

Radobok

- Gravity **19.8 BLG**
- ABV **8.7 %**
- IBU **22**
- SRM **18.7**
- Style **Doppelbock**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **23.8 liter(s)**

Mash information

- Mash efficiency **74 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **30.4 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 **22.8 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 **8.6 liter(s)** of **76C** water or to achieve **23.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Wędzony Steinbach	5 kg (65.8%)	80 %	5
Grain	Viking Melanoidynowy	2 kg (26.3%)	75 %	60
Grain	Słód Caramunich Typ II Weyermann	0.4 kg (5.3%)	73 %	120
Grain	Special W	0.2 kg (2.6%)	35 %	300

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