

Special Bitter

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **45**
- SRM **6.1**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **67 C**, Time **70 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **19.3 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **70 min** at **67C**
- Keep mash **1 min** at **76C**
- Sparge using **17.9 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|--------|-----|
| Grain | Pilzneński | 4.2 kg (76.4%) | 81 % | 4 |
| Grain | Strzegom Karmel 150 | 0.2 kg (3.6%) | 75 % | 150 |
| Grain | Strzegom Monachijski typ I | 0.3 kg (5.5%) | 79 % | 16 |
| Grain | Strzegom Monachijski typ II | 0.5 kg (9.1%) | 79 % | 22 |
| Grain | Rye, Flaked | 0.3 kg (5.5%) | 78.3 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil | Fuggles | 15 g | 60 min | 6.1 % |
| Boil | lunga | 10 g | 60 min | 11 % |
| Boil | Lublin (Lubelski) | 20 g | 60 min | 3.8 % |
| Aroma (end of boil) | Fuggles | 15 g | 15 min | 6.1 % |
| Aroma (end of boil) | lunga | 20 g | 15 min | 11 % |
| Whirlpool | Fuggles | 20 g | 10 min | 6.1 % |
| Whirlpool | Lublin (Lubelski) | 30 g | 10 min | 4 % |
| Whirlpool | lunga | 20 g | 10 min | 11 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------------|------|--------|--------|------------------|
| FM10 O czym szumią wierzby | Ale | Liquid | 30 ml | Fermentum Mobile |
| Starter | | | | |