 28.8 g  | Secondary | 10 day(s) |

## Notes

- Dodać mniej wody do zacieru - podnosić temperaturę gotowaną wodą.  
*Jan 28, 2019, 10:01 AM*
- Łuska ryżowa w proporcjach 15g na każde 10% ziaren bez łuski, np: 30% - 45g, 40% - 60g, 50% - 75g  
*Feb 7, 2019, 9:43 PM*