

PS1

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **30**
- SRM **30**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.3 liter(s)**
- Total mash volume **12.4 liter(s)**

Steps

- Temp **66 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **9.3 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **50 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **9 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (55.6%)	81 %	4
Grain	Biscuit Malt	0.15 kg (4.2%)	79 %	45
Grain	Płatki owsiane	0.5 kg (13.9%)	65 %	3
Grain	Strzegom Karmel 150	0.15 kg (4.2%)	75 %	150
Grain	Weyermann - Dehusked Carafa III	0.3 kg (8.3%)	70 %	1024
Sugar	Milk Sugar (Lactose)	0.5 kg (13.9%)	76.1 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	21 g	45 min	9.5 %