

Whiskies

- Gravity **15.6 BLG**
- ABV **---**
- IBU **71**
- SRM **40**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **21.7 liter(s)**

Steps

- Temp **53 C**, Time **10 min**
- Temp **62 C**, Time **10 min**
- Temp **71 C**, Time **40 min**
- Temp **79 C**, Time **20 min**

Mash step by step

- Heat up **15.5 liter(s)** of strike water to **59.6C**
- Add grains
- Keep mash **10 min** at **53C**
- Keep mash **10 min** at **62C**
- Keep mash **40 min** at **71C**
- Keep mash **20 min** at **79C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **24.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Casle Malting Whisky Nature	1 kg (16.1%)	85 %	4
Grain	Strzegom Karmel 300	1 kg (16.1%)	70 %	404
Grain	Strzegom Pale Ale	4 kg (64.5%)	79 %	7
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.2%)	68 %	1624

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tomahawk	20 g	60 min	15.5 %
Boil	Tomahawk	20 g	30 min	15.5 %
Boil	Agnus	20 g	15 min	14 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Ale	Dry	11.5 g	Fermentis