

Pszeniczne ciemne

- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **14**
- SRM **17.9**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.3 liter(s)**
- Total mash volume **16.4 liter(s)**

Steps

- Temp **44 C**, Time **15 min**
- Temp **63 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **12.3 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **15 min** at **44C**
- Keep mash **15 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|------|
| Grain | Pszeniczny | 2.2 kg (53.7%) | 85 % | 4 |
| Grain | Monachijski | 0.8 kg (19.5%) | 80 % | 16 |
| Grain | Strzegom Wiedeński | 0.8 kg (19.5%) | 79 % | 10 |
| Grain | Strzegom Karmel 600 | 0.2 kg (4.9%) | 68 % | 601 |
| Grain | Strzegom Czekoladowy ciemny | 0.1 kg (2.4%) | 68 % | 1200 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Lublin (Lubelski) | 30 g | 60 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|-------|-------|--------|------------|
| t 58 | Wheat | Slant | 200 ml | --- |