

apLaUS

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **41**
- SRM **6.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **1 %**
- Size with trub loss **22.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **9 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.7 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25.4 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **20 liter(s)** of strike water to **71.1C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|---------------|-------|-----|
| Grain | Strzegom Red Activ 30-40 | 1 kg (18.5%) | 80 % | 35 |
| Grain | Strzegom Pilzneński | 4 kg (74.1%) | 80 % | 4 |
| Grain | Płatki owsiane | 0.4 kg (7.4%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil | Amarillo | 30 g | 60 min | 9.5 % |
| Boil | Cascade | 10 g | 30 min | 6 % |
| Aroma (end of boil) | Cascade | 20 g | 10 min | 6 % |
| Aroma (end of boil) | Zula | 10 g | 5 min | 7.3 % |
| Dry Hop | Amarillo | 20 g | 3 day(s) | 9.5 % |
| Dry Hop | Zula | 10 g | 3 day(s) | 7.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-------------|--------|----------|-------|
| Other | Glukoza | 170 g | Bottling | --- |
| Fining | Whirlfloc T | 1 g | Boil | 5 min |