

## Witbier

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **11**
- SRM **3.4**
- Style **Witbier**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.2 liter(s)**

### Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **6.1 liter(s)**
- Total mash volume **8.2 liter(s)**

### Steps

- Temp **50 C**, Time **15 min**
- Temp **65 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **6.1 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **15 min** at **50C**
- Keep mash **45 min** at **65C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **9.1 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

### Fermentables

| Type  | Name              | Amount         | Yield | EBC |
|-------|-------------------|----------------|-------|-----|
| Grain | Pale ale IREKS    | 1.04 kg (51%)  | 80 %  | 6   |
| Grain | Pszeniczny IREKS  | 0.5 kg (24.5%) | 85 %  | 4   |
| Grain | Płatki pszeniczne | 0.5 kg (24.5%) | 85 %  | 3   |

### Hops

| Use for   | Name      | Amount | Time   | Alpha acid |
|-----------|-----------|--------|--------|------------|
| Boil      | Tradition | 10 g   | 50 min | 5 %        |
| Whirlpool | Tradition | 5 g    | 10 min | 5 %        |

### Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
| K-97 | Ale  | Dry  | 11 g   | ---        |

### Extras

| Type  | Name              | Amount | Use for | Time  |
|-------|-------------------|--------|---------|-------|
| Spice | Kolendra indyjska | 8 g    | Boil    | 5 min |

|       |                               |      |      |       |
|-------|-------------------------------|------|------|-------|
| Spice | skórka pomarańczy<br>słodkiej | 10 g | Boil | 5 min |
| Spice | skórka pomarańczy<br>gorzkiej | 10 g | Boil | 5 min |
| Spice | Skórka cytryny                | 8 g  | Boil | 5 min |

## Notes

- Temperatura fermentacji 18 st, po ustaniu spadku ekstraktu obniżyć do 10 na 3 dni, potem do 2 stopni na 14 dni  
*May 28, 2019, 9:47 PM*