

- Gravity **23.8 BLG**
- ABV **10.9 %**
- IBU **39**
- SRM **11.1**
- Style **Baltic Porter**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **32 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **69 C**, Time **30 min**
- Temp **75 C**, Time **15 min**

### Mash step by step

- Heat up **24 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **69C**
- Keep mash **15 min** at **75C**
- Sparge using **9.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                    | Amount         | Yield | EBC |
|-------|-------------------------|----------------|-------|-----|
| Grain | Strzegom Wiedeński      | 5.2 kg (57.8%) | 79 %  | 10  |
| Grain | Viking Malt Smoked Peat | 2.4 kg (26.7%) | 81 %  | 10  |
| Grain | Viking Malt Karmel 200  | 0.2 kg (2.2%)  | 75 %  | 200 |
| Grain | Viking Malt Cookie      | 0.2 kg (2.2%)  | 72 %  | 50  |
| Sugar | cukier                  | 1 kg (11.1%)   | 99 %  | --- |

### Hops

| Use for             | Name                   | Amount | Time   | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil                | Bravo                  | 30 g   | 30 min | 15.5 %     |
| Boil                | Columbus/Tomahawk/Zeus | 10 g   | 5 min  | 15.5 %     |
| Boil                | Columbus/Tomahawk/Zeus | 10 g   | 5 min  | 15.5 %     |
| Aroma (end of boil) | Mosaic                 | 10 g   | 5 min  | 10 %       |
| Aroma (end of boil) | Amarillo               | 10 g   | 5 min  | 9.5 %      |
| Aroma (end of boil) | Strata                 | 10 g   | 5 min  | 13.6 %     |
| Aroma (end of boil) | Lublin (Lubelski)      | 10 g   | 5 min  | 4 %        |

|                     |                 |      |       |      |
|---------------------|-----------------|------|-------|------|
| Aroma (end of boil) | Hallertau Blanc | 30 g | 5 min | 11 % |
|---------------------|-----------------|------|-------|------|

## Yeasts

| Name             | Type  | Form | Amount | Laboratory |
|------------------|-------|------|--------|------------|
| Saflager W 34/70 | Lager | Dry  | 11.5 g | Fermentis  |
| Saflager S-23    | Lager | Dry  | 11.5 g | Fermentis  |

## Notes

- słód dodałem przy temperaturze 57stopni  
dopilnować temperatury 62st - mieszać regularnie co 2stopnie;  
czas całego procesu (z przerwą na udostępnienie kuchni na obiad - 5h)  
na aromat : hibiskus, szklanka  
*Dec 31, 2021, 1:42 PM*