

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	---