

## #002 Belgijski witbier

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **21**
- SRM **3.3**
- Style **Witbier**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.2 liter(s)**
- Total mash volume **13.6 liter(s)**

### Steps

- Temp **50 C**, Time **30 min**
- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **10.2 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **30 min** at **50C**
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **78C**
- Sparge using **12.2 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount         | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 2 kg (58.8%)   | 80 %  | 4   |
| Grain | Płatki orkiszowe    | 0.25 kg (7.4%) | 80 %  | 6   |
| Grain | Płatki pszeniczne   | 0.4 kg (11.8%) | 85 %  | 3   |
| Grain | Płatki owsiane      | 0.5 kg (14.7%) | 85 %  | 3   |
| Grain | Rice, Flaked        | 0.25 kg (7.4%) | 70 %  | 2   |

### Hops

| Use for | Name               | Amount | Time   | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil    | Extra Styrian Dana | 7 g    | 60 min | 13.2 %     |
| Boil    | Extra Styrian Dana | 7 g    | 15 min | 13.2 %     |

### Yeasts

| Name                            | Type | Form | Amount | Laboratory      |
|---------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M21 Belgian Wit | Ale  | Dry  | 11 g   | Mangrove Jack's |

### Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

|       |   |      |      |        |
|-------|---|------|------|--------|
| Spice | Kolendra indyjska<br>tłuczona             | 7 g  | Boil | 10 min |
| Spice | Skórka cytrynowa<br>świeża                | 15 g | Boil | 10 min |
| Spice | Skórka<br>pomarańczowa<br>świeża          | 15 g | Boil | 10 min |
| Spice | Skórka<br>pomarańczowa<br>suszona KOTANIY | 10 g | Boil | 10 min |
| Spice | Trawa cytrynowa<br>KOTANIY                | 7 g  | Boil | 10 min |