terminator

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **65**
- SRM **38.3**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **7.9 liter(s)**
- Total mash volume **10.4 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **7.9 liter(s)** of strike water to **57C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **7.3 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Best Pilsen	2 kg *(80.8%)*	80.5 %	4
Grain	Strzegom Czekoladowy 1200	0.2 kg *(8.1%)*	68 %	1202
Grain	Strzegom Karmel 600	0.275 kg *(11.1%)*	68 %	601

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	30 g	60 min	6.4 %
Boil	Challenger	30 g	5 min	6.4 %
Boil	Oktawia	30 g	5 min	5.7 %
Boil	Simcoe	28.3 g	5 min	2.2 %
Boil	Citra	28.3 g	5 min	3 %

Yeasts

Name	Type	Form	Amount	Laboratory

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Safbrew S-33	Ale	Slant	250 ml	Fermentis