

oels

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **41**
- SRM **8.8**
- Style **English IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **50 C**, Time **5 min**
- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **5 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **5 min** at **50C**
- Keep mash **60 min** at **64C**
- Keep mash **5 min** at **72C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 4 kg (72.7%) | 80 % | 5 |
| Grain | Strzegom Karmel 150 | 0.5 kg (9.1%) | 75 % | 150 |
| Grain | Płatki pszeniczne | 0.5 kg (9.1%) | 85 % | 3 |
| Grain | Płatki owsiane | 0.5 kg (9.1%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil | Amarillo | 30 g | 55 min | 9.5 % |
| Aroma (end of boil) | Citra | 30 g | 10 min | 12 % |
| Dry Hop | Mosaic | 15 g | 5 day(s) | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us-05 | Ale | Dry | 11.5 g | --- |