

ciemny dunkel weizen

- Gravity **12.9 BLG**
- ABV ---
- IBU **15**
- SRM **20.3**
- Style **Dunkelweizen**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **9.4 liter(s)**
- Total mash volume **11.7 liter(s)**

Steps

- Temp **43 C**, Time **20 min**
- Temp **63 C**, Time **50 min**
- Temp **71 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **9.4 liter(s)** of strike water to **45.9C**
- Add grains
- Keep mash **20 min** at **43C**
- Keep mash **50 min** at **63C**
- Keep mash **20 min** at **71C**
- Keep mash **10 min** at **78C**
- Sparge using **5.6 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	pszeniczny jasny	1.2 kg (51.3%)	83 %	4.5
Grain	monachijski	0.7 kg (29.9%)	81 %	25
Grain	karmelowy	0.2 kg (8.5%)	76 %	30
Grain	czekoladowy	0.16 kg (6.8%)	68 %	400
Grain	zakwaszający	0.08 kg (3.4%)	80 %	4.5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau tradition	8 g	45 min	5.6 %
Boil	Hallertau tradition	8 g	15 min	5.6 %