

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 % |