

# #1

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **33**
- SRM **34.8**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

## Steps

- Temp **62 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

## Mash step by step

- Heat up **19.5 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **50 min** at **62C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	5 kg (76.9%)	82 %	4
Grain	Czekoladowy	0.5 kg (7.7%)	60 %	788
Grain	Strzegom Karmel 600	0.5 kg (7.7%)	68 %	601
Grain	Płatki owsiane	0.5 kg (7.7%)	60 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	45 g	15 min	4 %

## Extras

Type	Name	Amount	Use for	Time
Flavor	laktoza	600 g	Boil	10 min