

Po Sesji I

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **34**
- SRM **29.3**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **21.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **13.5 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **21.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Vienna Malt	2 kg (44.4%)	79 %	7
Grain	Viking Pale Ale malt	2 kg (44.4%)	80 %	5
Grain	Viking Czekoladowy ciemny	0.5 kg (11.1%)	67 %	900

Hops

Use for	Name	Amount	Time	Alpha acid
Whirlpool	Hersbrucker	50 g	5 min	3 %
Boil	Perle	35 g	60 min	7 %
Whirlpool	Perle	15 g	5 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	10 g	Safale