

Pszeniczne ciemne

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **13**
- SRM **16.4**
- Style **Dunkelweizen**

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 **8 %/h**
- Boil size **24.2 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

Steps

- Temp **44 C**, Time **15 min**
- Temp **52 C**, Time **15 min**
- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **14.7 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **15 min** at **44C**
- Keep mash **15 min** at **52C**
- Keep mash **30 min** at **65C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **24.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann Pszeniczny ciemny	3 kg (61.2%)	80 %	16
Grain	Weyermann Monachijski typ II	1.5 kg (30.6%)	79 %	22
Grain	Carahell	0.3 kg (6.1%)	77 %	26
Grain	Carafa III	0.1 kg (2%)	70 %	1400
Dodatek przy ostatniej przerwie				

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	20 g	60 min	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM41 Gwoździe i Banany	Wheat	Slant	250 ml	Fermentum Mobile