

Radobok

- Gravity **20.5 BLG**
- ABV **9 %**
- IBU **24**
- SRM **21.5**
- Style **Doppelbock**

Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **21.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **26.8 liter(s)**

Steps

- Temp **47 C**, Time **20 min**
- Temp **63 C**, Time **15 min**
- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **20.1 liter(s)** of strike water to **51.5C**
- Add grains
- Keep mash **20 min** at **47C**
- Keep mash **15 min** at **63C**
- Keep mash **60 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **7.8 liter(s)** of **76C** water or to achieve **21.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Wędzony Steinbach	4 kg (59.7%)	80 %	5
Grain	Red active	2 kg (29.9%)	81 %	70
Grain	Weyermann - Caraamber	0.6 kg (9%)	75 %	65
Grain	Weyermann - Chocolate Wheat	0.1 kg (1.5%)	74 %	788

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	30 g	90 min	7.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	300 ml	Fermentis