

polska

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **33**
- SRM **4.5**
- Style **American Pale Ale**

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 **15 %/h**
- Boil size **29.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **1 min** at **76C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **29.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 4 kg (83.2%) | 80 % | 4 |
| Grain | Strzegom Wiedeński | 0.5 kg (10.4%) | 79 % | 10 |
| Grain | Strzegom Karmel 30 | 0.2 kg (4.2%) | 75 % | 30 |
| Grain | Karmelowy 50 | 0.11 kg (2.3%) | 75 % | 59 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | lunga | 6 g | 60 min | 11 % |
| Boil | Marynka | 20 g | 60 min | 7.2 % |
| Boil | Lublin (Lubelski) | 20 g | 20 min | 2.6 % |
| Boil | Sybilla | 20 g | 10 min | 6.1 % |
| Boil | Sybilla | 15 g | 5 min | 6.1 % |
| Boil | Lublin (Lubelski) | 15 g | 5 min | 2.6 % |
| Boil | Sybilla | 15 g | 0 min | 6.1 % |
| Boil | Lublin (Lubelski) | 15 g | 0 min | 2.6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|-------------|-----|-----|------|--------|
| Safale S-04 | Ale | Dry | 10 g | Safale |
|-------------|-----|-----|------|--------|