

## Witek

- Gravity **12.4 BLG**
- ABV ---
- IBU **16**
- SRM **3.7**
- Style **Witbier**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.3 liter(s)**
- Total mash volume **20.4 liter(s)**

### Steps

- Temp **56 C**, Time **0 min**
- Temp **50 C**, Time **30 min**
- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **15.3 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **30 min** at **50C**
- Keep mash **0 min** at **56C**
- Keep mash **60 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **18.8 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

| Type  | Name                             | Amount         | Yield | EBC |
|-------|----------------------------------|----------------|-------|-----|
| Grain | Viking Pilsner malt - pilzneński | 2.4 kg (47.1%) | 82 %  | 4   |
| Grain | Viking Wheat Malt                | 1.2 kg (23.5%) | 83 %  | 5   |
| Grain | Abbey Malt Weyermann             | 0.1 kg (2%)    | 75 %  | 45  |
| Grain | Płatki pszeniczne                | 1 kg (19.6%)   | 85 %  | 3   |
| Grain | Płatki owsiane                   | 0.4 kg (7.8%)  | 85 %  | 3   |

### Hops

| Use for             | Name  | Amount | Time   | Alpha acid |
|---------------------|-------|--------|--------|------------|
| Boil                | Perle | 20 g   | 60 min | 6.5 %      |
| Aroma (end of boil) | Perle | 10 g   | 15 min | 6.5 %      |

### Yeasts

| Name        | Type  | Form | Amount | Laboratory |
|-------------|-------|------|--------|------------|
| Safale S-33 | Wheat | Dry  | 11.5 g | fermentis  |

## Extras

| Type  | Name                         | Amount | Use for | Time   |
|-------|------------------------------|--------|---------|--------|
| Spice | kolendra                     | 30 g   | Boil    | 10 min |
| Spice | słodka skórka pomarańczy     | 20 g   | Boil    | 10 min |
| Spice | świeża skórka z 3 pomarańczy | 160 g  | Boil    | 10 min |