

jesienne

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **23**
- SRM **16.1**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.4 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **19.3 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **13.8 liter(s)** of strike water to **77.6C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **21.1 liter(s)** of **76C** water or to achieve **29.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|------|
| Grain | pils | 4 kg (72.7%) | 82 % | 4 |
| Grain | Strzegom Monachijski typ I | 0.7 kg (12.7%) | 79 % | 16 |
| Grain | Strzegom Karmel 30 | 0.3 kg (5.5%) | 75 % | 30 |
| Grain | Strzegom Karmel 150 | 0.2 kg (3.6%) | 75 % | 150 |
| Grain | Strzegom Czekoladowy jasny | 0.2 kg (3.6%) | 68 % | 400 |
| Grain | Strzegom Czekoladowy ciemny | 0.1 kg (1.8%) | 68 % | 1200 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|---------|--------|--------|------------|
| Boil | Marynka | 15 g | 60 min | 8.8 % |
| Boil | Sladek | 20 g | 20 min | 8.5 % |
| Boil | Sladek | 20 g | 1 min | 8.5 % |
| Whirlpool | Sladek | 20 g | 20 min | 8.5 % |

Yeasts

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

| | | | | |
|-------|-----|-------|--------|-----------|
| us-05 | Ale | Slant | 200 ml | fermentis |
|-------|-----|-------|--------|-----------|