

Pierwszak

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **21**
- SRM **6.5**
- Style **Witbier**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **38 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.2 liter(s)**
- Total mash volume **23.4 liter(s)**

Steps

- Temp **50 C**, Time **20 min**
- Temp **64 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **18.2 liter(s)** of strike water to **54.3C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **20 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **25 liter(s)** of **76C** water or to achieve **38 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|---------|---------------------|----------------|-------|-----|
| Grain | Viking Pilsner malt | 2.5 kg (40.3%) | 82 % | 4 |
| Grain | Viking Wheat Malt | 2.5 kg (40.3%) | 83 % | 5 |
| Grain | Strzegom Karmel 300 | 0.2 kg (3.2%) | 70 % | 299 |
| Adjunct | Płatki pszeniczne | 0.5 kg (8.1%) | 60 % | 3 |
| Adjunct | Płatki owsiane | 0.5 kg (8.1%) | 60 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | Marynka | 20 g | 60 min | 10 % |
| Aroma (end of boil) | Citra | 30 g | 5 min | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|-------|------|--------|------------|
| WB-06 | Wheat | Dry | 17 g | --- |

Extras

| Type | Name | Amount | Use for | Time |
|-------|----------------------------|--------|---------|--------|
| Spice | Skórka słodkiej pomarańczy | 10 g | Boil | 15 min |
| Spice | Trawa cytrynowa | 5 g | Boil | 10 min |
| Spice | Skórka gorzkiej pomarańczy | 5 g | Boil | 15 min |