

Radobok

- Gravity **20.9 BLG**
- ABV **9.3 %**
- IBU **25**
- SRM **20.4**
- Style **Doppelbock**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.05 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **19.8 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 **13.3 liter(s)** of strike water to **53.6C**
- 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 **12.2 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Wędzony Steinbach	5 kg (76.9%)	80 %	5
Grain	Weyermann - Melanoiden Malt	1 kg (15.4%)	81 %	70
Grain	Słód Caramunich Typ II Weyermann	0.4 kg (6.2%)	73 %	120
Grain	Weyermann - Carawheat	0.1 kg (1.5%)	77 %	970

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