

Czarne Czeskie

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **27**
- SRM **16.2**
- Style **Schwarzbier**

Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **25 %/h**
- Boil size **15.1 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **10 liter(s)**
- Total mash volume **12.5 liter(s)**

Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **10 liter(s)** of strike water to **72.9C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **7.6 liter(s)** of **76C** water or to achieve **15.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.5 kg (60%)	80 %	5
Grain	Monachijski	0.5 kg (20%)	80 %	16
Grain	Abbey Castle	0.3 kg (12%)	80 %	45
Grain	Strzegom Czekoladowy jasny	0.05 kg (2%)	68 %	400
Grain	Brown Malt (British Chocolate)	0.05 kg (2%)	70 %	128
Grain	Simpsons - Coffee Malt	0.05 kg (2%)	74 %	296
Grain	Carafa III	0.05 kg (2%)	70 %	1034

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Spalt Select	20 g	60 min	6.1 %