

SAS

- Gravity **8.5 BLG**
- ABV **3.3 %**
- IBU **43**
- SRM **38.3**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **14.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **5.6 liter(s)**
- Total mash volume **7.4 liter(s)**

Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **5.6 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **10.6 liter(s)** of **76C** water or to achieve **14.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1.2 kg (64.9%)	81 %	4
Grain	Płatki owsiane	0.2 kg (10.8%)	85 %	3
Grain	Weyermann - Dehusked Carafa III	0.1 kg (5.4%)	70 %	1024
Grain	Czekoladowy żytni	0.1 kg (5.4%)	85 %	500
Grain	Strzegom Czekoladowy ciemny	0.25 kg (13.5%)	68 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	5 g	60 min	9.7 %
Aroma (end of boil)	Simcoe	5 g	20 min	13.3 %
Aroma (end of boil)	Centennial	10 g	15 min	9.7 %
Aroma (end of boil)	Simcoe	10 g	10 min	13.3 %
Dry Hop	Simcoe	35 g	3 day(s)	13.3 %
Dry Hop	Centennial	35 g	3 day(s)	9.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11.5 g	Fermentis